Fish and Game Commission
Meeting Binder

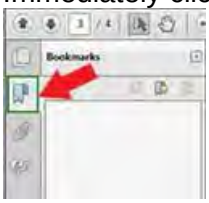
October 7-8, 2015

Commission Meeting

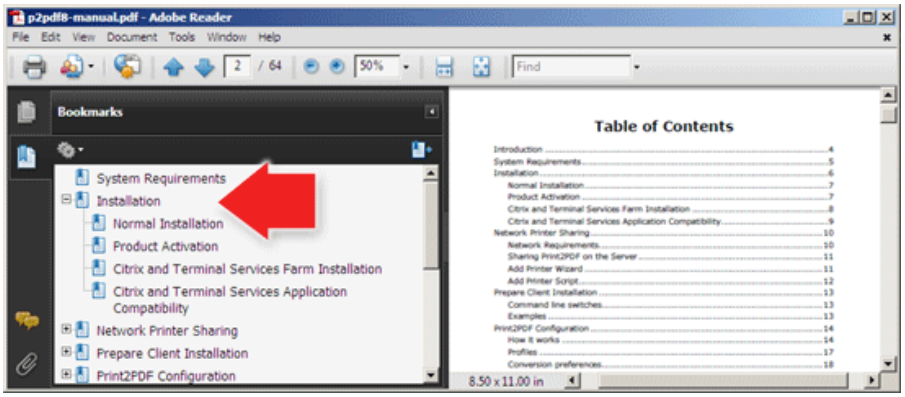
EASY GUIDE TO THE BINDER

1. Download and open the binder document using your Adobe Acrobat program/application.

2. Immediately click/tap on the “bookmark symbol” located near the top left-hand corner.



3. A bookmark panel should appear on either the top or the left-hand side of the screen. To make adjustments, simply use the Page Display option in the View tab. If done correctly, you should see something like:



4. We suggest leaving open the bookmark panel to help you move efficiently among the analysis sheets and supporting documents included in the binder. It’s helpful to think of these bookmarks as a table of contents which allows you to go to specific points in the binder without having to scroll through hundreds of pages.

5. Resize the bars by placing the icon in the dark, vertical line located between the text boxes and using a long click/tap to move ↔ in either direction. You may also adjust the sizing of the documents by adjusting the sizing preferences located on the Page Display icons found in the top toolbar or in the View tab.

6. Upon locating an analysis sheet for an agenda item that interests you, notice that you can get more information by double-clicking/tapping on any item underlined in red.

7. Return to the analysis sheet by simply re-clicking/tapping on the item in the bookmark panel.

OVERVIEW OF FISH AND GAME COMMISSION BUSINESS MEETING

- This is the 145th year of continuous operation of the Fish and Game Commission (Commission) in partnership with the Department of Fish and Wildlife (Department). Our goal is the preservation of our heritage and conservation of our natural resources through informed decision making. These meetings are vital in achieving that goal. In that spirit, we provide the following information to be as effective and efficient toward that end. Welcome and please let us know if you have any questions.

- We are operating under Bagley-Keene Open Meeting Act and these proceedings are being recorded and broadcast via Cal-Span.

- In the unlikely event of an emergency, please note the location of the nearest emergency exits. Additionally, the restrooms are located _____.

- Items may be heard in any order pursuant to the determination of the Commission President.

- The amount of time for each agenda item may be adjusted based on time available and the number of speakers.

- Speaker cards need to be filled out **legibly** and turned in to the staff **before** we start the agenda item. Please make sure to list the agenda items you wish to speak to on the speaker card.

- We will be calling the names of several speakers at a time so please line up behind the speakers' podium when your name is called. If you are not in the room when your name is called you may forfeit your opportunity to speak on the item.

- When you speak, please state your name and any affiliation. Please be respectful. Disruptions from the audience will not be tolerated. Time is precious so please be concise.

- To receive meeting agendas and regulatory notices about those subjects of interest to you, please visit the Commission's website, www.fgc.ca.gov, and sign up for our electronic mailing lists.

- Beginning October 1, 2015, all petitions for regulation change must be submitted in writing on the authorized petition form, FGC 1 Petition to the California Fish and Game Commission for Regulation Change, available at http://www.fgc.ca.gov/public/information/petitionforregulatorychange.aspx.

- **Warning**! The use of a laser pointer by someone other than a speaker doing a presentation may result in arrest.

INTRODUCTIONS FOR FISH AND GAME COMMISSION COMMISSION MEETINGS

FISH AND GAME COMMISSIONERS

Jack Baylis	President (Los Angeles)
Jim Kellogg	Vice-President (Discovery Bay)
Jacque Hostler-Carmesin	Member (McKinleyville)
Eric Sklar	Member (Saint Helena)
Anthony Williams	Member (Huntington Beach)

COMMISSION STAFF

Sonke Mastrup	Executive Director
Susan Ashcraft	Marine Advisor
Melissa Miller-Henson	Program Manager
Mary Brittain	Administrative Assistant
Caren Woodson	Analyst

OFFICE OF THE ATTORNEY GENERAL

Chris Ames	Senior Assistant Attorney General

DEPARTMENT OF FISH AND WILDLIFE- *Directorate*

Chuck Bonham	Director
Dan Yparraguirre	Deputy Director, Wildlife and Fisheries Division
David Bess	Chief, Law Enforcement Division

I would also like to acknowledge special guests who are present:
(i.e., elected officials, tribal chairpersons, other special guests)

_____

_____

_____

_____

Commissioners
Jack Baylis, President
Los Angeles
Jim Kellogg, Vice President
Discovery Bay
Jacque Hostler-Carmesin, Member
McKinleyville
Eric Sklar, Member
Saint Helena
Anthony C. Williams, Member
Huntington Beach

STATE OF CALIFORNIA
Edmund G. Brown Jr., Governor

Fish and Game Commission

Wildlife Heritage and Conservation
Since 1870

Sonke Mastrup, Executive Director
1416 Ninth Street, Room 1320
Sacramento, CA 95814
(916) 653-4899

www.fgc.ca.gov

REVISED* MEETING AGENDA
October 7-8, 2015

Embassy Suites – LAX North
9801 Airport Blvd., Los Angeles

The meeting will be live streamed at www.cal-span.org

NOTE: * Item 21 is new and items 22(A) and 27(C) have been revised. See important Commission meeting deadlines and procedures at the end of the agenda.

DAY 1 – OCTOBER 7, 8:30 A.M

1. Public Forum
   Any member of the public may address the Commission regarding the implementation of its policies or any other matter within the jurisdiction of the Commission. The issue to be discussed should not be related to any item on the current agenda. As a general rule, action cannot be taken on issues not listed on the agenda; at the discretion of the Commission, staff may be requested to follow up on such items. Submitting written comments is encouraged to ensure that all comments will be included in the record before the Commission. Please be prepared to summarize your comments in the time allocated by the presiding commissioner.

CONSENT ITEMS

2. Receive and approve request from Mr. Francesco Licata to transfer his California Halibut Trawl Vessel Permit No. BT0050 to Mr. Thomas Nguyen

3. Approve settlement agreement between the Department of Fish and Wildlife (Department) and Mr. Craig Yerkins, et al. regarding appeal of the Department's denial to reinstate Transferable Dungeness Crab Vessel Permit No. CT0068-T7 for F/V Terry S (FG03513)

4. Approve settlement agreement between the Department and Mr. Robert Jackson regarding his appeal of the Department's denial to reinstate Transferable Dungeness Crab Vessel Permit No. CT0215-T7 , for F/V Brooke Michelle (FG70433)

5. Approve settlement agreement between the Department and Mr. John Reid regarding his appeal of the Department's denial to reinstate Transferable Dungeness Crab Vessel Permit No. CT0108-T7 for F/V Huson (FG06579)

CONSENT (continued)

6. Approve Neushul Mariculture, Inc.'s request to renew state water bottom lease M-654-03 for aquaculture

7. Tribal Committee

   (A) Meeting summary
      I. Receive recommendations
   (B) Work plan development
      I. Update on current work plan and timeline
      II. Discuss and approve new topics

8. Marine Resources Committee

   (A) Work plan development
      I. Update on current work plan and timeline
      II. Discuss and approve new topics

9. Adopt proposed changes to commercial squid logbook and regulations (Section 149 and Appendix A, Title 14, CCR)

10. Adopt proposed changes to commercial hagfish regulations (Section 180.6, Title 14, CCR)

11. Adopt proposed changes to commercial herring regulations and certify the final supplemental environmental document (Sections 163 and 164, Title 14, CCR)

12. Adopt proposed changes to Dungeness crab and crab trap sport fishing regulations and negative declaration (Sections 29.80 and 29.85, Title 14, CCR)

13. Discuss proposed changes to marine protected area regulations (Section 632, Title 14, CCR)

14. Update and direction on petition for changes to sea urchin regulations

15. Climate change adaptation presentations and discussion

   (A) Charlton Bonham, Director, Department of Fish and Wildlife
   (B) Dr. Mark Gold, Associate Vice Chancellor, UCLA Institute of the Environment and Sustainability

16. Announce results from Executive Session

17. Department informational items

   (A) Director's report
   (B) Wildlife and Fisheries Division, and Ecosystem Conservation Division

(C) Law Enforcement Division
(D) Marine Region
(E) Overview of aquaculture in California
(F) Other

18. Other items

(A) Staff report
(B) Legislative update and possible action
(C) Federal agencies report

DAY 2 – OCTOBER 8, 8:00 A.M

19. Public Forum
Any member of the public may address the Commission regarding the implementation of its policies or any other matter within the jurisdiction of the Commission. The issue to be discussed should not be related to any item on the current agenda. As a general rule, action cannot be taken on issues not listed on the agenda; at the discretion of the Commission, staff may be requested to follow up on such items. Submitting written comments is encouraged to ensure that all comments will be included in the record before the Commission. Please be prepared to summarize your comments in the time allocated by the presiding commissioner.

CONSENT ITEMS

20. Receive and approve initial Private Lands Wildlife Habitat Enhancement and Management Area (PLM) plans and 2015-2020 licenses for:
(Pursuant to Section 601, Title 14, CCR)

(A) Pacheco Ranch (Santa Clara County)
(B) Camp 5 Outfitters Roth Ranch (Monterey and San Luis Obispo Counties)

21. Approve the Department's request for a 30-day extension to complete its evaluation of the petition to list the Humboldt marten (*Martes caurina humboldtensis*) as an endangered species under the California Endangered Species Act
(Pursuant to Section 2073.5, Fish and Game Code)

22. Wildlife Resources Committee

(A) Meeting summary
I. Receive and adopt recommendations
II. Update and direction concerning definition of frangible bullet
III. Update and direction concerning take of sambar deer
(B) Work plan development
I. Update on current work plan and timeline
II. Discuss and approve new topics
III. Appointments to predator workgroup

23. Items of interest from previous meetings

    (A) Action on petitions for regulatory change received at the August 2015 meeting
    (B) Action on petitions for non-regulatory changed received at the August 2015 meeting
    (C) Commission budget review
    (D) Update on bobcat trapping prohibition effective date
    (E) Update on at-risk fisheries rulemaking
    (F) Other

24. Adopt proposed changes to the transgenic definition, application and fee regulations
    (Sections 1.92 and 703, Title 14, CCR)

25. Discuss proposed changes to sport fishing regulations
    (Sections 1.05, et al., Title 14, CCR)

26. Request for authorization to publish notice of intent to amend commission meeting procedures regulations
    (Section 665, Title 14, CCR)

27. Tricolored blackbird (*Agelaius tricolor*)

    (A) Acknowledge receipt of petition from the Center for Biological Diversity to list as endangered via emergency regulation and via the listing process set forth under the California Endangered Species Act
    (Pursuant to Sections 2073.3 and 2076.5, Fish and Game Code)
    (B) Receive the Department's evaluation of the petition to list as an endangered species
    (Pursuant to 2073.5, Fish and Game Code)
    (C) Receive and act on requests from the Center for Biological Diversity to reconsider the Commission's June 2015 decision on whether listing as a threatened or endangered species may be warranted and to move consideration to the Commission's December 2015 meeting.

28. Department report on the status of Coho salmon
    (Pursuant to Section 2113, Fish and Game Code)

29. Discussion and action on future meeting items

    (A) Next meeting – December 9-10 in San Diego
    (B) Perpetual timetable for regulatory action updates (including changes to timing of DFW Lands Pass, falconry clean-up, spiny lobster, and commercial logbooks)
    (C) New business
        I. Commission name
        II. Timing of officer elections

EXECUTIVE SESSION

(Not Open to Public)

Pursuant to the authority of Government Code Section 11126(a)(1) and (e)(1), and Section 309 of the Fish and Game Code, the Commission will meet in closed Executive Session. The purpose of this Executive Session is to consider:

(A) Pending litigation to which the Commission is a party

I. Big Creek Lumber Company and Central Coast Forest Assoc. v. California Fish and Game Commission (Coho listing, south of San Francisco)

II. James Bunn and John Gibbs v. California Fish and Game Commission (squid permits)

III. Center for Biological Diversity and Earth Island Institute v. California Fish and Game Commission (black-backed woodpecker)

IV. Dennis Sturgell v. California Fish and Game Commission, California Department of Fish and Wildlife, and Office of Administrative Hearings (revocation of Dungeness crab vessel permit No. CT0544-T1)

V. Kele Younger v. California Fish and Game Commission, et al. (restricted species inspection fee waiver and Administrative Procedure Act)

(B) Possible litigation involving the Commission

I. Tricolored blackbird
II. Bobcat trapping prohibition

(C) Staff performance and compensation

(D) Update on hearing officer recommendations for license and permit items

I. Mr. Fred Todd

FISH AND GAME COMMISSION
2015 MEETING SCHEDULE
www.fgc.ca.gov

MEETING DATE	COMMISSION MEETING	COMMITTEE MEETING
November 4		**Marine Resources** Four Points by Sheraton Ventura Harbor Resort 1050 Schooner Drive Ventura, CA 93001
December 9-10	Town and Country Resort & Convention Center 500 Hotel Circle North San Diego, CA 92108	

OTHER MEETINGS OF INTEREST

Wildlife Conservation Board

- November 19, 2015, Sacramento, CA

Pacific Fishery Management Council

- November 14-19, 2015, Garden Grove, CA
- March 9-14, 2016, Sacramento, CA
- April 9-14, 2016, Vancouver, WA
- June 23-28, 2016, Tacoma, WA
- September 15-20, 2016 Boise, ID
- November 16-21, 2016, Garden Grove, CA

Western Association of Fish and Wildlife Agencies

- January 7-10, 2016, San Diego, CA
- July, 2016, Cody, WY

IMPORTANT COMMISSION MEETING PROCEDURES INFORMATION

WELCOME TO A MEETING OF THE CALIFORNIA FISH AND GAME COMMISSION
This is the 145th year of operation of the Commission in partnership with the California Department of Fish and Wildlife. Our goal is the preservation of our heritage and conservation of our natural resources through informed decision making; Commission meetings are vital in achieving that goal. In that spirit, we provide the following information to be as effective and efficient toward that end. Welcome and please let us know if you have any questions.

PERSONS WITH DISABILITIES
Persons with disabilities needing reasonable accommodation to participate in public meetings or other Commission activities are invited to contact the Reasonable Accommodation Coordinator at (916) 651-1214. Requests for facility and/or meeting accessibility should be received at least 10 working days prior to the meeting to ensure the request can be accommodated.

SUBMITTING WRITTEN MATERIALS
The public is encouraged to comment on any agenda item. Submit written comments by one of the following methods: **E-mail to fgc@fgc.ca.gov; hand deliver to Fish and Game Commission, 1416 Ninth Street, Room 1320, Sacramento, CA 95814; or hand-deliver to a Commission meeting.** ***The Commission no longer accepts written comments or requests for regulation changes via facsimile; please submit written comments and requests for regulation changes by email, mail service or in person.***

Written comments received at the Commission office by **5:00 p.m. September 24** will be made available to Commissioners prior to the meeting. Comments received by **12 noon on October 2** will be marked late and made available to Commissioners at the meeting. Otherwise, 10 copies of written comments must be brought to the meeting. All materials provided to the Commission may be made available to the general public.

PETITIONS FOR REGULATORY CHANGE AND NON-REGULATORY REQUESTS
All petitions for regulatory change and non-regulatory requests will follow a two-meeting cycle to ensure proper review and thorough consideration of each item. All requests submitted by **12 noon on October 2** (or heard during public forum at the meeting) will be scheduled for receipt at this meeting, and scheduled for consideration at the next business meeting.

Beginning October 1, 2015, all petitions for regulation change must be submitted in writing on the authorized petition form, FGC 1 Petition to the California Fish and Game Commission for Regulation Change, available at http://www.fgc.ca.gov/public/information/petitionforregulatorychange.aspx.

VISUAL PRESENTATIONS/MATERIALS
All electronic presentations must be pre-approved by the executive director. Visual presentations must be provided by email or delivered to the Commission office on a USB flash drive by **12 noon on October 2**. All electronic formats must be Windows PC compatible. A data projector, laptop and presentation mouse will be available for use at the meeting.

CONSENT CALENDAR
A summary of all items will be available for review at the meeting. Any item may be removed from the consent calendar by the Commission, or upon the request of the Department or member of the public who wishes to speak to that item.

LASER POINTERS may only be used by a speaker during a presentation; use at any other time may result in arrest.

SPEAKING AT THE MEETING
To speak on an agenda item, please complete a “Speaker Card" and give it to the designated staff member before the agenda item is announced. Cards will be available near the entrance of the meeting room. Only one speaker card is necessary for speaking to multiple items.

Agenda items may be heard in any order and on either day pursuant to the discretion of the presiding commissioner.

1. Speakers will be called in groups; please line up when your name is called.
2. When addressing the Commission, give your name and the name of any organization you represent, and provide your comments on the item under consideration.
3. Each speaker has three minutes to address the Commission; however, time may be adjusted at the discretion of the presiding commissioner. If there are several speakers with the same concerns, please appoint a spokesperson and avoid repetitive testimony.
4. Speakers may cede their time to an individual spokesperson, but only under the following conditions:
    a. Individuals ceding time forfeit their right to speak to the agenda item and must be present at the time the speaker addresses the Commission; and
    b. The minimum number of individuals required to cede time to a spokesperson and the amount of time allocated are *arranged in advance* with the presiding commissioner.
5. If you are presenting handouts/written material to the Commission at the meeting, please provide 10 copies to the designated staff member just prior to speaking.

STAFF SUMMARY FOR OCTOBER 7-8, 2015

1. PUBLIC FORUM

Today's Item **Information** ☒ **Action** ☐

Receipt of public comments and requests for regulatory and non-regulatory actions.

Summary of Previous/Future Actions

- **Today's receipt of requests and comments** **Oct 7-8, 2015; Los Angeles**
- Direction to grant, deny, or refer requests Dec 9-10, 2015; San Diego

Background

FGC generally receives three types of correspondence: Requests for regulatory action, requests for non-regulatory action, and informational only. The Administrative Procedure Act (APA) requires action on regulatory requests to be either denied or granted and notice made of that determination. At the end of public forum a motion may be made to provide direction to staff on any items for which FGC wishes to receive additional information or take immediate action. Otherwise, FGC will determine the fate of the regulatory and non-regulatory requests at the next commission meeting to allow staff time to evaluate requests.

Significant Public Comments

1. See regulatory requests in Exhibit 1
2. See non-regulatory requests in Exhibit 2

Recommendation (N/A)

Exhibits

1. Table containing a summary of new petitions for regulation change received by Sep 24 at 5:00 p.m., the comment deadline for the meeting binder.
2. Table containing a summary of new non-regulatory requests received by Sep 24 at 5:00 p.m., the comment deadline for the meeting binder.

3-26. Individual, new petitions and requests that are summarized in the tables.

27-33. Informational-only items; staff will not take any action on these unless otherwise directed by FGC.

Motion/Direction (N/A)

2. FRANCESCO LICATA (CONSENT)

Today's Item **Information** ☐ **Action** ☒

Approve an application from Mr. Francesco Licata to transfer California halibut bottom trawl vessel permit (BT0050) upon the sale of the *F/V Joyce* (FG48343).

Summary of Previous/Future Actions (N/A)

Background

Since April 2006, any vessel using bottom trawl gear in the state-managed halibut fishery must possess a valid California halibut bottom trawl vessel permit (CHBTVP) issued pursuant to Fish and Game Code, Section 8494. A CHBTVP may only be transferred under specific conditions.

Mr. Francesco Licata, who holds a CHBTVP for use on the *F/V Joyce,* has submitted an application to transfer his permit with the vessel to another owner (Exhibit 1). Pursuant to Fish and Game Code Section 8594(d)(3), a CHBTVP permitholder, or his/her conservator or estate representative, may request to transfer the permit with the vessel to a new permitholder if, prior to the implementation of a halibut trawl restricted access program, specific conditions are met. Because there is not a formal restricted access program for the California halibut fishery, FGC must determine if Mr. Licata is eligible to transfer the permit to another owner.

Two conditions must be met for FGC to approve a CHBTVP transfer: (1) The permitholder has died, is permanently disabled, or is at least 65 years of age and is retiring from commercial fishing; and (2) California halibut landings contributed significantly to the record and economic income derived from the vessel, as determined by regulations adopted by the Commission.

DFW has reviewed documentation submitted by Mr. Licata as well as landings data to support FGC consideration (Exhibit 2). Mr. Licata's documentation indicated that he is at least 65 years of age, and his application indicates that he is retiring from commercial fishing, meeting the first condition. Regarding the second condition that landings contributed significantly to the record and economic income derived from the vessel, FGC has not yet adopted any regulations to determine if the condition is met. In the absence of regulations, DFW limited its review of landings data to verifying that Mr. Licata has actively made landings of California halibut from the vessel. DFW has confirmed that, between 2011 and 2015, Mr. Licata made annual California halibut landings as one of 29 permit holders participating of the fishery (Exhibit 2).

Significant Public Comments (N/A)

Recommendation

FGC staff: Approve the application from Mr. Licata to transfer CHBTVP No. BT0050, under the condition recommended by DFW that Mr. Licata not possess a commercial fishing license or otherwise participate/assist in any commercial fishing activity henceforth.

DFW: Consider the application, with approval contingent on agreement that Mr. Licata shall

not possess a commercial fishing license or otherwise participate/assist in any commercial fishing activity henceforth.

Exhibits

1. Transfer application and non-confidential documentation submitted by Francesco Licata
2. DFW memo, received Sep 4, 2015

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the Consent Calendar, items 2-6.

3. MR. CRAIG YERKINS (CONSENT)

Today's Item **Information** ☐ **Action** ☒

Approve request from Mr. Craig Yerkins to reinstate Transferable Dungeness Crab Vessel Permit No. CT0068-T7 for F/V *Terry S*, per the settlement agreement between DFW and Craig Yerkins.

Summary of Previous/Future Actions (N/A)

Background

On Apr 2, 2015, Craig Yerkins, the managing owner of F/V *Terry S* (FG03513), submitted to DFW a renewal request for Dungeness Crab Vessel Permit No. CT0068-T7). In his request he explained that he did not submit the renewal request by the deadline because a family member was experiencing a terminal illness.

DFW license records show that F/V *Terry S* held a valid 2013-2014 TDCVP, making the TDCVP eligible for renewal for the 2014-2015 permit year. On Apr 9, 2015, DFW denied Mr. Yerkins' renewal request pursuant to Fish and Game Code, Section 7852.2(c), which states that DFW shall deny any application for renewal received after Mar 31 of the permit year following the year in which the applicant last held a valid permit for that fishery. Mr. Yerkins missed the deadline by two days.

Upon receiving Mr. Yerkins' appeal of DFW's decision, FGC staff approached DFW about a potential settlement agreement. DFW and Mr. Yerkins have signed a settlement agreement (Exhibit 1); DFW will not oppose the renewal request and within 60 days of FGC's decision Mr. Yerkins will pay all fees owed.

Significant Public Comments (N/A)

Recommendation

Approve request from Mr. Craig Yerkins to reinstate Transferable Dungeness Crab Vessel Permit No. CT0068-T7 for F/V *Terry S*, per the settlement agreement between DFW and Mr. Yerkins.

Exhibits

1. Settlement agreement between DFW and Craig Yerkins, dated Sep 8, 2015 (includes as appendices Mr. Yerkin's appeal letter to FGC and DFW's letter denying his request to renew DCVP)

Motion/Direction

Moved by _____ and seconded by _____ that the commission adopts the Consent Calendar, items 2-6.

4. MR. ROBERT JACKSON (CONSENT)

Today's Item **Information** ☐ **Action** ☒

Approve request from Mr. Robert Jackson to reinstate Transferable Dungeness Crab Vessel Permit No. CT0215-T7 for F/V *Brooke Michelle* (FG70433), per the settlement agreement between DFW and Mr. Jackson.

Summary of Previous/Future Actions (N/A)

Background

On Apr 23, 2015, Mr. Robert Jackson, owner of F/V *Brooke Michelle* FG70433), submitted to DFW a renewal request to renew Dungeness Crab Vessel Permit No. CT0215-T7 (DCVP). In his request he explained that he did not submit the renewal request by the deadline because a family member was experiencing an illness and he needed to care for his children while his wife tended to the ill family member.

DFW license records indicate that the DCVP for F/V *Brooke Michelle* was last valid during the 2013-2014 permit year, making it eligible for renewal in 2014-2015, but not 2015-2016.

On May 7, 2015, DFW denied Mr. Jackson's renewal request pursuant to Fish and Game Code, Section 7852.2(c), which requires DFW to deny any application received after March 31 of the permit year following the year in which the applicant last held a valid permit for that fishery. Mr. Jackson missed the deadline by only 23 days.

Upon receiving Mr. Jackson's appeal of DFW's decision on May 22, 2015, FGC staff approached DFW about a potential settlement agreement. DFW and Mr. Jackson have signed a settlement agreement (Exhibit 3); DFW will not oppose the renewal request and within 60 days of FGC's decision Mr. Jackson will pay all fees owed.

Significant Public Comments (N/A)

Recommendation

Approve request from Mr. Robert Jackson to reinstate Transferable Dungeness Crab Vessel Permit No. CT0215-T7 for F/V *Brooke Michelle* (FG70433), per the settlement agreement between DFW and Mr. Jackson.

Exhibits

1. Settlement agreement between DFW and Robert Jackson, dated Sep 2, 2015 (includes as appendices Mr. Jackson's appeal letter to FGC and DFW's letter denying his request to renew DCVP)

Motion/Direction

Moved by _____ and seconded by _____ that the commission adopts the Consent Calendar, items 2-6.

5. MR. JOHN REID (CONSENT)

Today's Item **Information** ☐ **Action** ☒

Approve request from Mr. John Reid to reinstate Transferable Dungeness Crab Vessel Permit No. CT0108-T7 for F/V *Huson* (FG06579), per the settlement agreement between DFW and John Reid.

Summary of Previous/Future Actions (N/A)

Background

On Aug 11, 2015, Mr. John Reid, owner of F/V *Huson* FG06579), submitted to DFW a renewal request to renew Dungeness Crab Vessel Permit No. CT0108-T7 (DCVP). In his request he explained that he did not submit the renewal request by the deadline because he inadvertently overlooked paying for the DCVP while paying renewal fees for a salmon vessel permit, commercial boat registration, and commercial fishing license.

DFW license records indicate that the DCVP for F/V *Huson* was last valid during the 2013-2014 permit year, making it eligible for renewal in 2014-2015, but not 2015-2016.

On Aug 12, 2015, DFW denied Mr. Reid's renewal request pursuant to Fish and Game Code, Section 7852.2(c), which requires DFW to deny any application received after March 31 of the permit year following the year in which the applicant last held a valid permit for that fishery.

Upon receiving Mr. Reid's appeal of DFW's decision on Aug 28, 2015, FGC staff approached DFW about a potential settlement agreement. DFW and John Reid have signed a settlement agreement (Exhibit 3); DFW will not oppose the renewal request and within 60 days of FGC's decision Mr. Reid will pay all fees owed.

Significant Public Comments (N/A)

Recommendation

Approve request from Mr. John Reid to reinstate Transferable Dungeness Crab Vessel Permit No. CT0108-T7 for F/V *Huson* (FG06579), per the settlement agreement between DFW and Mr. Reid.

Exhibits

1. Settlement agreement between DFW and John Reid, dated Sep 3, 2015 (includes as appendices Mr. Reid's appeal letter to FGC and DFW's letter denying his request to renew DCVP)

Motion/Direction

Moved by _____ and seconded by _____ that the commission adopts the Consent Calendar, items 2-6.

6. NEUSHUL MARICULTURE (CONSENT)

Today's Item **Information** ☐ **Action** ☒

Approve Neushul Mariculture, Inc. request to renew state water bottom lease No. M-654-03 for aquaculture

Summary of Previous/Future Actions

- Receive renewal request — Apr 8-9, 2015; Santa Rosa
- **Today approve renewal request** — **Oct 7-8, 2015; Los Angeles**

Background

FGC has the authority to lease state water bottoms that grant exclusive privilege to any person for conducting aquaculture, for an initial lease term not to exceed 25 years (Fish and Game Code sections 15400 and 15405). An existing lease holder may request to renew a lease prior to expiration and, if still actively engaged in aquaculture as determined by FGC, the lessee shall have a prior right to renew the lease on terms agreed upon between FGC and the lessee (Fish and Game Code Section 15406).

In 2011, FGC approved a new lease template that specified terms to be applied to new leases as well as lease renewals (Exhibit 1). The new lease template established, among other things, a lease term of 15 years with subsequent 10-year renewal terms, annual lease rental rates based on high, moderate, and low productivity classifications ($50, $100, or $150 per acre, respectively), with a provision that the State may review and recalculate lease rental rates no more frequently than every five years. The tenant is required provide to the State financial assurance sufficient for site clean-up if the lease is terminated or abandoned.

Neushul Mariculture, Inc. has held FGC-issued state water bottom lease M-654-03 in Santa Barbara Channel since 1980. The existing lease encompasses 25 acres of state water bottoms along the Santa Barbara coastline, for cultivating marine algae for research purposes, and is set to expire on Dec 8, 2015 (Exhibit 2). The lessee, Ms. Devon Harger of Neushul Mariculture, Inc., has submitted a request to renew the lease for a period of 15 years (Exhibit 4). There are no proposed changes to the culture methods or species currently authorized for the lease.

DFW has reviewed the current lease and request for renewal and provided recommendations to FGC (Exhibit 5). No changes to lease provisions or operations are proposed and, as a result, DFW has determined that the proposed project is subject to a categorical exempt from CEQA. The renewed lease would be subject to the new lease template, sets a renewed lease term of 15 years, and sets the annual rental rate based on the low productivity classification ($50 per acre). Finally, to ensure that the lessee's current financial securities (see escrow agreement, Exhibit 3) are sufficient, DFW will conduct a site survey to confirm existing structures, obtain a third-party estimate for clean-up, and adjust required financial securities to cover site clean-up as required under the lease terms.

Significant Public Comments (N/A)

Recommendation

FGC staff: Approve the lease renewal as recommended by DFW, and request that DFW proceed with steps to review and update escrow agreement if warranted.

DFW: Approve the lease renewal for a period of 15 years.

Exhibits

1. Lease template for State water bottom leases
2. Neushul Mariculture, Inc. State Water Bottom Lease M-654-03 and maps
3. Neushul Mariculture, Inc. Escrow Agreement, May 11, 2010
4. Email from Neushul Mariculture, Inc., requesting renewal of lease M-654-03, received Mar 17, 2015
5. DFW memo, received Sep 4, 2015

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the Consent Calendar, items 2-6.

7. TRIBAL COMMITTEE

Today's Item **Information** ☒ **Action** ☐

Update on progress at the Oct 6, 2015, Tribal Committee (TC) meeting in Los Angeles to draft a rulemaking to accommodate tribal requests for take exemptions in select marine protected areas.

Summary of Previous/Future Actions

- TC tribal take (TT) discussion — Apr 7, 2015; Santa Rosa
- TC TT discussion — Jun 9, 2015; Mammoth Lakes
- TC meeting to draft rulemaking — Oct 6, 2015; Los Angeles
- Today's discussion of progress — Oct 7**, 2015; Los Angeles**

Background

During FGC's rulemaking processes to adopt a network of marine protected areas (MPAs), the issue of impacting traditional gathering by Native American tribes surfaced. In particular, during the north coast study region planning effort (Point Arena to the California-Oregon border), the issue of tribal take of living marine resources was recognized as a traditional use to avoid impacting through the siting and designation of MPAs. FGC exempted take of living marine resources in specific MPAs by tribes that could demonstrate traditional use of those resources in those MPAs; this exemption did not apply to MPAs designated as "reserves".

FGC has received several requests since the north coast process from tribes that were not afforded the take exemptions in other study regions (for examples see exhibits 1-4). In a more recent instance, the Kashia Band of Pomo Indians would like to revisit the marine reserve regulations governing the Stewarts Point area. In 2010, the tribe, DFW, and FGC worked to modify the Stewarts Point MPA to maintain access to fishing and gathering, and ceremonial activities on the tribe's ancestral lands along the coast. A key element of the solution was that the property surrounding Stewarts Point was privately-owned and limited access largely to tribal members; the property has since changed hands, and is about to change hands again. The new property owners want to protect the conservation values of the property, but will also offer a public access trail running the length of the property. While the public trail will make the shoreline accessible to the public, the tribe is concerned about inappropriate access to its sacred areas, and the new owners are concerned about public safety arising from activities along the bluffs and shoreline (no exhibit)

Significant Public Comments (N/A)

Recommendation

TC prepare draft regulation change proposals to address the outstanding requests associated with tribal take in MPAs, which will allow the proposals to go through a vetting process before being presented to FGC.

Exhibits

1. Letter from the U.S. Bureau of Indian Affairs regarding tribal take in MPAs by Resighini Rancheria, received Aug 20, 2012
2. Letter from Resighini Rancheria requesting tribal take exemptions in select MPAs in north coast, received Aug 20, 2012
3. Letter from Cher-Ae Heights Indian Community of the Trinidad Rancheria, regarding consultation about tribal take exemption for Reading Rock SMCA, received Aug 14, 2013
4. Letter from Santa Ynez Band of Chumash Indians requesting tribal take exemption in SMCAs in Santa Barbara County, received Nov 1, 2011

Motion/Direction (N/A)

8. MRC

Today's Item **Information** ☐ **Action** ☒

Review tasks referred to the Marine Resources Committee (MRC), review potential agenda topics for Nov 4, 2015 MRC meeting, and consider potential new topics for MRC review.

Summary of Previous/Future Actions

- Most recent MRC meeting — Mar 4, 2015; Marina
- **Today approve draft November MRC topics** — **Oct 7-8, 2015; Los Angeles**
- Next MRC meeting — Nov 4, 2015; Ventura

Background

FGC directs committee work. Current topics already referred to MRC are shown in Exhibit 1. One additional topic previously referred to MRC is now ready to schedule for MRC review, based on DFW readiness:

- Update on Phase 2 amending kelp/algae harvest regulations: license fees and royalty rates

MRC generally meets three times per year; the Jul 8, 2015 MRC meeting scheduled for Trinidad was canceled, and outstanding topics have been rolled over for consideration on the Nov 4, 2015 MRC agenda; a full day meeting will likely be required to cover all items.

Draft agenda topics for the Nov 4, 2015 MRC meeting are shown in the Nov column of the MRC work plan (Exhibit 1) for FGC review and consideration today.

Significant Public Comments

Request from Diane Pleschner-Steele, California Wetfish Producers Association (CWPA), to be added to a future MRC agenda regarding findings from collaborative squid research between CWPA, DFW, and National Marine Fisheries Service (Exhibit 2).

Recommendation

Draft discussion topics for the Nov 2015 MRC meeting include:

- *Red Abalone Fishery Management Plan* development update
- Sustainable fishing communities discussion
- Overview of *Marine Life Management Act Master Plan for Fisheries* review
- Update on *Marine Life Protection Act Master Plan for Marine Protected Areas* review
- Phase 2 of amending kelp/algae harvest regulations
- Special project updates:
    - Fisheries bycatch workgroup update
    - Pier and jetty fishing review update

If there is interest, the request from Ms. Pleschner-Steele to present cooperative squid research results might be better served by presenting to the FGC at a future meeting.

Exhibits

1. MRC 3-year work plan and draft agenda topics for Nov 4, 2015 MRC meeting

Motion/Direction

Moved by _____ and seconded by _____ that the Commission approves the draft agenda topics for the Nov 2015 MRC meeting.

9. MARKET SQUID LOGBOOKS

Today's Item **Information** ☐ **Action** ☒

Adopt proposed changes to market squid logbooks and regulations.

Summary of Previous/Future Actions

- Original notice hearing — Apr 8-9, 2015; Santa Rosa
- Notice hearing — Jun 10-11, 2015; Mammoth Lakes
- **Today's adoption hearing — Oct 7-8, 2015; Los Angeles**

Background

The proposal will amend market squid logbook forms located in Appendix A of Title 14, and existing regulations concerning the forms (Section 149, Title 14).

Proposed changes to the market squid logbook provisions include:

- Update Market Squid Vessel Logbook (DFG 149a) and Market Squid Light/Brail Boat Logbook (DFG 149b) to bring these forms into compliance with the standards set by DFW's forms management coordinator.
- Improve instructions that explain how the logs are to be filled out.
- Improve the quality of data that are received by DFW.
- Refer to the revised forms entitled with an updated version number "Market Squid Vessel Logbook – DFW 149a (Rev. 05/01/15)", and "Market Squid Light/Brail Boat Logbook – DFW 149b (Rev. 05/01/15)."

Additionally, other non-substantive changes are proposed to the regulations in Section 149 in order to improve clarity and organization.

At the Apr 8, 2015, FGC meeting, DFW presented a potential regulatory package that included the above changes as well as proposed changes to lighting requirements in subsections (f), (g), and (h) of Section 149. However, at that same meeting, DFW withdrew its request for authorization to publish notice. The proposed lighting changes have been removed from the package to allow further scoping of current lighting practices, which has been deemed necessary to more fully evaluate the proposed lighting modifications.

Significant Public Comments (N/A)

Recommendation

FGC staff: Adopt the proposed changes as recommended by DFW.

Committee: N/A

DFW: Adopt the changes to the forms and regulatory text as originally proposed.

Exhibits

1. DFW memo, received May 14, 2015
2. ISOR
3. DFW email, received Sep 14, 2015
4. DFW presentation

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the proposed changes to market squid logbooks and Section 149, related to commercial take of market squid.

10. COMMERCIAL HAGFISH

Today's Item **Information** ☐ **Action** ☒

Adopt proposed changes to commercial hagfish regulations.

Summary of Previous/Future Actions

- Notice hearing — Aug 4-5, 2015; Fortuna
- **Today's adoption hearing** — **Oct 7-8, 2015; Los Angeles**

Background

The proposed regulations will amend Section 180.6, Title 14, to permit the use of 40-gallon barrel traps in the commercial hagfish fishery, limit the number of barrel traps to 25 per vessel, limit the number of vertical lines attached to the barrel traps to two per vessel, prohibit the use and possession of other types of traps when using barrel traps, and prohibit the use of popups on buoy lines for barrel traps. The proposal is intended to maintain the sustainability of California's hagfish fishery, reduce interaction with other bottom fishing gear, and reduce the potential for entanglement of vertical trap lines with marine mammals.

Current statutes specify the maximum number of bucket traps and Korean traps that may be used, require a general trap permit, prohibit possession of other species or gear while targeting or having in possession hagfish, and prohibit the use of popups on buoy lines for bucket and Korean traps. While statutes place a limit on the number of Korean traps and bucket traps that may be used to take hagfish, statutes do not limit the type of gear to only these two types of gear. Title 14 regulations require that all escapement holes, except the entrance funnel, of all hagfish traps have a minimum diameter of 9/16 inch to minimize the take of immature hagfish.

Significant Public Comments

1. Six comments expressing support for the proposed regulation (Exhibit 5).

Recommendation

FGC staff: Adopt the regulation as recommended by DFW.

Committee: N/A

DFW: Adopt the changes to the regulation as originally proposed.

Exhibits

1. DFW memo, received Jun 30, 2015
2. ISOR
3. DFW email, received Sep 14, 2015
4. DFW presentation
5. Email from Craig Thomsson, received Sep 14, 2015, with an attached sample of six emails received in support of the proposed changes

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the proposed changes to Section 180.6, related to commercial hagfish traps.

11. COMMERCIAL HERRING

Today's Item **Information** ☐ **Action** ☒

Certify the final supplemental environmental document, adopt the proposed project, and adopt proposed changes to commercial herring regulations.

Summary of Previous/Future Actions

- Notice hearing Aug 4-5, 2015; Fortuna
- **Today's discussion/adoption hearing** **Oct 7-8, 2015; Los Angeles**

Background

FGC annually adopts commercial herring regulations to establish fishing quotas. Proposed changes to the commercial harvest of herring and herring eggs on kelp for 2016 include:

Recommended Amendments to Section 163

- Amend Subsection 163(g)(4) by deleting the current quota of "2,500" tons and replacing it with a quota selected by FGC based on a range from zero (0) to five percent of the preceding year's spawning biomass estimate; and deleting "2014-2015". DFW is recommending a five percent quota equal to 834 tons.

Recommended Amendments to Section 164

- Amend Subsection 164(g)(3) by changing the form FG 143 HR (Rev. 2/14) to DFW 143 HR (REV. 06/04/15). The revision is necessary to conform to DFW standards and to create a form without the need for an annual update. The old and revised forms are attached to this rulemaking.
- Amend Subsection 164(h)(2) to change the application deadline for renewal of all herring eggs om kelp (HEOK) permits to be received by DFW, or if mailed, postmarked, on or before the first Friday of October each year. This change in the deadline will align the renewal dates for all other herring permits and be less confusing for the herring permit holders.
- Amend Subsection 164(j)(4) by increasing the quota allocation for HEOK permits from 0.79 to 1.0 percent of the overall quota as specified in Section 163 for harvest of herring.

Significant Public Comments (N/A)

Recommendation

FGC staff: Adopt the proposed changes as recommended by DFW.

DFW: Adopt proposed regulations.

Exhibits

1. DFW memo, received Jul 8, 2015
2. ISOR
3. Final supplemental environmental document
4. DFW memo, dated Aug 31, 2015
5. DFW presentation

Motion/Direction

Moved by _____ and seconded by _____ that the Commission certifies the final supplemental environmental document, adopts the proposed project, and adopts proposed changes to subsections 163(g)(4), et al., related to commercial harvest of herring and harvesting of herring eggs.

12. DUNGENESS CRAB

Today's Item **Information** ☐ **Action** ☒

Adopt negative declaration and proposed changes to Dungeness crab and crab trap regulations.

Summary of Previous/Future Actions

- Original notice hearing — Apr 8-9, 2015; Santa Rosa
- Notice hearing — Aug 4-5, 2015; Fortuna
- **Today's discussion/adoption hearing — Oct 7-8, 2015; Los Angeles**

Background

In Dec 2013, FGC considered requests from Coastside Fishing Club, the Golden Gate Fishermen's Association, and a commercial passenger fishing vessel (CPFV) captain, for modifications to Dungeness crab recreational fishery regulations. FGC directed these requests to be presented to the Dungeness Crab Task Force (DCTF) at its Apr 2014 meeting. DFW presented these requests to DCTF, resulting in the following recommendations:

1. Remove the language limiting CPFVs in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties to the take of six Dungeness crab that are six inches in length or greater. This change will align statewide bag and size limits.
2. Require crab traps to have one destruct device of a single strand of untreated cotton twine size No. 120 or less that creates an unobstructed escape opening in the top or upper half of the trap of at least five inches in diameter when the destruct attachment material corrodes or fails. This change will help to ensure trapped organisms can escape from a lost trap.
3. Require crab traps to be affixed with a buoy and that each buoy shall be marked to identify the operator's GO ID number as stated on his/her sport fishing license. These changes will identify the operator of the trap for enforcement purposes since it is unlawful to disturb traps that belong to another person.
4. Prohibit all crab traps from being deployed in ocean waters seven days prior to the opening of the Dungeness crab season. This change would prevent crab traps from being in the water before the season starts, thus reducing illegal catch.
5. Add Santa Barbara County to clarify the location of Point Arguello, the southernmost landmark where crab traps and crab loop traps can be used in California.

At the Apr 2015 notice hearing, several CPFV operators gave public comment in opposition to the CPFV crab limit change. FGC did not give authorization to publish notice, pending review of the concerns. In Jun 2015, DFW updated FGC and recommended moving forward with the original request. Following discussion, FGC expressed interest in pursuing regulation changes to go into effect in time for the season opener of Nov 1, 2015, which would require notice in Aug, and adoption in Oct, with a request to the Office of Administrative Law for expedited review.

At the notice hearing in Aug, FGC authorized DFW to go to notice, with a DFW-recommended change to the proposal – that instead of requiring buoys be marked with the owner's GO ID number, to change to the operator's GO ID number for purposes of enforcement. DFW has notified FGC staff that some opposition has been expressed to DFW about the change from owner to operator, but stands by its recommendation.

Significant Public Comments

1. Report from DCTF, providing its recommendation regarding the Coastside Fishing Club proposal (Exhibit 4)
2. Letter from Coastside Fishing Club, renewing its petition to revise recreational D. crab regulations and stating a willingness to defer certain items to simplify a rulemaking package (Exhibit 5)
3. Support for Coastside's proposal (Exhibit 6, page 11, and Exhibit 7, example of 35 form letters)
4. A recommendation to eliminate the 60 crab trap limit for CPFVs (Exhibit 8).
5. Commercial D. crab fishermen opposed to the proposed amendments related to reduced size for six counties (to make consistent statewide for recreational fishermen, but still shorter than commercial requirements) and the statewide 10-crab limit, and in support of a destruct device for pots (exhibits 9-11)

Recommendation

FGC staff: Adopt the proposed changes as recommended.

DFW: Adopt proposed regulations.

Exhibits

1. DFW memo, dated Jul 6, 2015
2. ISOR
3. Negative declaration
4. Report from the Dungeness Crab Task Force to DFW and FGC, dated May 9, 2014
5. Letter from Coastside Fishing Club, dated May 2, 2014
6. Letter from Earthjustice and Center for Biological Diversity and, received Jun 26, 2015
7. Sample support form letter from Larry Starrk, received Sep 4, 2015
8. Email from Captain Tom Mattusch, received Nov 24, 2014
9. Email from Erik Owen, received Aug 27, 2015
10. Email from Nick Krieger, received Sep 10, 2015
11. Letter from Joe Nungaray, received Sep 1, 2015
12. DFW Presenation

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the negative declaration and proposed changes to subsection 29.80(c), et al. related to recreational Dungeness crab and crab traps regulations.

13. MARINE PROTECTED AREAS (MPA)

Today's Item **Information** ☒ **Action** ☐

Discuss proposed changes to marine protected area regulations.

Summary of Previous/Future Actions

- Notice hearing — Aug 4-5, 2015; Fortuna
- **Today's discussion hearing** — **Oct 7-8, 2015; Los Angeles**
- Adoption hearing — Dec 9-10, 2015; San Diego

Background

The proposed regulations will clarify and correct errors and inconsistencies in the regulations as follows:

- Clarify the origin of MPA and marine managed area (MMA) definitions.
- Clarify the allowed and prohibited take for marine resources in state marine reserves (SMRs), state marine conservation areas (SMCAs), state marine parks (SMPs), and state marine recreational management areas (SMRMAs).
- Remove the allowance for aquaculture within Drakes Estero SMCA.
- Clarify aquaculture use in Morro Bay SMRMA.
- Update obsolete commercial troll gear references.
- Remove the allowance for the commercial harvest of kelp within Año Nuevo SMCA and change its classification from an SMCA to an SMR.
- Simplify the names of twenty-one MMAs.
- Adjust the shared boundary between Laguna Beach SMR and Laguna Beach no-take SMCA to address municipality concerns.
- Replace the coordinate boundary at Goleta Slough SMCA with the mean high tide line.
- Delete unnecessary text pertaining to the mean high tide line for three offshore MMAs.
- Refine boundaries to improve geographic accuracy for 106 MMAs and special closures by:
    - adding a third decimal place to increase precision for all current coordinates ending at 1/100th of a minute;
    - moving coordinates closer to an intended point of reference;
    - adding additional coordinates to existing boundaries; and
    - anchoring offshore boundaries on the 3 nautical mile state line.
- Correct a printing error in subsection 632(b)(120) and make other non-substantive changes for clarity and consistency.

At its Aug 4, 2015, meeting, FGC received a request from Mr. Joe Exline for an alternate western boundary line for Laguna Beach SMR, rather than the boundary correction proposed

by DFW. FGC received testimony in opposition to this recommendation and did not include Mr. Exline's proposal in the rulemaking.

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

1. DFW memo, received Jul 20, 2015
2. ISOR
3. ISOR Attachment 1 – Summary of proposed language amendments
4. ISOR Attachment 2 – Summary of proposed boundary refinement amendments
5. ISOR Attachment 3 – Proposed boundary refinement images
6. DFW presentation

Motion/Direction (N/A)

14. SEA URCHIN

Today's Item **Information** ☐ **Action** ☒

Receive update and presentation from the California Sea Urchin Commission (CSUC) on proposed sea urchin regulation changes, and give direction concerning potential rulemaking.

Summary of Previous/Future Actions

- MRC received CSUC proposal — Jun 18, 2013; Santa Barbara
- MRC receives revised CSUC proposal — Aug 5, 2014; San Diego
- FGC accepts proposal; schedules rulemaking — Oct 2014; Mt. Shasta
- FGC puts rulemaking on hold — Dec 3, 2014; Van Nuys
- **Today receive update; give direction — Oct 7-8, 2015; Los Angeles**

Background

Since the 1970s, sea urchins (primarily red) have been commercially harvested throughout California. A spike in commercial effort and landings in the late 1980s led to new regulations; this included establishing a capacity reduction goal of 300 permits, a lottery system to allow for one new entrant for every 10 permits not renewed (i.e., 10-to-1 issuance) until the capacity goal of 300 was reached (at which time the lottery would revert to 1-to-1 issuance), and restrictions on fishing days from Jun-Oct. The capacity goal of 300 permits was reached in approximately 2007 (see Exhibit 1 for a 2014 DFW presentation to MRC on the fishery). Since then, between one-third and one-half of permits have been inactive, or "latent".

Industry concern over the potential for these latent permits to become active and result in unsustainable fishery economic and resource conditions prompted the CSUC, an industry-sponsored body of voting- and non-voting members, to develop a regulation change proposal. The proposal, primarily focused on permit capacity reduction, underwent a lengthy review and revision process through the MRC and CSUC consultations with DFW, culminating in an Aug 2014 MRC recommendation for FGC to accept the revised and streamlined proposal for 2015 rulemaking.

The proposed changes include reducing the permit capacity goal from 300 to 150 permits through a revised 10-to-1 permit issuance system. The proposal also added one day of fishing to the current four allowed Jun – Oct in southern California.

At its Oct 2014 meeting, FGC accepted the MRC recommendation to schedule rulemaking for 2015 but, in response to testimony from an urchin buyer/processor concerned with the proposed capacity goal of 150, asked that CSUC work with the processing sector to identify a solution with which all could agree. Ultimately the rulemaking was put on hold pending a shared agreement.

Exhibit 2 provides CSUC's update regarding its efforts to work with processors to address their concerns (without success), and request to move forward with the rulemaking. CSUC believes that it has made a good-faith effort to engage the processing sector throughout, and that the opportunities for them to respond were sufficient enough to warrant moving forward without

further delay, despite some unresolved opposition. A CSUC summary of proposed changes, processor concerns, and CSUC response to those concerns, are shown in Exhibit 3; today, CSUC will present its request and rationale to FGC.

DFW's Marine Region has consistently expressed support for the general concept of reducing capacity in the fishery, recognizing that there is an unquantified resource risk of overfishing if all latent permits started actively fishing. As an industry-driven proposal, however, it has deferred to the petitioner, CSUC, to define the details and has only been supportive of moving forward with a simple and unified proposal, to minimize staff workload associated with supporting the rulemaking (see DFW recommendation). While CSUC has hired a consultant to support the rulemaking and alleviate some of staff's associated workload, concern remains that division between the fishing and processing sectors may lead to the more complex rulemaking they are attempting to avoid.

Significant Public Comments (N/A)

Recommendation

FGC staff: Staff recommends scheduling the proposed changes for the 2016 rulemaking calendar, given that CSUC will provide resources to support the rulemaking and CEQA processes.

DFW: The Marine Region supports the concept of reduced urchin permit capacity in general, but has deferred to the petitioner, CSUC, to define the details. Marine Region has only endorsed moving forward with a unified proposal and commitment from CSUC to provide adequate resources to support the rulemaking process.

Exhibits

1. DFW presentation on sea urchin, presented to MRC in Aug 2014
2. Letter from David Goldenberg, CSUC, received Jul 31, 2015
3. CSUC revised proposal, submitted Sep 24, 2015, dated October 7, 2015

Motion/Direction

Moved by _____ and seconded by _____ that the Commission directs staff to begin working with the California Sea Urchin Commission on a draft initial statement of reasons and appropriate CEQA document for the proposal as presented, and to schedule a rulemaking for 2016.

15. CLIMATE CHANGE UPDATE

Today's Item **Information** ☒ **Action** ☐

Receive presentations on efforts to address climate change and genomics in wildlife management.

Summary of Previous/Future Actions (N/A)

Background

As follow-up to a presentation made to FGC in 2014 by Dr. Mark Gold, FGC will receive two sets of presentations on efforts to address impacts of climate change on California's wildlife. The first presentation will be about the efforts by DFW and the second is a set of speakers on how recent scientific developments may help wildlife managers.

1. California Department of Fish and Wildlife: Climate Change Adaptation
2. The Role of Conservation Genomics in Wildlife Management: An Update on Pertinent Research at UCLA

   Introduction, Overview and Conclusion
   Mark Gold, UCLA Associate Vice Chancellor of Environment and Sustainability

   Desert Tortoises and Solar Development in the Mojave
   Brad Shaffer, Professor in Ecology and Evolutionary Biology (EEB) and the Institute of Environment and Sustainability (IoES), Director of the LaKretz Center for California Conservation Science

   Bird Genoscape Project - Pacific Flyway Migratory Birds
   Tom Smith, Professor in EEB and IoES, Director of the Center for Tropical Research
   Genomics of California Market Squid*Samantha Cheng, Ph.D. student in EEB*

   The Use of Genomics for Poaching and Conservation Forensics

Robert Wayne, Professor in EEB **Significant Public Comments (N/A)**

Recommendation (N/A)

Exhibits (N/A)

Motion/Direction (N/A)

16. EXECUTIVE SESSION

Today's Item **Information** ☒ **Action** ☐

(A) Pending litigation to which FGC is a party: See agenda for complete list of litigation.
(B) Possible litigation involving FGC: Tricolored blackbird, bobcat trapping ban.
(C) Staff performance and compensation: Update on staffing.
(D) Update on hearing officer recommendations on license and permit items:
    I. Mr. Fred Todd

Summary of Previous/Future Actions (N/A)

Background

This is a standing agenda item for FGC to announce results from its executive session.

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits (N/A)

Motion/Direction (N/A)

17. DEPARTMENT INFORMATION

Today's Item **Information** ☒ **Action** ☐

This is a standing agenda item to receive and discuss informational updates from DFW:

(A) Director's Report
(B) Wildlife and Fisheries Division, and Ecosystem Conservation Division
(C) Law Enforcement Division
(D) Marine Region
(E) Other

Summary of Previous/Future Actions (N/A)

Background

The DFW Law Enforcement Division is now preparing and distributing a monthly report (exhibits C1-C2).

At FGC's request, the Marine Region has provided a memo with information about marine fisheries management authorities (Exhibit D1)

The week of Sep 21 was Aquaculture Awareness Week (Exhibit E1).

DFW has undertaken or reported on a number of activities that are potentially of interest to FGC members (see exhibits F1-F12).

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

C1. *Law Enforcement Division Monthly Report*, Jun 2015
C2. *Law Enforcement Division, Monthly Report*, Jul 2015
D1. Memo from Regional Manager Craig Shuman, dated Sep 24, 2015
E1. CDFW News Release: *Aquaculture Awareness Week: 10 Facts About California Aquaculture*, dated Jun 3, 2015
F1. CDFW News Release: *Responsible Angling Practices Help Conserve Sturgeon Populations*, dated Aug 11, 2015
F2. CDFW News Release: *Recreational Pacific Halibut Fishery to Close August 13*, dated Aug 11, 2015
F3. CDFW News Release: *CDFW to Hold Public Meeting on Merced River Closure*, dated Aug 11, 2015
F4. CDFW News Release: *CDFW Wildlife Officer Academy Graduates 30 Cadets*, Aug 14, 2015
F5. CDFW News Release: *Emergency Merced River Angling Closure in Effect as of Aug.*

18, dated Aug 18, 2015

F6. CDFW News Release: *Photo Shows Wolf Pups in Northern California*, dated Aug 20, 2015

F7. CDFW News Release: *CDFW Now Recruiting New Wildlife Officers*, dated Aug 25, 2015

F8. CDFW News Release: *Reporting Resources Violations Faster, Easier Using Technology*, dated Aug 26, 2015

F9. CDFW News Release: *Camp Meeker Water District Releasing Water to Save Salmon*, dated Sep 4, 2015

F10. CDFW News Release: *American River Hatchery Suffers Fish Die-off*, dated Sep 9, 2015

F11. CDFW News Release: *Reward Offered for Return of Satellite Tags from Federally Protected Green Sturgeon*, dated Sep 15, 2015

F12. CDFW News Release: *CDFW Recognizes National Hunting and Fishing Day, Celebrates Contributions of California's Hunters and Anglers*, dated Sep 23, 2015

Motion/Direction (N/A)

18A. OTHER ITEMS – STAFF REPORT

Today's Item **Information** ☒ **Action** ☐

Receive the staff report, including the Aug meeting highlights and staff time allocations.

Summary of Previous/Future Actions (N/A)

Background

Aug Meeting HIghlights

Per President Baylis' request, staff has prepared a shortened summary of meeting outcomes for the previous meeting (Exhibit A1).

Staff Capacity and Roles

In an effort to help keep FGC current on its staffing and where staff is expending its time, staff has developed a report that shows the allocation of time in general categories for the previous month, as well as highlights some of the specific activities for the previous and current months (Exhibit A2).

About a dozen individuals have applied for the Wildlife Advisor position (senior environmental scientist, specialist), with about half of the applications incomplete. Staff is reviewing the remaining applications. The position remains open until filled.

The need for dedicated legal assistance has been steadily increasing as FGC issues have become more complex. In recognition of this need, DFW agreed to hire a lawyer that would be dedicated to the legal needs of FGC; Michael Yuan has accepted the position and will begin Nov 2, 2015. Michael Yuan has served as counsel to the Florida Fish and Wildlife Conservation Commission for the past thirteen years. For the last six of those years, he served as the Deputy General Counsel. Mr. Yuan attended Florida State University, College of Law, and graduated in 2001.

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

A1. Staff summary of Aug 2015 FGC meeting outcomes
A2. *Staff Report on Staff Time Allocation* – dated September 25, 2015

Motion/Direction (N/A)

18B. OTHER ITEMS – LEGISLATIVE UPDATE

Today's Item **Information** ☒ **Action** ☒

Review and discuss legislation of interest, and provide staff direction.

Summary of Previous/Future Actions

- Brief legislative update Aug 4-5, 2015; Fortuna
- **Today's update and possible action** **Oct 7-8, 2015; Los Angeles**

Background

FGC staff has prepared a list of legislative bills that may be of interest to FGC, which includes a brief synopsis and current bill status. Items highlighted in yellow indicate legislation of particular interest or that may impact FGC's resources and workload.

This is an opportunity for FGC to provide direction to staff concerning any proposed legislation. At any meeting FGC may direct staff to provide information or share concerns with bill authors. FGC members also have the option to take positions on bills at the same meeting an update is provided.

The State legislature recessed on September 11, 2015, and will reconvene on January 4, 2016. The last day for the Governor to sign or veto bills passed by the Legislature is October 11, 2015.

Updates on Adopted Legislation

SB 798 (Committee on Natural Resources)-- If signed by the Governor, this bill exempts the Commission from the Administrative Procedures Act for sport fishing conformance which will notably impact consideration of ocean salmon, Pacific halibut, and bluefin tuna regulations.

Updates on Pending Legislation

AB 290 (Bigelow) – This is a 2-year bill; would re-define "pigs", prohibit release into uncontrolled areas, eliminate DFW-required management plan, require up to 40% of funds from sale of wild pig validations be used to remedy damage by pigs, replace the wild pig tag with a validation on the hunting license which permits unlimited take and possession, set pig validation at $15 for residents and $30 for nonresidents, and prohibit take at night unless DFW is notified by 3:00 p.m. prior to the planned take.

AB 435 (Chang) – This is a 2-year bill; would require that each department, board, and commission of the Natural Resources Agency, except as specified, and each department, board, and office of the California Environmental Protection Agency Web cast all onsite public meetings, in a manner that enables listeners and viewers to ask questions and provide public comment by telephone or electronic communication commensurate with those attending the meeting.

AB 665 (Frazier) – This is a 2-year bill; would confirm that the state fully occupies the field of authority for the taking and possession of fish and game. The bill was amended to alleviate concerns regarding the prohibition of cities and counties from enacting laws that affect

incidental take for the purpose of protecting health and/or safety. The bill clarifies that unless otherwise authorized by the Fish and Game Code or other state or federal law, FGC and DFW are the only entities that may adopt or promulgate regulations regarding the take or possession of fish and game on any lands or waters within the state.

AB 729 (Atkins) – This is a 2-year bill. Per FGC request, staff met with Speaker Atkins' staff. Legislative staff indicated Speaker Atkins is not seeking to remove FGC's aquaculture lease authority. FGC staff agreed to keep in touch with the office and monitor the legislation.

SB 345 (Berryhill) – This is a 2-year bill. If passed, the bill would (1) authorize charitable organizations to possess fish taken under a sport fishing license in excess of a possession under certain provisions, (2) require FGC to adopt regulations to clarify when a possession limit is not violated by processing into food lawfully taken sport fish, (3) make annual fishing licenses valid for a full 12 months, and (4) create a junior fishing license.

Significant Public Comments (N/A)

Recommendation

FGC staff: See WRC Staff Summary (Item No. 22) for input re: AB 290 (pigs) and SB 345 (fishing license)

WRC: See WRC staff summary (Item No. 22)

DFW staff: The Department *does not* support SB 345.

Exhibits

1. FGC legislative tracking log, as of Sep 24, 2015
2. DFW legislative report, as of Sep 23, 2015

Motion/Direction

Moved by _____ and seconded by _____ that the commission supports _____ and/or opposes _____.

18C. OTHER ITEMS – FEDERAL REPORT

Today's Item **Information** ☒ **Action** ☐

This is a standing agenda item to receive reports on any recent federal agency activities of interest not otherwise addressed under other agenda items.

Summary of Previous/Future Actions (N/A)

Background

U.S. Department of Food and Agriculture (USDA): USDA's Office of the Inspector General conducted an audit of the Animal and Plant Health Inspection Service (APHIS) Wildlife Services to, among other things, determine if wildlife damage management activities were justified and effective. The audit does not identify problems with wildlife damage management activities, but makes seven recommendations related to the management information system (Exhibit C1).

National Oceanic and Atmospheric Administration (NOAA): NOAA announced the availability of approximately $10 million in competitive grants to address the needs of fishing communities and to increase opportunities to keep working waterfronts viable. The deadline for proposals is Nov 2 (Exhibit C2). The new NOAA Fisheries Climate Science Strategy identifies seven key steps that aim to reduce the effects of climate change on fisheries and living marine resources (Exhibit C3)

U.S. Fish and Wildlife Service (USFWS): USFWS announced that California will receive nearly $16 million in grants (over 40% of grant monies awarded to 20 states) to boost collaborative endangered species conservation efforts (Exhibit C4).

Other USFWS activities and announcements include:

1. A new fish screen and intake facility will improve fish passage on the Sacramento River, especially important for migratory fish like salmon and steelhead (Exhibit C5)
2. Restoration efforts in south San Francisco Bay are paying dividends for two key endangered species (Exhibit C6).
3. Central Valley refuges are benefiting from a forward-looking conservation process, the California Landscape Conservation Cooperative (Exhibit C7).
4. USFWS and its partners are working to combat killer chytridiomycosisa in declining California frog populations (Exhibit C8).
5. For the first time in two years water is being pumped via the Ady Canal into Lower Klamath National Wildlife Refuge, the most significant feeding and nesting habitat for waterfowl in the Western U.S., to increase the amount of water available for migrating waterfowl (Exhibit C9).

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

C1. DOI news release: *OIG Audited APHIS' Wildlife Services (WS) to determine whether its damage management activities complied with applicable laws and requirements*, Audit Report 33601-0002-41, dated Sep 2015

C2. NOAA news release: *NOAA announces up to $10 million available to support fisheries projects under Saltonstall-Kennedy Grants Program*, dated Se 3, 2015

C3. NOAA Fisheries news release: *CNOA's new Climate Science Strategy aims to reduce effects of climate change on fisheries and living marine resources*, dated Aug 25, 2015

C4. USFWS news release: *California to Receive Nearly $16 million in Grants to Boost Endangered Species Conservation Efforts*, dated Aug 13, 2015

C5. USFWS field notes entry: *Pritchard Lake Fish Screen and Intake Facility to Improve Fish Passage on the Sacramento River,* dated May 29, 2015

C6. USFWS field notes entry: *Restoration Efforts Paying Dividends for Two Key San Francisco Bay Area Endangered Species*, dated Aug 21, 2015

C7. USFWS field notes entry: *Refuge Benefits from Forward-Looking Process to Conserve California's Central Valley*, dated Aug 26, 2015

C8. USFWS field notes entry: *Service Working to Combat Killer Chytrid in California Frog Populations*, dated Aug 28, 2015

C9. USFWS field notes entry: *Fall Waterfowl Migration Underway at Lower Klamath NWR*, dated Sep 10, 2015

Motion/Direction (N/A)

1
19. PUBLIC FORUM (DAY 2)

Today's Item **Information** ☒ **Action** ☐

Receipt of public comments and requests for regulatory and non-regulatory actions.

Summary of Previous/Future Actions

- **Today's receipt of requests and comments** **Oct 7-8, 2015; Los Angeles**
- Direction to grant, deny, or refer requests Dec 9-10, 2015; San Diego

Background

FGC generally receives three types of correspondence: Requests for regulatory action, requests for non-regulatory action, and informational only. The Administrative Procedure Act (APA) requires action on regulatory requests to be either denied or granted and notice made of that determination. At the end of public forum a motion may be made to provide direction to staff on any items for which FGC wishes to receive additional information or take immediate action. Otherwise, FGC will determine the fate of the regulatory and non-regulatory requests at the next commission meeting to allow staff time to evaluate requests.

Significant Public Comments

1. See regulatory requests in Exhibit 1
2. See non-regulatory requests in Exhibit 2

Recommendation (N/A)

Exhibits

See exhibits for Item No. 1.

Motion/Direction (N/A)

20. INITIAL PLM LICENSE AND PLAN (CONSENT)

Today's Item **Information** ☐ **Action** ☒

Approve the initial Private Lands Wildlife Habitat Enhancement and Management Area (PLM) 5-year management plans, applications and 2015 harvest programs for two properties.

Summary of Previous/Future Actions (N/A)

Background

DFW has reviewed the applications and management plans for these properties and found that they are in compliance with FGC policies for private lands management (Exhibit 1).

Significant Public Comments (N/A)

Recommendation

FGC staff: Approve under a motion adopting the consent calendar.

DFW: Approve the 2015-2020 wildlife management plans, applications and 2015 harvest programs (Exhibit 2).

Exhibits

1. DFW memo, received Sep 4, 2015
2. PLM initial annual details

Motion/Direction

Moved by _____ and seconded by _____that the Commission adopts the Consent Calendar, items 20-21.

21. HUMBOLDT MARTEN PETITION (CONSENT)

Today's Item **Information** ☐ **Action** ☒

DFW requests an extension of 30 days to evaluate the petition to list the Humboldt marten as endangered under the California Endangered Species Act.

Summary of Previous/Future Actions

• Received petition	Jun 8, 2015
• FGC transmits petition to DFW	Jun 18, 2015
• Notice of Receipt of Petition published	Jul 24, 2015
• **Act on DFW request for 30-day extension**	**Oct 8, 2015; Los Angeles**
• Receive DFW evaluation and recommendation	Dec 9-10, 2015; San Diego
• Determine whether petitioned action may be warranted	Feb 10-11, 2016; Sacramento

Background

California Fish and Game Code, Section 2073.5, requires that within 90 days of receiving a petition, DFW shall evaluate the petition and submit to FGC a written evaluation with a recommendation; under this section the director of DFW may also request an extension of up to 30 days to complete the evaluation.

If the extension request is granted, the new due date will be Oct 16, 2015.

Significant Public Comments (N/A)

Recommendation

FGC staff: Approve DFW's request for an additional 30 days.

Exhibits

1. DFW memo requesting a 30-day extension

Motion/Direction

Moved by _____ and seconded by _____that the Commission adopts the Consent Calendar, items 20-21.

22. WILDLIFE RESOURCES COMMITTEE

Today's Item **Information ☒** **Action ☒**

Discuss results and recommendations from the Sep 9, 2015, WRC meeting.

Summary of Previous/Future Actions

• WRC meeting	May 6, 2015; Los Angeles
• Tentative approval of recommendations	Jun 10-11, 2015; Mammoth Lakes
• Most recent WRC meeting	Sep 9, 2015; Fresno
• **Today discuss and approve recommendations**	**Oct 8-9, 2015; Los Angeles**

Background

FGC directs committee work. The September agenda item was focused on resolving the structure and function of the Predator Policy Workgroup and approving agenda topics for the Sep WRC meeting (Exhibit 1). In addition, DFW made a presentation reporting on results of a snagging study that was requested by FGC.

Topics that were previously referred by FGC to WRC and were outstanding tasks:

- Predator management policy review
- One year versus calendar term fishing license
- Feral pig management
- Possession of game for processing into food (Sec. 3080(e), Fish and Game Code)

With regard to the predator management policy review, FGC staff identified the growing public participation and group dynamics of the Predator Policy Workgroup as preventing meaningful progress. At the May WRC meeting a possible solution was identified and tentatively approved by FGC at its June meeting. Staff presented structural and functional recommendations for the Predator Policy Workgroup (Exhibit 3), which FGC adopted at its Aug 2015 meeting. Also in Aug the president nominated Bill Gaines, Noelle Cremers, and Jean Su to the writing group. At the Sep 2015 WRC meeting the co-chairs decided to consider appointing additional members at the Oct 2015 FGC meeting based on the list of applicants (Exhibit 4).

DFW's snagging presentation was the result of a study that FGC requested in response to controversies surrounding salmon and steelhead fishing methods. Concerns were raised that certain fishing methods are unsportsmanlike and cause harm to fishing opportunities and fish populations.

Significant Public Comments

1. The Al Taucher Conservation Coalition (ATCC) is requesting clarification as to what process WRC is using to implement the Predator Policy Workgroup relative to the approved by FGC in Aug, 2015 (Exhibit 2).
2. National Shooting Sports Foundation (NSSF) expresses concerns about transparency and process being used by WRC to address predator policy (Exhibit 5).

3. Safari Club International (SCI) is concerned about WRC form and function relative to predator policy project (Exhibit 6).

Recommendation

FGC: Staff has not had sufficient time to process and evaluate all of the applications for the Predator Policy Workgroup that continue to arrive and therefore has no recommendations at this time.

WRC:

1. Fix definition of legal bullets for big game to exclude “frangible” bullets
2. Delete prohibition on the use of GPS for hounds
3. Support the DFW proposals for upland game, mammals, Klamath River, and waterfowl
4. Conduct additional investigation into the 12-month fishing license proposal and ways to encourage fishing participation
5. Support legislative efforts to make dealing with depredating pigs more efficient
6. Support continuing effort to implement 3080(e) dealing with possession of game for processing into food
7. Consider appointing additional members to the predator policy workgroup at October FGC meeting

Exhibits

1. WRC Sep 9, 2015, meeting materials (see Sep 9, 2015 at http://www.fgc.ca.gov/meetings/2015)
2. ATCC letter regarding WRC function, received Sep 8, 2015
3. Approved Predator Policy Workgroup proposal
4. List of applicants to Predator Policy Workgroup, as of Sep 25, 2015
5. NSSF letter regarding WRC structure and function, received Sep 24, 2015
6. SCI letter regarding WRC form and function, received Sep 24, 2015

Motion/Direction

Moved by _____and seconded by _____ that the Commission approves _____recommendations of the WRC.

Moved by _____and seconded by_____ that the Commission appoints _____ to the writing and _____ to the review groups of the Predator Policy Workgroup

23. ITEMS OF INTEREST FROM PREVIOUS MEETINGS

Today's Item **Information** ☒ **Action** ☒

This is a standing agenda item for FGC to provide direction on regulatory petitions and non-regulatory requests from the public, as well as other items of interest from previous meetings. For this meeting:

(A) Action on petitions for regulatory change received at the Aug meeting and pending items from previous meetings.

(B) Action on non-regulatory requests received at the Aug meeting and pending items from previous meetings.

(C) Commission budget review

(D) Update on bobcat trapping prohibition effective date

(E) Update on fisheries-at-risk rulemaking.

(F) Other

1. Receive final Marine Protected Areas Statewide Leadership Team Work Plan, endorsed by Ocean Protection Council on Sep 22, 2015
2. Update regarding legal questions from commission and staff (Exhibit F3)

Summary of Previous/Future Actions

(A-B) FGC received the requests in exhibits A1 and B1 in three ways: (1) Requests received at the office through July 23 were published as tables in the June meeting binder, (2) requests received as late handouts were delivered at the June meeting, and (3) requests that were received during public forum at the June meeting.

(C) FGC received a DFW and FGC budget overview at the Aug 2015 meeting. President Baylis requested more detail of the FGC budget

(D) FGC adopted a bobcat trapping ban regulation at its Aug 2015 meeting

(E) in Jun 2015 FGC adopted an emergency regulation for fisheries at risk that is set to expire on Dec 29, 2015. FGC also directed staff to begin work on a long-term solution for fisheries at risk.

(F) 1. Aug 4-5, 2015, Fortuna - FGC received update on implementation and management of California's marine protected areas, including work plan efforts
2. During the Aug 2015 FGC meeting, several legal questions were raised and Deputy Attorney General Daniel Harris was asked to research and provide any information he could in response.

Background

(A-B) FGC provides guidance and direction to staff regarding requests from the public received by mail and email and during public forum at the previous FGC meeting. The public request logs listed as exhibits capture the regulatory and non-regulatory requests received through the last meeting that require FGC guidance.

(C) FGC requested a review of its budget allocation. A staff presentation will address the allocated spending authority for the 2015-16 fiscal year.

(D) FGC adopted a statewide bobcat trapping ban at its Aug 2015 meeting. Staff has been preparing the Final Statement of Reasons for review and approval by the Office of Administrative Law and Department of Finance; once their approval is received, the Secretary of State will provide the final approval, making the proposal law. Staff will provide an update on the expected date the regulations will be effective.

(E) DFW will provide an update on efforts to develop a regulation for a long-term solution for fisheries at risk. See agenda item 29B for proposed additions to the rulemaking timetable.

(F) 1. In Aug 2015, FGC received a series of presentations covering implementation and management activities for California's marine protected areas (MPAs) being undertaken by State agency representatives (FGC, DFW, OPC) and partners. One activity highlighted by presenters was the near-completion of a three-year work plan by the MPA Statewide Leadership Team, which includes ongoing review and regulatory actions by FGC. The work plan is now finalized, and was endorsed by OPC at its Sep 22, 2015 meeting in Sacramento (see exhibits 23F.1 and 23F.2).

2. Periodically, the FGC has questions regarding form or function of the commission that requires legal evaluation.

Significant Public Comments

(D) Concerns have been raised about the potential effective date of the bobcat trapping ban being after the start of the season (see exhibits D.1-D.4).

Recommendation

(A-B) Adopt staff recommendations for the regulatory and non-regulatory requests with either (1) deny the request, (2) grant the request, or (3) refer the request to MRC, WRC, TC, DFW staff, or FGC staff for further evaluation or information gathering. The exhibits contain staff recommendations for each request.

(C) N/A

(D) N/A

(E) Accept the requested changes to the regulatory timetable under agenda item 29B.

(F) 1. N/A

2. N/A

Exhibits

A1. Regulatory requests received at the Aug 2015 meeting

B1. Non-regulatory requests received at the Aug 2015 meeting
C1. Staff presentation on FGC allotment for 2015-16
D1. Email from the Center for Biological Diversity raising concerns about the effective date for the bobcat trapping ban, received Aug 17, 2015
D2. Email from M. Kirsh requesting that the bobcat trapping ban become effective immediately, received Sep 2, 2015
D3. Follow-up email from the Center for Biological Diversity reiterating concerns about the effective date for the bobcat trapping ban, received Sep 14, 2015
D4. Email from Kanta Masters requesting that FGC request an expedited review by the Office of Administrative Law of the bobcat trapping regulation, received Sep 23, 2015
F1. MPAs Statewide Leadership Team Work Plan FY 15/16–17/18 and Executive Summary
F2. Resolution of the Ocean Protection Council (adopted Sep 22, 2015)
F3. Memo from Daniel S. Harris, Deputy Attorney General, Natural Resources Law Section, Office of the California Attorney General, dated Sep 15, 2015

Motion/Direction

(A-B) Moved by _____ and seconded by _____ that the commission adopts the staff recommendations for actions on August 2015 regulatory and non-regulatory requests.

OR

Moved by _____ and seconded by _____ that the Commission adopts the staff recommendations for actions on August 2015 regulatory and non-regulatory requests, except for item(s) _____ for which the action is _____.

24. TRANSGENIC

Today's Item **Information** ☐ **Action** ☒

Adopt proposed changes to the transgenic definition, application and fee regulations.

Summary of Previous/Future Actions

- DFW's report on transgenics — Jun 10-11, 2015; Mammoth Lakes
- Notice hearing — Aug 4-5, 2015; Fortuna
- **Today's adoption hearing** — **Oct 7-8, 2015; Los Angeles**

Background

DFW's review of the current definition of "transgenic" in Title 14, Section 1.92, has revealed several vulnerabilities that could prevent FGC and DFW from adequately protecting native fish and wildlife from the threat of predation by, competition with, or hybridization with potentially threatening transgenic species. DFW's proposed revision to the definition of transgenic addresses each of these vulnerabilities and, in doing so, seeks to enhance the ability of FGC and DFW to protect native fish and wildlife. In developing this revised definition, DFW surveyed the statutes and regulations relating to transgenic and genetically modified species from all forty-nine other states as well as the federal government.

In addition, DFW proposes to add a narrowly circumscribed exemption to cover certain species of aquarium animals that will be maintained in closed systems and not placed in the waters of the state and which DFW has determined pose no risk to native fish and wildlife. To qualify for this exemption, the person or entity seeking to import, possess, distribute and sell individual transgenic aquatic animals within California must submit both an application that complies with the requirements of Section 703(a)(3) and an application fee to cover DFW's costs incurred in processing the application.

Significant Public Comments (N/A)

Recommendation

FGC staff: Adopt proposed regulations as noticed and as re-noticed on Sep 22, 2015.

DFW: Adopt proposed regulations.

Exhibits

1. ISOR
2. PSOR

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the proposed changes to section 1.92 and 703, related to transgenic definition, application and fee as noticed on Aug 11, 2015 and as modified on Sep 22, 2015.

25. SPORT FISH 2016

Today's Item **Information** ☒ **Action** ☐

Discussion of proposed changes to sport fishing regulations.

Summary of Previous/Future Actions

• DFW's status report	Jun 10-11, 2015; Mammoth Lakes
• Notice hearing	Aug 4-5, 2015; Fortuna
• **Discussion hearing**	**Oct 7-8, 2015; Los Angeles**
• Adoption hearing	Dec 9-10, 2015; San Diego

Background

DFW's proposal for this year's sport fish rulemaking combines DFW and public requests for changes to Title 14, CCR. This proposal:

- revises snagging definition for clarity and consistency,
- creates a new definition for landlocked salmon and bag and possession limits for non-anadromous waters,
- creates flexibility for black bass contest drawing dates,
- increases fishing opportunities around the de-commissioned Red Bluff Diversion Dam,
- closes Yolo Bypass, Toe Drain, and Tule Canal to Sturgeon fishing to protect vulnerable fish, and
- makes general clean-up to clarify San Francisco and San Pablo bay boundaries, recognize Solano Lake in 7.50(b), and technical fixes to reptile and green sturgeon regulations

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

1. ISOR

Motion/Direction (N/A)

26. MEETING PROCEDURES

Today's Item **Information** ☐ **Action** ☒

Authorization to publish notice of intent to change FGC meeting procedure regulations.

Summary of Previous/Future Actions

• **Today's notice hearing**	**Oct 7-8, 2015; Los Angeles**
• Discussion hearing	Dec 9-10, 2015; San Diego
• Adoption hearing	Feb 10-11, 2016, Sacramento

Background

Per direction received at the Feb and Aug 2015 FGC meetings, staff has prepared proposed regulations related to meeting procedures, which will do the following:

- Define the number of members constituting a quorum to conduct Commission and committee meetings;
- Allow commissioners who are not appointed members of a committee to attend committee meetings only as observers;
- Establish a deadline for public requests for meeting agenda items;
- Specify that agendas items will be approved by majority vote of the Commission;
- Specify that committee agenda items may not include items scheduled for action by the Commission, unless otherwise directed by majority vote of the Commission;
- Specify that the Commission president, vice president or their designee may amend meeting agendas;
- Establish a deadline, consistent with the Bagley-Keene Open Meeting Act, for public distribution of agendas;
- Outline the process and timeline for receipt of and action on WRC and MRC recommendations; and
- Specify the process for public participation in Commission and committee meetings including:
    - when public testimony will be taken;
    - appropriate public forum topics;
    - time limits for public comment at Commission meetings and methods the public may use to receive additional time;
    - when and how to submit written comments;
    - when and how to submit audio and visual presentations;
    - when and how to receive approval of audio and visual presentations by the executive director; and
    - disruptive behavior.

Staff requests feedback on any items of potential concern or additional items to include in the proposed regulations.

Significant Public Comments

1. Several comments recommending procedures for WRC meetings (Exhibits 3-7, 12)

2. One comment recommending voting requirements in cases where only three commissioners are present, and requesting public forum be included as the first and last agenda items for each day of each meeting (Exhibit 8)
3. Two comments requesting that all FGC communications be made on government issued devices/servers (Exhibits 9-10)

Recommendation

Authorize publication of the notice.

Exhibits

1. Proposed regulatory text
2. Summary of public recommendations
3. Letter from Scott Franklin, Michel & Associates, P.C., representing the National Rifle Association of America (NRA), received Apr 14, 2014
4. Letter from C.D. Michel, Michel & Associates, P.C, representing NRA, received Jul 11, 2014
5. Letter from Ashlee Titus, Bell, McAndrews & Hiltachk, LLP, representing the National Shooting Sports Foundation (NSSF), received Jul 21, 2014
6. Letter from Dennis Anderson, Safari Club International, received Jul 14, 2014
7. Letter from C.D. Michel, Michel & Associates, P.C, representing NRA, received Jul 31, 2014
8. Email from Eric Mills, Action for Animals, received Jun 30, 2015 (also under item 23A)
9. Letter from C.D. Michel, Michel & Associates, P.C., representing NRA and California Rifle and Pistol Association, received Jun 5, 2015 (also under item 23A)
10. Letter from Trevor Santos, NSSF, received Jul 9, 2015 (also under item 23A)
11. FGC staff presentation
12. Letter from Sean Brady, Michel & Associates, P.S., representing NRA received Sep 24, 2015 (also under 23A)

Motion/Direction

Moved by _____ and seconded by _____ that the Commission authorizes publication of a notice of its intent to amend Section 665, Title 14, California Code of Regulations, regarding meeting procedures as recommended by Commission staff.

OR

Moved by _____ and seconded by _____ that the Commission authorizes publication of a notice of its intent to amend Section 665, Title 14, California Code of Regulations, regarding meeting procedures as recommended by Commission staff and adding/deleting the following: (Enumerate deletions and/or additions.)

27. TRICOLORED BLACKBIRD

Today's Item **Information** ☐ **Action** ☒

Receive the Center for Biological Diversity's (CBD) August 2015 petition and DFW's evaluation of the petition to list tricolored blackbird as endangered, and request for emergency action. Take action on CBD's request to defer to FGC's December 2015 meeting, reconsideration of CBD's 2014 petition.

Summary of Previous/Future Actions

• FGC transmitted 2014 petition to DFW	Oct 15, 2014
• Published notice of receipt of 2014 petition	Oct 21, 2014
• Took emergency action to list	Dec 3, 2014; Van Nuys
• Received DFW's 2014 petition evaluation	April 8-9, 2015; Santa Rosa
• Decision that listing is **not** warranted	Jun 10-11, 2015; Mammoth Lakes
• CBD request to reconsider Jun 11 decision	Aug 4-5, 2015; Fortuna
• **Today receive CBD's 2015 petition, receive DFW's petition evaluation, and act on CBD's request to defer until Dec reconsideration of the 2014 petition**	**Oct 9-10, 2015; Los Angeles**

Background

In Dec 2014 FGC listed tricolored blackbird as endangered through emergency regulations that expired on June 30, 2015. In the interim, DFW prepared and submitted to FGC a petition evaluation as required by CESA; the petition evaluation was received by FGC at its Apr 9, 2015 meeting and on Jun 11, 2015 it made a decision that listing tricolored blackbird as endangered was not warranted. Shortly after, CBD submitted a letter requesting FGC reconsider its Jun decision. At its Aug 2015 meeting, FGC deferred to its Oct 2015 meeting a decision on CBD's request for reconsideration of the 2014 petition. On Aug 19, CBD submitted a new petition to list tricolored blackbird as endangered and requested emergency action.

Significant Public Comments

1. A letter from CBD requesting that FGC continue to Dec reconsideration of FGC's June 11 decision regarding CBD's 2014 tricolored blackbird petition (Exhibit 2).
2. A letter from Audubon California supporting the petition.

Recommendation

FGC staff: Approve CBD's request to defer to FGC's December 2015 meeting reconsideration of CBD's 2014 petition. Given the complex history and recent re-petitions, staff feels giving the commission and public additional time to review the documents is prudent and expected under the law.

Exhibits

1. Petition to list tricolored blackbird as endangered and request for emergency action, received Aug 19, 2015
2. Letter from CBD, dated Sep 10, 2015
3. Letter from Audubon California, received Sep 24, 2015
4. DFW's petition evaluation will be provided at the meeting

Motion/Direction

Moved by _____ and seconded by _____ that the Commission defers action regarding the tri-colored blackbird to its December 2015 meeting in order to give the public and commission adequate time for review,

28. REPORT ON COHO SALMON STATUS

Today's Item **Information** ☒ **Action** ☐

Receive DFW status report on coho salmon.

Summary of Previous/Future Actions

- FGC approved coho salmon recovery strategy — Feb 4, 2004, Sacramento
- **Today's receipt of status report** — **Oct 7-8, 2015; Los Angeles**

Background

This item was rescheduled from the Aug 2015 FGC meeting due to lack of time.

DFW is submitting its report describing progress made by DFW in implementing the Recovery Strategy for California Coho Salmon between 2004 and 2012.

Coho salmon (*Oncorhynchus kisutch*) in the Central California Coast Evolutionarily Significant Unit (CCC ESU) and the Southern Oregon Northern California Coast Evolutionarily Significant Unit (SONCC ESU) are listed as endangered and threatened, respectively, under both the federal and California endangered species acts.

The progress report provides an extensive description of the recovery actions implemented by DFW, through and with substantial assistance by many cooperators. The status of coho salmon populations within each recovery unit is provided as well.

Section 2106 of the Fish and Game Code provides that DFW may develop and implement a recovery strategy pilot program for coho salmon and Section 2113 requires DFW to report the status and progress of the implementation of the recovery strategy.

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

1. DFW memo, received Apr 2, 2015
2. Recovery Strategy for California Coho Salmon Progress Report 2004-2012
3. DFW presentation

Motion/Direction (N/A)

STAFF SUMMARY FOR OCTOBER 7-8, 2015

29A. FUTURE MEETINGS – NEXT MEETING

Today's Item **Information** ☒ **Action** ☐

Review logistics for the next FGC meeting and identify potential agenda items.

Summary of Previous/Future Actions (N/A)

Background

The next FGC meeting is scheduled for Dec 9-10, 2015, at the Town and Country Resort & Convention Center in San Diego. Staff does not anticipate any other special logistics for this meeting. Potential agenda items are included in Exhibit 1.

Significant Public Comments (N/A)

Recommendation

Provide staff with feedback on agenda topics to add or delete for the Dec meeting.

Exhibits

1. Potential agenda topics for Dec 9-10, 2015, FGC meeting

Motion/Direction (N/A)

29B. FUTURE MEETINGS – PERPETUAL TIMETABLE FOR REGULATORY ACTION

Today's Item **Information** ☒ **Action** ☐
Review and acknowledge requested changes to the perpetual timetable for anticipated regulatory actions.

Summary of Previous/Future Actions

- Adopted 2015 rulemaking calendar — Dec 3, 2014; Van Nuys
- Last amended perpetual regulatory timetable — Aug 2015
- **Today's requested changes to timetable — Oct 7-8, 2015; Los Angeles**

Background

At each FGC meeting, FGC staff provides the latest approved timetable along with any requests for changes.

Through a memo (Exhibit B1) DFW has requested changes to the FGC 2015 regulatory timetable (Exhibit B2):

- Replace the Trawl Logbooks rulemaking with Electronic Reporting of Marine Logbooks, and publish notice for regulations in Feb 2016, with discussion and adoption in Apr 2016.
- Move the request to publish notice to amend DFW Lands Pass regulations from Oct 2015 to Feb 2016, with discussion in Apr 2016 and adoption in Jun 2016.
- Add a request to extend the current emergency regulations set to expire on Dec 29, 2015, to protect fisheries at risk in Dec 2015.
- Add a request to publish notice to make permanent the Jun 2015 emergency regulations to protect fisheries at risk with notice in Dec 2015, discussion in Feb 2016 and adoption in Apr 2016.
- Move the request to publish notice to amend falconry regulations from Oct 2015 to Feb 2016, with discussion in Apr 2016 and adoption in Jun 2016.
- Move the request to publish notice to amend sport and commercial spiny lobster regulations from Dec 2015 to Feb 2016, with discussion in Apr 2016 and adoption in Jun 2016. Adoption is contingent upon commission receipt of the Spiny Lobster Fishery Management Plan in Dec 2015, with discussion in Feb 2016 and adoption in Apr 2016.

Note that the requested changes listed above are reflected in Exhibit B2 in blue text.

Significant Public Comments (N/A)

Recommendation

FGC staff: Acknowledge that requested changes to the regulatory timetable are acceptable.

DFW: See Exhibit B1 for DFW's requested changes.

Exhibits

B1. DFW memo requesting changes to the perpetual timetable for regulatory actions, received Sep 24, 2015

B2. Perpetual timetable for anticipated regulatory actions, updated Sep 29, 2015

Motion/Direction (N/A)

29C. FUTURE MEETINGS – NEW BUSINESS

Today's Item **Information** ☐ **Action** ☒

This agenda item is intended to share public requests to consider new business or for Commissioners to bring new items of business to FGC; two such items were identified in advance for this meeting (Commission name and timing of officer elections).

Summary of Previous/Future Actions (N/A)

Background

I. Commission Name/Brand

Based in part upon a recommendation from the California Fish and Wildlife Strategic Vision process, in 2013 the legislature changed the name of the California Department of Fish and Game to the California Department of Fish and Wildlife, to better reflect the scope of the department's jurisdiction and responsibilities in the 21st Century. However, FGC's name did not change, and therefore retains the "fish and game" nomenclature that is used by very few states and territories of the U.S. any longer. A formal name change for the FGC would require a constitutional amendment.

Numerous state agencies have successfully used an informal name for branding purposes, such as Caltrans, Cal Fire, CalPERS, CalRecycle, California State Parks and CalVet. Similar suggestions have been made for FGC to appeal to a broader constituency, simplify its name, and better reflect its work. Potential brands include The Wildlife Commission, CalWildlife, and CalWild. Use of an informal name requires legislative authorization.

II. Timing of Officer Elections

Fish and Game Code, Section 102(a), states, "The commissioners shall annually elect one of their number as president and one as vice president, by a concurrent vote of at least three commissioners." There is no limitation on when that vote is taken or when the president and vice president assume office, However, the use of the word "annually, implies that elections are held only once per year. The code also provides for removal of officers and for filling vacant offices as needed.

Historically officer elections have been held at the beginning of FGC's Feb meeting each year, with the new president and vice president assuming their roles immediately after the vote. This timing owes part of its origin in the terms of the commissioners which expire January 15 of their sixth year. Holding elections at the February meeting allows appointments to be made before elections of officers. The disadvantage of this process is that it gives the officers no time to prepare for the meeting. One way to solve this problem would be to hold the election at the end of the Feb meeting and the new officers would assume their roles after adjournment of the meeting. Another solution that has been proposed is to have the election the second day of the previous meeting (currently Dec) and assume their roles at the next meeting (Feb). One disadvantage of

this option could be having a different set of commissioners in Feb requiring another election in Feb. In both cases where elections are held at the end of one meeting and the new officers assuming their roles after the meeting allows a leadership transition where the outgoing officers can meet with the new officers to discuss what goals were achieved in the previous year, were there any impediments encountered, and potential goals for the upcoming year. A possible advantage of the Dec vote is that the California Fish and Game Code could be printed with the current president and vice president properly identified(currently the previous year's officers are listed since the code book is printed in mid-December).

Significant Public Comments (N/A)

Recommendation

Staff requests that any discussion and direction on items include expected deliverable(s), timeline, staff workload, and roles/responsibilities.

Exhibits (N/A)

Motion/Direction

Provide staff direction on whether to pursue an informal name for FGC and whether to schedule officer elections for the Dec 2015 meeting.

CALIFORNIA FISH AND GAME COMMISSION
RECEIPT LIST FOR REGULATORY REQUESTS THROUGH 9-24-2015

FGC - California Fish and Game Commission **DFW** - California Department of Fish and Wildlife **WRC** - Wildlife Resources Committee **MRC** - Marine Resources Committee

Grant (previously Accept): FGC is *willing to consider* the petition through a process **Deny (previously Reject):** FGC is *not willing to consider* the petition
Refer: FGC *needs more information* before deciding whether to grant or deny the petition

Green cells: Referrals to DFW for more information **Blue cells:** Referrals to FGC staff or committee for more information
Lavender cells: Accepted and moved to a rulemaking **Yellow cells:** Current action items

Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
8/25/2015 8/30/2015	Julia Fuller Barbara Longmuir Raphael Zandra	Trapping		Requests complete ban on trapping of all furbearing animals because taking animals for profit is unnecesary.	**Action scheduled 12/9-10/2015**		
9/2/2015	Carol Johnson	Trapping		Requests ballot initiative to ban commercial and recreational trapping of all furbearers.	**Action scheduled 12/9-10/2015**		
8/27/2015 9/11/2015 9/14/2015	Elaine Trogman Jill Franzke Diane Pease	Drift Gill Nets		Requests ban on drift gill net use in California to curb take of non-target species.	**Action scheduled 12/9-10/2015**		
8/11/2015	George Burkhardt	Save water		Requests two options to reduce water waste: (1) eliminate fish flow release, and (2) raise the level of all existing reservoir dams	**Action scheduled 12/9-10/2015**		
7/31/2015	Greg Helms, Ocean Conservancy; Anna Weinstein, Audubon California, and others	Forage species policy		Requests FGC consider planning for a rulemaking process to establish conforming forage regulations such that federal and California actions unfold on roughly parallel timelines.	**Action scheduled 12/9-10/2015**		
8/10/2015	Jason Robinson	Rock crab transfer process		Requests to amend the south coast rock crab permit process to allow for transfer permits on a first come first serve basis or to give applicants that have been attempting for consecutive years more points in the lottery as is the case with the sea urchin lottery.	**Action scheduled 12/9-10/2015**		
8/3/20154	Chris Borden	Fishing		Requests to stop fishing because too many whales are dying.	**Action scheduled 12/9-10/2015**		

Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
8/21/2015	Greg Ross	Tehama Wildlife Area rules		Requests revocation of the rules banning ATVs in the Tehama Wildlife Area because use does not impact wildlife or plants.	**Action scheduled 12/9-10/2015**		
8/28/2015	Del Norte County Board of Supervisors	Klamath River --Blue Creek Closure		Requests FGC repeal or amend the closure of Blue Creek to fishing because the decision was made without consideration of science or the impact on residents, including small businesses.	**Action scheduled 12/9-10/2015**		
9/24/2015	Mercer Lawing, CA Trappers Association	Bobcat trapping		Requests FGC reconsider ban on bobcat trapping because the decision failed to address the biological and economic impacts.	**Action scheduled 12/9-10/2015**		

CALIFORNIA FISH AND GAME COMMISSION
RECEIPT LIST FOR NON-REGULATORY REQUESTS THROUGH 9-24-2015

FGC - California Fish and Game Commission **DFW** - California Department of Fish and Wildlife **WRC** - Wildlife Resources Committee **MRC** - Marine Resources Committee

Grant (previously Accept): FGC is *willing to consider* the petition through a process **Deny (previously Reject):** FGC is *not willing to consider* the petition
Refer: FGC *needs more information* before deciding whether to grant or deny the petition

Green cells: Referrals to DFW for more information **Blue cells:** Referrals to FGC staff or committee for more information
Lavender cells: Accepted and moved to a rulemaking **Yellow cells:** Current action items

Date Received	Name of Petitioner	Subject of Request	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
9/24/2015	Sean Brady, Michel & Associates, representing National Rifle Association	Committee Procedures	Requests rules and procedures be establsihed for the WRC through normal regulatory approval process before WRC takes any further action.	**Action Scheduled 12/9-10/2015**		
8/6/2015	Ilson New representing Dan Yoakum	HEOK Experimental Permit	Requests clarification on the definition of HEOK fishing.	**Action Scheduled 12/9-10/2015**		
9/10/2015	Michael Flores, Al Taucher Conservation Coalition	Predator Policy Workgroup	Requests clarification of actions the at FGC Aug meeting in Fortuna whereby individuals were publicly appointed to the Predator Policy working group in conflicht with the process previously establsihed by the Commission.	**Action Scheduled 12/9-10/2015**		
8/11/2015	Diane Pleschner-Steele, CA Wetfish Producers Association	WRC Meeting	Request to provide update on squid research at MRC and FGC meetings.	**Action Scheduled 12/9-10/2015**		
9/11/2015 9/13/2015	Hazel Kimberly Leonard Frances LiBrandi	Urban Coyotes	Request to help control urban coyote problems.	**Action Scheduled 12/9-10/2015**		
6/18/2015	William Lemos	North Coast Human Waste	Requests something be done to address the human waste problem occuring along the north coast during abalone season.	**Action Scheduled 12/9-10/2015**		

From: Julia Fuller
To: FGC
Subject: Stop Trapping All Furbearers
Date: Tuesday, August 25, 2015 9:35:18 AM

Thank you for your vote to ban the commercial and recreational trapping of bobcats statewide.

I request that you extend this ban to all furbearing animals. Our exposure to the disgusting trophy hunts taking place in Africa by rich people of low character have focused on the need to block all such activities of hunters killing for the thrill of the hunt or the desire to make money by killing beautiful animals for their fur. No animal should be killed solely for profits and an unnecessary luxury item - their fur. We have other ways to keep warm and the animals deserve to keep their coats and live out their lives in the wild.

Our wildlife belongs to all Californians, not just the mercenaries. Please help protect them before we eliminate them from our state. I would love to see funding made available for more Fish and Game agents to deal with all illegal poaching. Much of the poaching is done by people who are not California citizens and I would love to see higher penalties for this horrible and irresponsible practice.

Thank you for considering my position.

Julia Fuller
[redacted]

From: Barbara L
To: FGC
Subject: Ban!
Date: Tuesday, August 25, 2015 11:41:04 AM

We MUST ban the commercial and recreational trapping of all furbearers now!

Barb Longmuir

Sent from my iPad

From:	Zandra Raphael
To:	FGC
Subject:	REQUEST INITIATIVE TO BAN TRAPPING OF ALL FUR BEARING ANIMALS
Date:	Sunday, August 30, 2015 5:58:18 PM

I am writing to request an initiative banning the commercial and recreational trapping of all fur bearers. I have already shown my support for the bobcats at this point. While this is an atrocious practice, inhumane to say the least, the last thing we need to do is send these animals' beautiful pelts to China and Russia for profit. These animals need to be protected - they are part of 'all God's creatures, big and small.'

Shame on members Jim Kellogg and Jacqueline Hostler-Carmesin - BOO to them for voting 'no' on banning the commercial and recreational trapping of bobcats . KUDOS to Jack Baylis, Eric Sidar and Anthony Williams for voting 'yes.'

Thank you,

Zandra Raphael

From:	carol johnson
To:	FGC
Subject:	initiative to stop trapping all furbearers
Date:	Wednesday, September 02, 2015 5:41:50 PM

At least it was voted 3-2 to ban commercial and recreational trapping of bobcats statewide on Aug.5th. But no animal should be killed solely for profit (pelts). We need a state ballot initiative to ban the commercial and recreational trapping of all furbearers.

Thank you for listening.
Carol Johnson
volunteer at Lindsay Wildlife Experience Rehabilitation Hospital in Walnut Creek, CA

From:	Jill Franzke
To:	FGC
Subject:	No more longline/gill nets
Date:	Friday, September 11, 2015 5:29:38 PM

Dear Mr. Baylis

Please impose a total ban on all gill net operation in CA ocean waters. It's time to stop the deadly practice of using nylon longline/gill nets in commercial fishing. Every year hundreds of whales, dolphins, sea turtles, sea otters, sea lions, and diving sea birds lose their lives by becoming entangled in these nets. Please make California a safe place for wildlife.

Sincerely,

Jill Franzke
[redacted]

From: diane Pease
To: FGC
Subject: Gill net fishing
Date: Monday, September 14, 2015 12:25:34 PM

Please end the practice by the fishing industry of gill net fishing.
Many wonderful creatures of the sea are sacrificed because of this inhumane, indiscriminant, practice'

Diane Pease
[redacted]

From: Elaine Trogman
To: FGC
Subject: Ending Drift Gill Net use in California
Date: Thursday, August 27, 2015 3:55:40 PM

Dear Sir & Madame,

I was born and raised in California and I feel I am entitled to have some say regarding what goes on along our coastline. I was shocked to learn that nets were placed off our beautiful California coast that were sometimes over a mile long. They not only caught intended fish but they, also, killed marine mammals, turtles, dolphins and other unintended catch. Many species die and they are never used for anything. This is not right and I feel it has got to stop. Other states like Washington and Oregon have banned this gill net practice and we should do the same.

Sincerely,
Elaine Trogman
[redacted]

From: Jholtzhln@aol.com
To: FGC
Subject: Ban Drift Gilnets
Date: Wednesday, September 02, 2015 9:36:18 AM

To: Mr. Jack Baylis, President of the CA Fish and Game Commission

Dear Mr.Baylis,

Please work to ban the use of drift gilnets by commercial fishermen in California waters. At a time when oceans of the world are increasingly polluted and ocean life declining, we must move to save California's fragile marine eco-system.

The use of drift gillnets is intended for the use of one targeted species, such as the thresher shark. All other species are discarded as "takings." Our marine mammals; such as whales and dolphins, become entangled in the nets before downing.

We must move at once to ban this barbaric and wasteful fishing practice and save as much of California's magnificent and diverse ocean-life as we can.

Thank you for your attention.

Joan Jones Holtz
[redacted]

From: George Burkhardt
Subject: Stop Wasting Our Water
Date: Tuesday, August 11, 2015 5:55:49 PM

As a responsible official dedicated to the principal of serving/protecting the common good; I implore you to do everything you can to stop wasting our water. Please therefore join other officials in leadership positions such US Representative Tom McClintock to immediately take definitive action to alleviate the state-wide CA water crisis. Although there are a host of actions that could be taken to produce real results, I am suggesting only the following **Top Two** for your consideration:

1. **Eliminate**, (or at the very least **Suspend** and/or **Disregard**) **"fish flow release"** federal regulations that mandate and continue to waste billions of gallons of fresh water annually at an ongoing cost of hundreds of millions of dollars. These perhaps initially well-meaning regulations have since been proven to have been based on bad science, but yet are still blindly followed today even though these regulations continue to cause massive wide-spread harm to a great many ordinary citizens, businesses and wildlife.

- Fish flow releases are intended to, but perhaps at best only assist few if any native trout or steelhead salmon, and certainly do not measurably increase their survival rate. Fish flow releases not as intended do assist the survival rate of more non-native hatchery-raised fish, but again there is not a measurable result of significance.
- As all the CA reservoirs are currently being drained to comply with "fish flow releases" into our rivers supposedly to protect native fish, we are at the same time systematically wiping out the entire resident fish populations (trout, kokanee salmon, etc) of these same reservoirs. Additionally the collateral damage done to other wildlife such as bald eagles and ospreys that depend fully on their now exterminated reservoir fish population food source is simply stunning. FOLLOWING GOVERNMENTAL PROGRAMS INTENDED TO SAVE A FEW NATIVE FISH WHILE THE SAME PROGRAMS ARE DESTROYING UNTOLD NUMBERS OF WILDLIFE **IS INSANITY.**

- Local newspapers and TV stations continue to report on the increasing numbers of ordinary citizens who have had their drinking water supply dry up and are desperately attempting to deal with it.
- Family farms passed down from one generation to another have either gone out of business or are at the brink of doing so.

Implementing the above change to end "fish flow releases" would be similar to the #1 life-saving practice followed in a hospital emergency room when the trauma surgeon first "stops the bleeding" of the patient in order to save him. Considering what the likely devastation will be on the entire state if we suffer a 5th consecutive year of drought in 2016 – this medical analogy may very well come true.

2. **Raise the level of all existing reservoir dams** originally designed to be higher

if needed and raise those that can now be re-designed and re-done at a reasonable cost. Lake Shasta is perhaps the best example of a very large water supply reservoir that has a dam originally designed to be made much higher whenever needed. IT IS THEREFORE CRITICAL TO RAISE OUR DAM LEVELS NOW!

- All CA citizens are hoping and praying the predictions of a strong El Nino weather system beginning this fall will deliver higher than normal precipitation.
- Immediate action now will allow existing reservoirs to capture and store the otherwise El Nino excess water that will otherwise be lost when it simply cascades over the spillways and eventually flows out to sea to become more saltwater.
- Individual and/or collective failure by officials such as yourself to act on this urgent need in a timely manner would be irresponsible at least for all, and perhaps even dereliction of duty for some.

Please step up, do the right thing, and demonstrate your leadership.

In closing, thank you in advance for responding to this call for action, and please email me to advise specifically what you have done so I can share your good work with other concerned citizens.

George Burkhardt
[redacted]

July 31, 2015

Mr. Jack Baylis, President
California Fish and Game Commission
1416 9th Street, Suite 1320
Sacramento, CA 95814

RE: Implementation of the Commission's November 2012 Policy on Forage Species

Dear President Baylis and Commissioners:

We are writing to update you on recent developments in the precautionary management of forage fish species on the West Coast. We believe these developments provide an opportunity to advance implementation of California's landmark forage species policy, and we offer our recommendations in this regard. Forage species such as herring, smelts, and market squid are the lifeblood of our marine ecosystems and coastal communities, supporting the salmon, halibut, tuna, marlin, and other large fish that sustain our commercial and recreational fisheries, as well as the tremendous diversity of seabirds, whales, and pinnipeds that enrich California's economy and quality of life. We thank you for unanimously adopting a forage policy in November 2012[1] to protect this critical prey base, for utilizing and furthering the implementation of that policy in developing a Fishery Management Plan (FMP) for Pacific herring, and for the State's leadership in forage species protection at the Pacific Fishery Management Council (Council).[2]

The 2012 California forage species policy addresses both managed and unmanaged species. The California Fish and Game Commission (Commission) and the California Department of Fish and Wildlife (CDFW) have made considerable strides toward implementation of the forage species policy with regards to managed species, including through the proposed FMP and recent annual specifications packages for the state Pacific herring fishery. This letter and our recommendations address those components of the policy that call for preventing the development of new fisheries on unmanaged/unfished forage species absent rigorous advance analysis, and for which corollary regulations are being finalized for federal waters.

Our recommendation, in summary, is that acting to "conform" to forthcoming federal regulations, on a parallel timeline, is the most straightforward approach available to implementing the unmanaged forage goals in California's forage policy. Our proposed approach

[1] The Commission's policy on forage fish as adopted in November 2012 is included here as Appendix A, and may also be accessed online at http://www.fgc.ca.gov/meetings/2012/081012MRCDraft_ForagePolicy_MRCrec.pdf
[2] Our appreciation also extends to recently departed Commissioners, and to staff at the California Fish and Game Commission and California Department of Fish and Wildlife.

is to work with CDFW and the National Oceanic and Atmospheric Administration's Fisheries Service (NOAA Fisheries) to make federal regulations conducive to conformance, then to subsequently present the Commission with a request to initiate conformance rulemaking. Below we provide additional background and detail.

Background and Context

Forage species are an indispensable part of the Pacific Ocean's food web, and a key reason the waters off the West Coast are among the most productive in the world. These small, nutrient-rich species serve as the primary food source for a vast array of larger fish and dependent predators, including California's most commercially and recreationally valuable marine species. As global catch of forage species continues to increase, precautionary forage species management has emerged as a core element of an ecosystem-based approach to fisheries management that considers not only particular harvested species but their prey, habitat, and role in the marine environment.

A few West Coast forage species are subject to major active fisheries, such as market squid, sardine, herring, and northern anchovy. Several others, including sand lance, myctophid lanternfish, saury, and certain smelts and pelagic squids, are neither directly targeted for fishing nor actively managed. There are also some small-scale fisheries in California for smelts.

As scientists have increasingly come to understand the critical role of forage species in the health of ocean ecosystems, currently unfished and unmanaged forage species are gaining protections similar to those called for in the California forage species policy, which is designed to ensure that no new fishing takes place on key forage species in state waters without first accounting for the needs of larger fish and other predators. In March 2015, the Council unanimously approved protections in federal waters that will prohibit new directed commercial fishing on seven groups of unmanaged forage species, absent rigorous prior review and analysis. NOAA Fisheries is now working with officials from each West Coast state to develop draft implementing regulations for Council consideration this September. Meanwhile, the State of Oregon is preparing to draft an FMP for unmanaged forage fish species in Oregon, which is expected to essentially apply the federal forage regulations to Oregon's state waters. Oregon anticipates developing its forage FMP during the summer and fall of 2015, with consideration by the Oregon Fish and Wildlife Commission in early 2016. The State of Washington adopted a strong Forage Fish Management Plan[3] in 1998 and already has a regulatory program in place preventing the development of new fisheries for all species, including forage species, until they are approved.

As the Council began developing protections for unmanaged forage species in federal waters, the Commission initiated a process in December 2011 aimed at similar protections. As part of the process, representatives from conservation organizations and the fishing industry were asked to collaboratively develop a guiding policy for forage species in California state waters. The result was a forward-looking, consensus policy adopted unanimously by the Commission in November 2012 (see Appendix A). With respect to currently unfished and unmanaged species, the policy establishes precautionary, science-based management goals parallel to those of the nearly-

[3] Washington Department of Fish and Wildlife, Forage Fish Management Plan: A plan for managing the forage fish resources of Washington (Sept. 1998), *available at* http://wdfw.wa.gov/publications/00195/

completed federal action. However, because the policy is non-regulatory in that Commission policies guide the development of state regulations, further action would be needed by the Commission to align state and federal rules.

Following its adoption, the conservation and fishing industry representatives who crafted the policy began to discuss ways to implement it.[4] Regarding the prevention of new or expanded fisheries on unmanaged forage species, the groups discussed and vetted a number of implementation pathways including the Commission's emerging fisheries policy and other related approaches. Regular consultations with CDFW staff over the ensuing nine months and a key presentation to the Marine Resources Committee (MRC)[5] in March 2014 resulted in a focus on the goal of preventing new unmanaged fisheries on forage species, and a refined approach focused on achieving consistent regulations in state and federal waters. We ultimately determined that the Council would be an efficient forum in which to develop and vet a regulatory package for federal waters that was responsive to state concerns, and that could then be implemented in parallel regulations in state waters.

After several years of diligent work, the Council in March 2015 unanimously adopted amendments to all of its FMPs prohibiting directed fishing on seven groups of forage species as the first initiative of its Fishery Ecosystem Plan (FEP), and NOAA Fisheries is currently drafting implementing regulations in collaboration with the states and the Council.

Recommended Path Forward

Based on this history of careful, stakeholder driven consideration, we now recommend the Commission adopt California regulations consistent with the federal prohibition on new directed forage fisheries, both to protect California fishery and ecosystem resources and to establish similar rules between California and adjacent federal waters. Consistent regulations across jurisdictions will prevent confusion and aid enforcement and compliance. Further, state action to achieve alignment with federal regulations is an approach often utilized by the Commission, and is the most straightforward approach available to implementing the unmanaged forage goals in California's forage policy. We are in agreement with CDFW staff that such action should apply to new directed fisheries and should not affect existing small-scale fisheries for smelts or other small-scale fisheries identified as having comparable relevant characteristics. Based on the current schedule for implementation of federal regulations by NOAA Fisheries, we further believe California's best option is to initiate action by the end of 2015, in order to leverage the current effort being applied to developing West Coast forage regulations by the Council, NOAA Fisheries, Oregon managers and CDFW staff. From conversations with CDFW staff, we understand that internal timelines likely preclude a Commission notice hearing, a key first step, in 2015. We suggest that by the end of 2015, the Commission could still commit to and plan for

[4] Again, the focus of this letter is the unmanaged species aspects of the policy, but we do want to provide additional information on progress relative to the managed species aspects of the policy as well. To address aspects of the policy related to forage species already actively managed by the Commission, several stakeholders convened with the Department to develop a proposal for a Fishery Management Plan for Pacific Herring. We thank the Commission for its support of this endeavor, including the recent support letter to external funding organizations that are considering funding that process.

[5] See CFGC MRC Meeting Materials for March 24, 2014, "*Report by Oceana [et al.] on Its Implementation of the Commission's Forage Species Policy,*" Oceana Presentation (PDF)

the development of consistent regulations, perhaps by calendaring this item. Subsequently, we hope that the Commission could consider a proposed regulatory package and initial statement of reasons, and hold a notice hearing, in early 2016.

CDFW personnel are significantly engaged in ensuring that the forthcoming federal regulations fully support and preserve California's specific management needs and existing fisheries. As conservation organizations, we are also working through the federal rulemaking process to ensure that California's needs and concerns are addressed, so that conforming action can be as streamlined and straightforward as possible. Therefore, we are optimistic that the bulk of the staff time and expense needed to craft forage protection regulations applicable to California will already have been invested by Fall of 2015. We understand that new Commission regulations carry time, resource and opportunity costs. However, acting in concert with federal rulemaking will provide efficiencies less available should California defer action. Our recommendation, therefore, is that the Commission begin work on a process, as described above, by the end of 2015 to effectively synchronize with the expected federal timeline. We understand that the Commission's regulatory calendar and workload are significant factors in this decision that warrant careful consideration and if the Commission were to act on our request, we would look forward to working with you to schedule this in the most efficient way possible.

Thus, our organizations urge the Commission to consider planning for a rulemaking process to establish conforming forage regulations such that federal and California actions unfold on roughly parallel timelines. Once a pre-draft of the federal regulations is available that has CDFW support, our groups anticipate submitting a Petition for Regulatory Change to the Commission to initiate this process. Based on current timelines, we hope that this could take place in October 2015 but we expect to further vet this target date with Commission and CDFW staff to best accommodate the Commission regulatory calendar. Alternatively, because the Commission's process for external regulatory requests entails multiple meetings, there may be valuable time savings available if the Commission itself initiates the process. Either way, our intention is to support federal and state regulations that fully honor California's important existing fisheries and management programs, to minimize time and workload impacts in forage protection, and to harmonize current regulatory requests with important planning priorities for CDFW's Marine Region. We look forward to working with you and Department and Commission staff to calendar, streamline, and minimize workload associated with this process.

In this latter respect, our organizations fully support the emerging effort by CDFW and the Commission to update the MLMA Master Plan for Fisheries. This critical effort will not only modernize and strengthen California's fisheries and marine ecosystem management, but is instrumental in the recommended path we propose. A policy preventing new directed fishing on forage species unless and until determined to be sustainable ultimately needs refined measures to address bycatch of these species, and a procedure for the Commission to consider proposed new directed fisheries on forage, approve or disapprove them, and if approved to set conditions on them. The Commission has already directed staff to convene a Bycatch Working Group to formally review (and potentially revise) bycatch-related components of the Master Plan update, which could address the issue of incidental catch of forage species. Furthermore, revisiting management of emerging fisheries in the Master Plan could provide a method for reviewing proposed new fisheries that is consistent with the goals of the forage policy.

In summary, we believe a two-pronged approach to implementation of the state forage policy provides California with the best option: 1) the near-term state action we describe here to preclude new directed fisheries on forage species by harmonizing state and federal regulations, and 2) careful, inclusive planning for longer range, comprehensive policy refinement to incrementally apply ecosystem-based concepts to management of forage species through actions like the MLMA Master Plan update, development and/or revision of FMPs, or other regulatory vehicles. Finally, we note that the California forage fish policy explicitly calls for the harmonization of state and federal regulations for unmanaged forage species, stating that Commission management goals should "*Facilitate consistency in the management of forage species, integrate with existing Fishery Management Plans, and encourage cooperation and collaboration across jurisdictions and international boundaries in managing forage species.*"[6]

The undersigned organizations reiterate our deep appreciation of the Commission and Department for its leadership in protecting forage as a vital ecosystem resource.

Sincerely,

Anna Weinstein
Marine Program Director
Audubon California

Greg Helms
Manager, Fish Conservation Program
Ocean Conservancy

Geoffrey Shester, Ph.D.
California Campaign Director
Oceana

Paul Shively
Project Director, U.S. Oceans, Pacific
The Pew Charitable Trusts

Cc: Chuck Bonham, Director, CDFW
Craig Shuman, Marine Region Manager, CDFW
Sonke Mastrup, Executive Director, California Fish and Game Commission

[6] See Commission forage fish policy, Section III, bullet #4, available in Appendix A and at http://www.fgc.ca.gov/meetings/2012/081012MRCDraft_ForagePolicy_MRCrec.pdf

APPENDIX A: Commission Forage Policy as Adopted November 2012

DRAFT -- August 10, 2012

It is the policy of the Fish and Game Commission that:

I. For purposes of California fisheries management, forage species are defined as species that contribute significantly to the diets of larger organisms during some part of their life history, thereby transferring energy and nutrients to higher trophic levels in the ecosystem.

II. The Commission recognizes the importance of forage species to the marine ecosystem off California's coast and envisions management of forage species that: optimizes their ecological, economic and social values; accounts for the benefits rendered by forage species to other species, fisheries, wildlife, and the overall ecosystem; and considers recreational and commercial fishing interests and other economic sectors.

III. The Commission intends to provide adequate protection for forage species through management goals that:

- Are precautionary and utilize the best available science in management decisions using clear and transparent methods;
- Identify and progressively incorporate Essential Fishery Information (EFI) needed for ecosystem-based management of forage species, including physical factors, oceanographic conditions, the effects of fishing on forage species' dependent predators, the availability of alternative prey, spatio-temporal foraging hotspots for predators, and existing management, including marine protected areas;
- Prevent the development of new or expanded forage fisheries until EFI is available and applied to ensure the sustainability of target forage species and protection of its benefits as prey; and
- Facilitate consistency in the management of forage species, integrate with existing Fishery Management Plans, and encourage cooperation and collaboration across jurisdictions and international boundaries in managing forage species.

END POLICY

From: Jason Robinson
To: FGC
Subject: Agenda Item Request for Rock Crab Transfer Process
Date: Monday, August 10, 2015 8:48:03 AM

Dear Commissioners,

I would like to address the transfer process of the south coast rock crab permit. The current process allows five permits to be transferred each year, if more than five applications have been submitted the license and revenue branch conducts a manual closed door lottery. I have been participating in the process for four consecutive years and have been unsuccessful in getting the permit I have already paid for transferred. My concerns and possible solutions are as follows:

The DFW has created a process which an individual applicant may never be successful in transferring his or her permit.

The current process allows for first time applicants to be successful while applicants that have been applying for years to remain unsuccessful. This is not fair.

The uncertainty of the current process makes it logistically impossible for a business to plan for the future.

The non-transparency of the lottery creates skepticism; every applicant that I've spoken with has concerns about the legitimacy of the lottery. I have requested to be a witness and was denied.

A simple solution that would gain the support of participants and could be accomplished easily would be to transfer permits on a first come first serve basis. For example, if I where applicant number 12 I would know my permit would transfer on year three. With that knowledge I could prepare my business accordingly. Traps would be ready to go in the water, I would be able to secure my markets and have a much better chance of being successful.

A back up solution could be to give applicants that have been attempting for consecutive years more points in the lottery as is the case with the Sea Urchin lottery.

This is my formal request to make this issue an agenda item at Septembers Commission meeting. Please feel free to contact me at any time. I look forward to discussing this matter further.

Sincerely,
Jason Robinson

From:	Chris Borden
To:	FGC
Subject:	Stop fishing please
Date:	Monday, August 03, 2015 9:16:08 PM

Too many whales are dying because there's no fish to eat save our whales and stop fishing please
Sent from my iPad

From:	Greg Ross
To:	FGC
Subject:	Fwd: Tehama Wildlife Area
Date:	Friday, August 21, 2015 2:58:53 PM

To Whom it may concern,

I sent this email to Andrew Hughan, Public Information Officer for the Department, and he said I should forward it to you. Thank you for your time and I would love to here back from someone there.

---------- Forwarded message ----------
From: **Greg Ross** <[redacted]
Date: Fri, Aug 21, 2015 at 11:34 AM
Subject: Tehama Wildlife Area
To: [redacted], [redacted]

Andrew,

I am contacting you in regards to the closure of ATV use in the Tehama Wildlife Area. First and foremost, I am 100% opposed to the closure. I have enjoyed the area since a young boy, hunting and fishing with my father, taking my sons up as well, and now introducing my grandson to the beauty of the area. I certainly hope you are familiar with the Wildlife area and what we as sportsman have to deal with when it comes to traveling the roads, which are in my opinion, second to none. It is one big rock. In fact, when talking about going up there we refer to it as, "going up in the rocks." With ATV's being introduced back in the mid-80's early 90's and where they have evolved to too the present, what a breath of fresh air in making a trip up to "the rocks." Now we have Fish and Wildlife banning their use?? For the life of me, I cannot make heads or tails with the reasoning. If the ATV traffic was getting out of hand and riders going off the roads, then that needs to be dealt with, but to ban their use is not the answer. I noticed in the Red Bluff paper recently, Mitch Carlson stated that"it is to protect wildlife as well as ATV traffic can damage the ground and plants." I left a message at the Red Bluff office to contact me because I would like Mitch to explain how, by keeping out ATV's, it is protecting wildlife, the ground, and plants. ATV's are not allowed off the roads. By this analogy, all traffic should be banned from the area.
I have talked local Wardens, Tehama Wildlife Area employee's, and all are opposed to the ruling. Please, please, see if the ruling can be revoked, and let the sportsman of the north state enjoy the area on an ATV once again.

Thanks

--
Greg Ross
Director of Maintenance, Operations, and Transportation
Tehama County Department of Education
1135 Lincoln Street
[redacted]

County of Del Norte County
Board of Supervisors
981 "H" Street, Ste. 200
Crescent City, California 95531

Phone
(707) 464-7204

Fax
(707) 464-1165

Petition to Repeal or in the Alternative Amend Title 14 (b)(91.1)(B)(3) and (4) of Section 7.50 of the California Code of Regulations (Blue Creek Closure)

California Fish and Game Commission
1416 Ninth Street, Suite 1320
Sacramento, CA 95814
FGC@fgc.ca.gov

2015 AUG 28 PM 2:06
MS

Requested by:

County of Del Norte
David Finigan, Chair of the Board of Supervisors
981 H Street, Suite 210
Crescent City, CA 95531
(707) 464-7204

This is a petition to repeal the regulation adopted by the California Fish and Game Commission (Commission) on April 17, 2015 and effective June 4, 2015 located at Title 14 Section 7.50(b)(91.1)(B)(3) of the California Code of Regulations (CCR). If for any reason this petition is not successful at repealing the aforementioned regulation it shall be interpreted as a petition to amend the stated regulation sections for the following fishing season (2016).

This Petition is based upon the following statutes, background information, and justifications.

Applicable Statutes:

Government Code 11340.6 states "Except where the right to petition for adoption of a regulation is restricted by statute to a designated group or where the form of procedure for such a petition is otherwise prescribed by statute, any interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation as provided in Article 5."

Fish and Game Code §220 states "(a) Any regulation of the commission added or amended pursuant to this article shall remain in effect for the period specified therein or until superseded by subsequent regulation of the commission or by statute. (b) Notwithstanding this article, the commission may add, amend, or repeal regulations at any regular or special meeting if facts are presented to the commission which were not presented at the time the original regulations were adopted and if the commission

determines that those regulations added, amended, or repealed are necessary to provide proper utilization, protection, or conservation of fish and wildlife species or subspecies.

Fish and Game Code §315 states "The commission may at any time close any stream, lake, or other inland waters, or portions thereof, to the taking of any species or subspecies of fish to protect and properly conserve the fish, except for the taking of fish otherwise permitted by this code under a commercial fishing license, for such time as the commission may designate, or until such time as new legislation thereon enacted by the Legislature may become effective."

Fish and Game Code §315.3 states "The commission may, at any time when facts are presented to the commission which were not presented to the commission at the time of its December meeting held pursuant to Section 209, open any stream, lake, or other inland waters, or portions thereof, to the taking of any species or subspecies of fish for the proper utilization of the fish, for such time as the commission may designate or until such time as new legislation thereon enacted by the Legislature may become effective."

Fish and Game Code §703.3 states "It is the policy of the state that the department and commission use ecosystem-based management informed by credible science in all resource management decisions to the extent feasible. It is further the policy of the state that scientific professionals at the department and commission, and all resource management decisions of the department and commission, be governed by a scientific quality assurance and integrity policy, and follow well-established standard protocols of the scientific profession, including, but not limited to, the use of peer review, publication, and science review panels where appropriate. Resource management decisions of the department and commission should also incorporate adaptive management to the extent possible."

Fish and Game Code §703.5 states "It is the policy of the state as follows: (a) That the department and the commission seek to create, foster, and actively participate in effective partnerships and collaborations with other agencies and stakeholders to achieve shared goals and to better integrate fish and wildlife resource conservation and management with the natural resource management responsibilities of other agencies. (b) That the department and commission participate in interagency coordination processes that facilitate consistency and efficiency in review of projects requiring multiple permits, including, but not necessarily limited to, joint state, federal, and local permit review teams that enable early consultation with project applicants, and provide improved sharing of data, information, tools, and science to achieve better alignment of planning, policies, and regulations across agencies."

Fish and Game Code §6920 states "(a) The department shall, with the advice of the Advisory Committee on Salmon and Steelhead Trout and the Commercial Salmon Trollers Advisory Committee, prepare and maintain a detailed and comprehensive program for the protection and increase of salmon, steelhead trout, and anadromous fisheries. (b) The department shall consult with every public agency whose policies or decisions may affect the goals of this program to determine if there are feasible means for those public agencies to help the department achieve the goals of this program."

Background Facts:

On April 17, 2015 the Commission voted to close the fishing area of the Klamath River within 500 feet of the mouth of Blue Creek from September 15 to December 31 and to close the area from 500 feet above the mouth of the Blue Creek to ½ mile downstream of the mouth of the Blue Creek June 15 through September 14.

The closure was pursuant to an amendment of Subsections (b)(91.1) and (b)(195) of Section 7.50 Title 14 of the CCR. The amendment was noticed as three Options in the Initial Statement of Reasons for Regulatory Action and in the Final Statement of Reasons for Regulatory Action. Option 1 was the Department proposal. Option 2 was the Yurok Tribe proposal and Option 3 was a "possible combination" of Option 1 and 2.[1] Precipitating the Options was a letter from the Yurok Tribe formally recommending modifications of the regulations. This letter was dated November 19, 2014. The Commission then had a Notice hearing on the proposed amendments on December 3, 2014. The Initial Statement of Reasons was filed on January 12, 2014. A discussion hearing was held on February 12, 2015. The Pre-Adoption Statement of Reasons was filed March 20, 2015. The adoption hearing was held April 17, 2015. The Final Statement of Reasons was filed May 4, 2015. The regulation was approved by the Office of Administrative Law and took effect on June 4, 2015.

The closure was outlined in Options 2 and 3 but was against the recommendation of the Department.[2] Department staff stated "The Department cannot support that as the preferred option."[3]

The closure was not based on scientific data regarding this specific location. The response to public comment by the Commission states that "The Commission adopted the proposed closure at the mouth of Blue Creek as a precautionary conservation measure" and "Scientific studies are needed to determine if, and under what criteria, alternate or additional closures may be necessary."[4] The lack of scientific data was discussed by the Commission on April 17, 2015 as well as the need for such scientific data including temperature monitoring.[5]

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[1] Option 1 - No catch and release fishing in Spit Area – Department Proposal: All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area. Option 2- Conservation closure below the mouth of Blue Creek to reduce catch and release in a thermal refuge area and protect late-fall Chinook holding to prior to entering Blue Creek. Option 3- (1) All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area. (2) Conservation closure below the mouth of Blue Creek to reduce catch and release mortality in a thermal refugia area and protect late-fall Chinook holding prior to entering Blue Creek.

[2] See Memorandum dated April 1, 2015 from Charlton Bonham, Director to Sonke Mastrup, Executive Director

[3] Teleconference April 17, 2015 available http://www.cal-span.org/media.php?folder[]=CFG comment found at 2:01:27: 2:35:50.

[4] http://www.fgc.ca.gov/regulations/2015/ktcommentsandresponses.pdf

[5] Teleconference April 17, 2015 available http://www.cal-span.org/media.php?folder[]=CFG comment found at 2:34:00 – 2:34:48

Even without the scientific data supporting a closure of the Blue Creek area, the Commission voted to close the area, as one Commissioner stated at the April 17, 2015, "Why not close it and see what happens?"[6]

Justification for Repeal or Amendment

The closure in question was arbitrary and capricious as it was not done with due regard for science, facts, and circumstances. The regulation was adopted in procedural disarray. It appears from the record several Commissioners wished to find out if, scientifically, there would be a need to close the area through temperature monitoring but could not adopt such a regulation because the noticing had not been done for such an alternative.[7] At the April 17, 2015 meeting, Executive Director Mastrup stated at one point during the motions "this is getting really screwed up quite honestly"[8] referring to the process of passing the motion on the closure of Blue Creek. The Commissioners lack of understanding of the motion they were passing, whether it was a recommendation of the Department or not, and the process needed to amend the regulation is clear from the record.

The Statement of Reasons promulgated by the Commission did not adequately estimate the impact upon County residents including impacts upon small businesses, in particular businesses consisting of sport fishing. Instead the Final Statement of Impacts states that "The impacted businesses are generally small businesses employing few individuals and, like all small businesses, are subject to failure for a variety of reasons." The Commission did not adequately consider the economic impact of such actions. Del Norte County had, according to census data, 21.8% of persons living below the poverty level as compared to 15.9% of people statewide.[9] The effect on small businesses is a significant impact on the County.

Under Title 14 CCR 777.8(c), "Any proposed regulations for which significant adverse environmental effects have been identified during the review process shall not be approved or adopted as proposed if there are feasible mitigation measures or feasible alternatives which would avoid or substantially lessen any significant adverse effect which the proposed regulations may have on the environment, in accordance with Public Resources Code section 21081." The method in which the Commission noticed, evaluated, and eventually adopted the regulations at issue was wholly inadequate because there were several options which were evaluated together as one proposal when, in reality, they had different consequences and different significance of effects. The Commission eventually adopted what appears to be a combination of the Options which encompassed the Blue Creek closure. "Option 1 "would have been an alternative which would have lessened the significant impact on the local economy and local businesses. Whether the Options were mutually exclusive is unclear from the documents noticing the hearings on the amended regulations, but it appears that on April 17, 2015 the Commission decided they were not mutually exclusive and appears to have adopted a combination of the Options. In a

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[6] Teleconference April 17, 2015 available http://www.cal-span.org/media.php?folder[]=CFG comment found at 2:03:26.

[7] Teleconference April 17, 2015 available http://www.cal-span.org/media.php?folder[]=CFG comment found at 2:31:00-2:49:22

[8] Teleconference April 17, 2015 available http://www.cal-span.org/media.php?folder[]=CFG comment found at 2:39:46

[9] http://quickfacts.census.gov/qfd/states/06/06015.html

response to the comments received by the public, the Department states "the final economic effect related to steelhead fishing will have to be assessed post season due to lack of adequate fishing effort data for this area."[10] Additionally the possibility of an adverse environmental impact due to fish crowding in the Blue Creek area was not fully vetted in accordance with §777.6 of the Title 14 of the CCR. Overall, the adoption of the combination of the Options does not comport with the procedural regulations for implementation of the California Environmental Quality Act of 1970 (CEQA).

The scientific data needs to be evaluated as to whether such a closure is a necessary conservation measure or is scientifically sound. Department staff representative Stafford Lehr stated "That's where the Department actually wanted to be with the Yurok. These points that have been raised are extremely valid and...they have expressed a concern, the Department has looked at it and said 'we really don't know what is the effort really, right at Blue Creek.'"[11] The Department staff representative went on to state the Department would like to build temperature criteria and address the issue in the coming year when there is scientific data available and explained that the proposal in front of the Commission would close the area regardless of what the temperature conditions were. Anecdotal data has indicated crowding conditions at the mouth of the Blue Creek partially due to fishing restrictions under the new regulations combined with low water levels are resulting in the deadly parasite ich which was responsible for the 2002 fish kill which caused severe damage to tribal trust resources and commercial and sport fisheries for years to come, undermining the regional economy.[12] Scientific data regarding this specific location as well as consequences to local resources and local economy needs to be considered rather than a "why not close it and see what happens" approach based upon political pressures. This is the exact reason why decision making by a California regulatory authority should not be arbitrary.

Through letters dated February 12, 2015 and May 29, 2015, the County via its Board of Supervisors urged the Fish and Game Commission not to adopt such regulation without supporting scientific data but to no avail. County Counsel wrote a letter on June 9, 2015 expressing the disappointment of the Board after the regulation was amended.

The County Board of Supervisors believe the Commission should collaborate with agencies and stakeholders in a meaningful manner according to its own polices and state law and should work toward solutions together rather than unilaterally denying repeated requests from the County that they reassess their decision making process as to this matter.

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[10] http://www.fgc.ca.gov/regulations/2015/ktcommentsandresponses.pdf

[11] Teleconference April 17, 2015 available http://www.cal-span.org/media.php?folder[]=CFG comment found at 2:33:55

[12] See press release from Jared Huffman https://huffman.house.gov/media-center/press-releases/rep-jared-huffman-insists-federal-agencies-act-to-prevent-klamath-river

The County now calls upon the Commission to repeal such regulation or, in the alternative, amend the regulation taking into consideration the impacts on the County and all of its residents. The Commission is required to act within 30 days under Government Code §11340.7. The County looks forward to an official response to this Petition.

Sincerely,

David Finigan,
Chairman of the Board
Del Norte County
Board of Supervisors

Attachments

1. Notice of Proposed Changes in Regulations- Jan. 13, 2015
2. Initial Statement of Reasons - January 12, 2015
3. Final Statement of Reasons – May 4, 2015
4. Summary and Response to Public Comments
5. Approved Regulatory Language (page 1)
6. Office of Administrative Law's decision: June 4, 2015
7. Letter from Yurok Tribe Chairman Thomas O'Rourke- November 19, 2014
8. Press Release "Rep. Jared Huffman insists federal agencies act to prevent Klamath River fish kill" – August 3, 2015
9. Blue Creek fishing closure: Parties air their grievances–July 16, 2015

Attachment 1

TITLE 14. Fish and Game Commission
Notice of Proposed Changes in Regulations

NOTICE IS HEREBY GIVEN that the Fish and Game Commission (Commission), pursuant to the authority vested by Sections 200, 202, 205, 215, 220, 240, 315, and 316.5, of the Fish and Game Code and to implement, interpret or make specific Sections 200, 202, 205, 215, and 316.5 of said Code, proposes to amend subsections (b)(91.1) and (b)(195) of Section 7.50, Title 14, California Code of Regulations, relating to Klamath River sport fishing.

Informative Digest/Policy Statement Overview

The Klamath River System, which consists of the Klamath River and Trinity River basins, is managed through a cooperative system of State, federal, and tribal management agencies. Salmonid regulations are designed to meet natural and hatchery escapement needs for salmonid stocks, while providing equitable harvest opportunities for ocean recreational, ocean commercial, river recreational and tribal fisheries.

The Pacific Fishery Management Council (PFMC) is responsible for adopting recommendations for the management of recreational and commercial ocean salmon fisheries in the Exclusive Economic Zone (three to 200 miles offshore) off the coasts of Washington, Oregon, and California. When approved by the Secretary of Commerce, these recommendations are implemented as ocean salmon fishing regulations by the National Marine Fisheries Service.

The California Fish and Game Commission (Commission) adopts regulations for the ocean salmon recreational (inside three miles) and the Klamath River System recreational fisheries which are consistent with federal fishery management goals.

For the purpose of PFMC mixed-stock fishery modeling and salmon stock assessment, salmon greater than 22 inches are defined as adult salmon (ages 3-5) and salmon less than or equal to 22 inches are defined as grilse salmon (age 2).

Klamath River Fall-Run Chinook
Klamath River fall-run Chinook salmon (KRFC) harvest allocations and natural spawning escapement goals are established by the PFMC. The KRFC harvest allocation between tribal and non-tribal fisheries is based on court decisions and allocation agreements between the various fishery representatives.

The 2015 KRFC in-river recreational fishery allocation recommended by the PFMC is currently unknown. All proposed closures for adult KRFC are designed to ensure sufficient spawning escapement in the Klamath River Basin and equitably distribute harvest while operating within annual allocations.

Klamath River Spring-Run Chinook
The Klamath River System also supports Klamath River spring-run Chinook salmon (KRSC). Naturally produced KRSC are both temporally and spatially separated from KRFC in most cases.

Presently, KRSC stocks are not managed or allocated by the PFMC. The in-river recreational fishery is managed by general basin seasons, daily bag limit, and possession limit regulations.

KRFC Allocation Management
The PFMC 2014 allocation for the Klamath River System recreational harvest was 4,128 adult KRFC. Preseason stock projections of 2015 adult KRFC abundance will not be available from the PFMC until March 2015. The 2015 Klamath River Basin allocation will be recommended by the PFMC in April 2015 and presented to the Commission for adoption prior to its April 2015 meeting.

For public notice requirements, the Department of Fish and Wildlife (Department) recommends the Commission consider an allocation range of 0 – 67,600 adult KRFC in the Klamath River Basin for the river recreational fishery.

Current Recreational Fishery Management
The KRFC in-river recreational harvest allocation is divided into geographic areas and harvest is monitored under real time subquota management. KRSC in-river recreational harvest is managed by general season, daily bag limit, and possession limit regulations.

The daily bag and possession limits apply to both stocks within the same sub-area and time period.

Proposed Changes
No changes are proposed for the general (KRSC) opening and closing season dates, and bag, possession and size limits.

The following changes to current regulations are proposed:

KRFC QUOTA MANAGEMENT: Seasons, Bag and Possession Limits
For public notice requirements, a range of KRFC bag and possession limits are proposed until the 2015 Klamath River Basin quota is adopted. As in previous years, no retention of adult KRFC salmon is proposed for the following areas, once the subquota has been met.

The proposed open seasons and range of bag and possession limits for KRFC salmon stocks are as follows:

1. Klamath River - August 15 to December 31
2. Trinity River - September 1 to December 31
3. Bag Limit - [0-4] Chinook salmon of which no more than [0-4] fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length.
4. Possession limit - [0-12] Chinook salmon of which [0–12] over 22 inches total length may be retained when the take of salmon over 22 inches total length is allowed.

SPIT AREA MANAGEMENT
Current regulations specify that the spit area (within 100 yards of the channel through the sand spit formed at the Klamath River mouth) closes to all fishing after 15 percent of the total adult KRFC quota has been taken downstream of the Highway 101 bridge.

In 2014 the Department also evaluated restrictive measures for the spit area which included a "no catch and release" regulation for Chinook salmon legally caught in the spit area to protect Chinook stocks from excessive catch and release mortality. The regulatory time frame did not allow for sufficient time to promulgate such a regulation change. The Department informed the Commission that it would consider this change for the 2015 regulatory cycle.

The following options are being provided for Commission consideration:

Option 1 - No catch and release fishing in Spit Area - Department Proposal
After internal discussion and Yurok Tribal coordination, the Department is proposing the following change to the 2015 fall Chinook spit area regulations:

> All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area.

This regulatory proposal does not preclude anglers from leaving the spit area and fishing other areas once their adult daily bag has been taken. Anglers may fish other areas outside of the spit to fill the grilse (Chinook salmon <22 inches) component of their daily bag limit. This regulation also does do not preclude anglers from filling a daily bag composed entirely of grilse salmon while fishing the spit area.

Option 2 - All Chinook salmon must be kept in Spit Area with Blue Creek closure - Yurok Proposal
The Yurok tribe is proposing the following modifications to the Klamath River regulations in the spit area and on the main Klamath River below the confluence with Blue Creek:

1) No catch and release fishing allowed in the spit area to reduce pinniped predation on released fish, and
2) Conservation closure below the mouth of Blue Creek to reduce catch and release in a thermal refuge area and protect late-fall Chinook holding prior to entering Blue Creek.

The first modification is to the spit area at the mouth of the Klamath River to allow no release of Chinook salmon, regardless of whether they are legally caught or foul hooked. This option provides an exception from the general snagging prohibitions in Section 2.00. The second modification would add Blue Creek to the September 15 to December 31 stream mouth closures and add a new Klamath River main stem closure from June 15 to September 14 from 500 feet above to ½ mile downstream around the mouth of Blue Creek.

Option 3 – A possible combination of Options 1 and 2
The Commission may combine Option 1's prohibition on catch and release fishing in the spit area with Option 2's Blue Creek conservation closure.
1) All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area.
2) Conservation closure below the mouth of Blue Creek to reduce catch and release in a thermal refuge area and protect late-fall Chinook holding prior to entering Blue Creek.

ADDITIONAL PROPOSED CHANGES
The name of the road listed in subsection (b)(91.1)(B)2. is proposed to be corrected from "Ishi Pishi Falls road" to "Ishi Pishi Road". Cross references are proposed to be corrected in subsection (b)(195) to reduce public confusion. Other changes are proposed for clarity and consistency.

Benefits of the Proposed Regulations
The benefits of the proposed regulations are in conformance with federal law, sustainable management of Klamath River Basin salmon resources, and promotion of businesses that rely on recreational salmon fishing in the Klamath River Basin.

The proposed regulations are neither inconsistent nor incompatible with existing State regulations. The Legislature has delegated authority to the Commission to promulgate sport fishing regulations (Sections 200, 202, 205, 315, and 316.5, Fish and Game Code). Commission staff has searched the California Code of Regulations and has found no other State regulations related to the recreational take of Chinook salmon in the Lower Klamath River Basin.

NOTICE IS GIVEN that any person interested may present statements, orally or in writing, relevant to this action at a hearing to be held in the Resources Building Auditorium, 1416 Ninth Street, Sacramento, California, on Thursday, February 12, 2015, at 8:00 a.m., or as soon thereafter as the matter may be heard.

NOTICE IS ALSO GIVEN that any person interested may present statements, orally or in writing, relevant to this action at a teleconference originating in the Fish and Game Commission conference room, 1416 Ninth Street, Suite 1320, Sacramento, California, on Friday, April 17, 2015, at 8:30 a.m., or as soon thereafter as the matter may be heard. Interested persons may also participate at the following locations: Department of Fish and Wildlife, Conference Room, 50 Ericson Court, Arcata, California; Department of Fish and Wildlife, Conference Room, 20 Lower Ragsdale Drive, Suite 100, Monterey, California; Department of Fish and Wildlife, Conference Room, 1933 Cliff Drive, Suite 9, Santa Barbara, California; and Department of Fish and Wildlife, Conference Room, 4665 Lampson Avenue, Los Alamitos, California. Written comments may be submitted at the address given below, or by fax at (916) 653-5040, or by e mail to FGC@fgc.ca.gov. Written comments mailed, faxed or e-mailed to the Commission office, must be received before 5:00 p.m. on April 16, 2015. All comments must be received no later than April 17, 2015, at one of the teleconference hearing locations listed above. If you would like copies of any modifications to this proposal, please include your name and mailing address.

The regulations as proposed in strikeout-underline format, as well as an initial statement of reasons, including environmental considerations and all information upon which the proposal is based (rulemaking file), are on file and available for public review from the agency representative, Sonke Mastrup, Executive Director, Fish and Game Commission, 1416 Ninth Street, Box 944209, Sacramento, California 94244-2090, phone (916) 653-4899. Please direct requests for the above mentioned documents and inquiries concerning the regulatory process to Sonke Mastrup or Sherrie Fonbuena at the preceding address or phone number. **Stafford Lehr, Chief of Fisheries Branch, Department of Fish and Wildlife, (916) 327-8840 or Stafford.Lehr@wildlife.ca.gov, has been designated to respond to questions on the substance of the proposed regulations.** Copies of the Initial Statement of Reasons, including the regulatory language, may be obtained from the address above. Notice of the proposed action shall be posted on the Fish and Game Commission website at http://www.fgc.ca.gov.

Availability of Modified Text

If the regulations adopted by the Commission differ from but are sufficiently related to the action proposed, they will be available to the public for at least 15 days prior to the date of adoption. Circumstances beyond the control of the Commission (e.g., timing of Federal regulation adoption, timing of resource data collection, timelines do not allow, etc.) or changes made to be responsive to public recommendation and comments during the regulatory process may preclude full compliance with the 15-day comment period, and the Commission will exercise its powers under Section 202 of the Fish and Game Code. Regulations adopted pursuant to this section are not subject to the time periods for adoption, amendment or repeal of regulations prescribed in Sections 11343.4, 11346.4 and 11346.8 of the Government Code. Any person

interested may obtain a copy of said regulations prior to the date of adoption by contacting the agency representative named herein.

If the regulatory proposal is adopted, the final statement of reasons may be obtained from the address above when it has been received from the agency program staff.

Impact of Regulatory Action/Results of the Economic Impact Analysis

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Business, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. The proposed regulations are projected to have some impact on the net revenues to local businesses servicing sport fishermen. Visitor spending may be reduced and in the absence of the emergence of alternative visitor activities, the drop in spending could induce business contraction. However, this will not likely affect the ability of California businesses to compete with businesses in other states. The preservation of Klamath River salmon stocks is necessary for the success of lower and upper Klamath River Basin businesses which provide goods and services related to fishing. The proposed changes are necessary for the continued preservation of the resource and therefore the prevention of adverse economic impacts.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The proposed regulations range from no fishing of KRFC salmon in 2015; to a normal Klamath River Basin salmon season. The Commission anticipates some impact on the creation or elimination of jobs in California. The potential employment impacts range from 0 to 23 jobs which are not expected to create, eliminate or expand businesses in California. The Commission anticipates impacts on the creation, elimination or expansion of businesses in California ranging from no impact to reduced revenues to approximately 30 businesses that serve sport fishing activities. However, the possibility of growth of businesses to serve substitute activities exists. Adverse impacts to jobs and/or businesses would be less if fishing of grilse KRFC salmon is permitted than under the complete closure to all fishing. The impacted businesses are generally small businesses employing few individuals and, like all small businesses, are subject to failure for a variety of causes. Additionally, the long-term intent of the proposed action is to increase sustainability in fishable salmon stocks and, subsequently, the promotion and long-term viability of these same small businesses.

The Commission anticipates benefits to the health and welfare of California residents. Providing opportunities for a salmon sport fishery encourages consumption of a nutritious food.

The Commission anticipates benefits to the environment by the sustainable management of California's salmon resources.

The Commission does not anticipate any benefits to worker safety.

(c) Cost Impacts on a Representative Private Person or Business:

The Commission is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State: None.

(e) Nondiscretionary Costs/Savings to Local Agencies: None.

(f) Programs Mandated on Local Agencies or School Districts: None.

(g) Costs Imposed on any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code: None.

(h) Effect on Housing Costs: None.

Effect on Small Business

It has been determined that the adoption of these regulations may affect small business. The Commission has drafted the regulations in Plain English pursuant to Government Code Sections 11342.580 and 11346.2(a)(1).

Consideration of Alternatives

The Commission must determine that no reasonable alternative considered by the Commission, or that has otherwise been identified and brought to the attention of the Commission, would be more effective in carrying out the purpose for which the action is proposed, would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

FISH AND GAME COMMISSION

Sonke Mastrup
Executive Director

Dated: January 13, 2015

Attachment 2

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Subsections (b)(91.1) and (b)(195) of Section 7.50
Title 14, California Code of Regulations
Re: Klamath River Sport Fishing Regulations

I. Date of Initial Statement of Reasons: January 12, 2015

II. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: December 3, 2014
Location: Van Nuys

(b) Discussion Hearing: Date: February 12, 2015
Location: Sacramento

(c) Adoption Hearing: Date: April 17, 2015
Location: Teleconference

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

The Klamath River System, which consists of the Klamath River and Trinity River basins, is managed through a cooperative system of State, federal, and tribal management agencies. Salmonid regulations are designed to meet natural and hatchery escapement needs for salmonid stocks, while providing equitable harvest opportunities for ocean recreational, ocean commercial, river recreational and tribal fisheries.

The Pacific Fishery Management Council (PFMC) is responsible for adopting recommendations for the management of recreational and commercial ocean salmon fisheries in the Exclusive Economic Zone (three to 200 miles offshore) off the coasts of Washington, Oregon, and California. When approved by the Secretary of Commerce, these recommendations are implemented as ocean salmon fishing regulations by the National Marine Fisheries Service (NMFS).

The California Fish and Game Commission (Commission) adopts regulations for the ocean salmon recreational (inside three miles) and the Klamath River System recreational fisheries which are consistent with federal fishery management goals.

Two tribal entities within the Klamath River System, the Hoopa Valley Tribe and the Yurok Tribe, maintain fishing rights for ceremonial,

subsistence and commercial fisheries that are managed consistent with federal fishery management goals. Tribal fishing regulations are promulgated by the Hoopa and Yurok tribes.

For the purpose of PFMC mixed-stock fishery modeling and salmon stock assessment, salmon greater than 22 inches are defined as adult salmon (ages 3-5) and salmon less than or equal to 22 inches are defined as grilse salmon (age 2).

Klamath River Fall-Run Chinook

Klamath River fall-run Chinook salmon (KRFC) harvest allocations and natural spawning escapement goals are established by the PFMC. The KRFC harvest allocation between tribal and non-tribal fisheries is based on court decisions and allocation agreements between the various fishery representatives.

The 2015 KRFC in-river recreational fishery allocation recommended by the PFMC is currently unknown. All proposed closures for adult KRFC are designed to ensure sufficient spawning escapement in the Klamath River Basin and equitably distribute harvest while operating within annual allocations.

Klamath River Spring-Run Chinook

The Klamath River System also supports Klamath River spring-run Chinook salmon (KRSC). Naturally produced KRSC are both temporally and spatially separated from KRFC in most cases.

Presently, KRSC stocks are not managed or allocated by the PFMC. The in-river recreational fishery is managed by general basin seasons, daily bag limit, and possession limit regulations. KRSC harvest will be monitored on the Lower Klamath River in 2015 and ensuing years by creel survey.

KRFC Allocation Management

The PFMC 2014 allocation for the Klamath River System recreational harvest was 4,128 adult KRFC. Preseason stock projections of 2015 adult KRFC abundance will not be available from the PFMC until March 2015. The 2015 basin allocation will be recommended by the PFMC in April 2015 and presented to the Commission for adoption prior to its April 2015 meeting.

For public notice requirements, the Department of Fish and Wildlife (Department) recommends the Commission consider an allocation range of 0 – 67,600 adult KRFC in the Klamath River Basin for the river recreational fishery. This recommended range encompasses the historical range of the Klamath River Basin allocations and allows the PFMC and Commission to make adjustments during the 2015 regulatory cycle.

The Commission may modify the KRFC in-river recreational salmon harvest allocation which is normally 15 percent of the non-tribal PFMC harvest allocation. Commission modifications need to meet biological and fishery allocation goals specified in law or established in the PFMC Salmon Fishery Management Plan otherwise harvest opportunities may be reduced in the California ocean fisheries.

The annual KRFC in-river harvest allocation is split into 4 geographic areas with subquotas assigned to each. They are as follows:

1. for the main stem Klamath River from 3,500 feet downstream of the Iron Gate Dam to the Highway 96 bridge at Weitchpec -- 17 percent of the recreational fishery allocation;
2. for the main stem Klamath River from downstream of the Highway 96 bridge at Weitchpec to the mouth -- 50 percent of the recreational fishery allocation;
3. for the Trinity River downstream of the Old Lewiston Bridge to the Highway 299 West bridge at Cedar Flat -- 16.5 percent of the recreational fishery allocation; and
4. for the Trinity River downstream from the Denny Road bridge at Hawkins Bar to the confluence with the Klamath River -- 16.5 percent of the recreational fishery allocation.

The spit area (within 100 yards of the channel through the sand spit formed at the Klamath River mouth) closes to all fishing after 15 percent of the total Klamath River Basin quota has been taken downstream of the Highway 101 bridge.

These geographic areas are based upon the historical distribution of angler effort and ensure equitable harvest of adult KRFC in the upper Klamath River and Trinity River. The subquota system requires the Department to monitor angler harvest of adult KRFC in each geographic area. All areas will be monitored on a real time basis except for the following:

<u>Klamath River upstream of Weitchpec and the Trinity River:</u> Due to funding and personnel reductions, the Department will be unable to deploy adequate personnel to conduct harvest monitoring in the Klamath River upstream of Weitchpec and in the Trinity River for the 2015 season. The Department has reviewed salmon harvest and run-timing data for these areas. Based on this review, the Department has developed a Harvest Predictor Model (HPM) which incorporates historic creel survey data from the Klamath River downstream of Iron Gate Dam to the confluence with the Pacific Ocean and the Trinity River downstream of Lewiston Dam to the confluence with the Klamath River. The HPM is driven by the positive relationship between KRFC harvested in the Lower and Upper Klamath River. The HPM will be used by the Department to implement fishing

closures to ensure that anglers do not exceed established subquota targets.

Current Recreational Fishery Management
The KRFC in-river recreational harvest allocation is divided into geographic areas and harvest is monitored under real time subquota management. KRSC in-river recreational harvest is managed by general season, daily bag limit, and possession limit regulations.

The Department presently differentiates the two stocks by the following dates:

Klamath River

1. January 1 through August 14 - General Season KRSC.
   For purposes of clarity, daily bag and possession limits apply to that section of the Klamath River downstream the Highway 96 bridge at Weitchpec to the mouth.

2. August 15 to December 31 - KRFC quota management.

Trinity River

1. January 1 through August 31 – General Season KRSC.
   For purposes of clarity, daily bag and possession limits apply to that section of the Trinity River downstream of the Old Lewiston Bridge to the confluence with the South Fork Trinity River.

2. September 1 through December 31 – KRFC quota management.

The daily bag and possession limits apply to both stocks within the same sub-area and time period.

Proposed Changes
No changes are proposed for the general (KRSC) opening and closing season dates, and bag, possession and size limits.

The following changes to current regulations are proposed:

<u>KRFC QUOTA MANAGEMENT: Seasons, Bag and Possession Limits</u>
For public notice requirements, a range of KRFC bag and possession limits are proposed until the 2015 Klamath River Basin quota is adopted. As in previous years, no retention of adult KRFC salmon is proposed for the following areas, once the subquota has been met.

The proposed open seasons and range of bag and possession limits for KRFC salmon stocks are as follows:

1. Klamath River - August 15 to December 31
2. Trinity River - September 1 to December 31

3. Bag Limit - [0-4] Chinook salmon – of which no more than [0-4] fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length.
4. Possession limit - [0-12] Chinook salmon of which [0–12] over 22 inches total length may be retained when the take of salmon over 22 inches total length is allowed.

SPIT AREA MANAGEMENT:

Regulations adopted in 2014 specify the spit area (within 100 yards of the channel through the sand spit formed at the Klamath River mouth) will close to all fishing after 15 percent of the total Klamath River Basin quota has been taken downstream of the Highway 101 bridge. At the same time, the Commission removed language (special note in the regulations for the spit fishery) that allowed the Department to keep the spit fishery open if the Department projected the Klamath River Basin adult fall Chinook would not be met.

In 2014 the Department also evaluated restrictive measures for the spit area which included a "no catch and release" regulation for Chinook salmon legally caught in the spit area to protect Chinook stocks from excessive catch and release mortality. The regulatory time frame did not allow for sufficient time to promulgate such a regulation change. The Department informed the Commission that it would consider this change for the 2015 regulatory cycle.

At issue is the perception of mortality associated with Chinook salmon which are caught and released by anglers trying to fill their daily grilse bag limit. Typically the fall Chinook bag limit is composed of an adult portion and grilse portion. In 2014 the daily fall Chinook bag limit was three fish, no more than one adult. Thus, anglers fishing the spit area would often catch and keep their one adult and continue fishing for the grilse portion of their daily bag. Some anglers would catch multiple adult fall Chinook and have to release these fish since they already had retained their one adult. Some released Chinook were observed floating downstream, thus becoming easy prey for the marine mammals that congregate in this area.

The following options are being provided for Commission consideration:

Option 1 - No catch and release fishing in Spit Area - Department Proposal

After internal discussion and Yurok Tribal coordination, the Department is proposing the following change to the 2015 fall Chinook salmon spit area regulations:

> All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area.

This regulatory proposal does not preclude anglers from leaving the spit area and fishing other areas once their adult daily bag has been taken. Anglers may fish other areas outside of the spit to fill the grilse (Chinook salmon <22 inches) component of their daily bag limit. This regulation also does do not preclude anglers from filling a daily bag composed entirely of grilse salmon while fishing the spit area.

Option 2 - All Chinook salmon must be kept in Spit Area with Blue Creek closure - Yurok Proposal

The Yurok tribe approached the Commission at the notice hearing for additional proposed modifications to the Klamath River regulations in the spit area and the main Klamath River below the confluence with Blue Creek. The Commission directed the Department to add a regulatory option to allow further consideration of the Yurok proposal:

1) No catch and release fishing allowed in the spit area to reduce pinniped predation on released fish, and
2) Conservation closure below the mouth of Blue Creek to reduce catch and release in a thermal refuge area and protect late-fall Chinook holding to prior to entering Blue Creek.

The first modification is to the spit area at the mouth of the Klamath River to allow no release of Chinook salmon. This revision would add a new subarea on the spit area by adding a new subsection (b)(91.1)(E) for the spit area.

The difference between the Yurok Tribe's proposed regulation and the Department's proposal is that the Tribal proposal requires the retention of all fish caught, regardless of whether they are caught legally or foul hooked. The proposed regulations therefore provide, in this one instance, an exception from the snagging prohibitions in subsections (b) and (c) of Section 2.00. The rationale for this is that a substantial proportion of fish caught in this area are foul hooked due to the nature of the fishery. Given that these fish are exhausted when released, and there is a relatively large presence of sea lions and seals that feed upon these released fish, the Tribe recommends that all fish caught (even those foul hooked) be retained and counted toward an angler's daily bag limit.

The second modification would expand subsection (b)(91.1)(B)3. to add Blue Creek to the September 15 to December 31 stream mouth closures and add a new Klamath River main stem closure from June 15 to September 14 from 500 feet above to ½ mile downstream around the mouth of Blue Creek.

This proposed conservation area has two purposes, depending on the time of year:

1) Mid-June to mid-September: The intent of this closure to fishing is to protect the large numbers of adult summer steelhead, as well as spring

and fall-run Chinook salmon (thousands during some years), that are seeking thermal respite from the excessively warm Klamath River main stem temperatures. The intent is to prevent these fish from being caught by anglers, played for an extended period of time in the ambient river conditions that are several degrees warmer (sometimes near lethal levels) than the thermal refuge, and then eventually released. Forcing fish to go through such abrupt temperature changes, while putting them through excessive stress, results in physiological trauma that can lead to death.

2) Mid-September through December: The intent of this closure is to protect the genetically unique late-fall run chinook salmon that hold at the mouth of Blue Creek prior migrating upstream to spawn in Blue Creek, similar to the protections that are currently given at the mouths of the Salmon, Scott and Shasta Rivers.

Option 3 – A possible combination of Options 1 and 2

The Commission may combine Option 1's prohibition on catch and release fishing in the spit area with Option 2's Blue Creek conservation closure.

1) All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area.
2) Conservation closure below the mouth of Blue Creek to reduce catch and release in a thermal refuge area and protect late-fall Chinook holding prior to entering Blue Creek.

ADDITIONAL PROPOSED CHANGES

The name of the road listed in subsection (b)(91.1)(B)2. is proposed to be corrected from "Ishi Pishi Falls road" to "Ishi Pishi Road". Cross references are proposed to be corrected in subsection (b)(195) to reduce public confusion. Other changes are proposed for clarity and consistency.

Benefits of the Proposed Regulations

It is the policy of this State to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the State for the benefit of all the citizens of the State. In addition, it is the policy of this State to promote the development of local California fisheries in harmony with federal law respecting fishing and the conservation of the living resources of the ocean and inland waters under the jurisdiction and influence of the State. The objectives of this policy include, but are not limited to, the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use. Adoption of scientifically-based Klamath River Basin salmon seasons, size limits, and bag and possession limits provides for the maintenance of sufficient populations of salmon to ensure their continued existence.

The benefits of the proposed regulations are in conformance with federal law, sustainable management of Klamath River Basin salmon resources, and promotion of businesses that rely on recreational salmon fishing in the Klamath River Basin.

(b) Authority and Reference Sections from Fish and Game Code for Regulation:

Authority: Sections 200, 202, 205, 215, 220, 240, 315 and 316.5, Fish and Game Code.

Reference: Sections 200, 202, 205, 215 and 316.5, Fish and Game Code.

(c) Specific Technology or Equipment Required by Regulatory Change:

None.

(d) Identification of Reports or Documents Supporting Regulation Change:

In-River Sport Fishing Economics Technical Report, National Oceanographic and Atmospheric Administration, National Marine Fisheries Service (NMFS), September 2011.

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

No public meetings are being held prior to the notice publication. The 45-day comment period provides adequate time for review of the proposed amendments.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

The use of more liberal regulations for bag limits, possession limits and fishing methods. For KRFC salmon, more liberal regulations would be less desirable than those proposed because they could create risk of an intense fishery reaching or exceeding the quota in a very short time. Reaching the quota in a very short time could be damaging to the local economy. Exceeding the allowable harvest could be damaging to the KRFC salmon stocks.

(b) No Change Alternative:

The No Change Alternative would leave the current 2014 regulations in place and would not conform to the PFMC Klamath River Basin quota for 2015. Nor would it address the excessive catch and release mortality within the spit area. The change is necessary to continue appropriate harvest rates and an equitable distribution of the harvestable surplus.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the proposed regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. The proposed regulations are projected to have some impact on the net revenues to local businesses servicing sport fishermen. Visitor spending may be reduced and in the absence of the emergence of alternative visitor activities, the drop in spending could induce business contraction. However, this will not likely affect the ability of California businesses to compete with businesses in other states. The preservation of Klamath River salmon stocks is necessary for the success of lower and upper Klamath River Basin businesses which provide goods and services related to fishing. The proposed changes are necessary for the continued preservation of the resource and therefore the prevention of adverse economic impacts.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The proposed regulations range from no fishing of KRFC salmon in 2015; to a normal Klamath River Basin salmon season. The Commission anticipates some impact on the creation or elimination of jobs in California. The potential employment impacts range from 0 to 23 jobs which are not

expected to create, eliminate or expand businesses in California. The Commission anticipates impacts on the creation, elimination or expansion of businesses in California ranging from no impact to reduced revenues to approximately 30 businesses that serve sport fishing activities. However, the possibility of growth of businesses to serve substitute activities exists. Adverse impacts to jobs and/or businesses would be less if fishing of grilse KRFC salmon is permitted than under the complete closure to all fishing. The impacted businesses are generally small businesses employing few individuals and, like all small businesses, are subject to failure for a variety of causes. Additionally, the long-term intent of the proposed action is to increase sustainability in fishable salmon stocks and, subsequently, the promotion and long-term viability of these same small businesses.

The Commission anticipates benefits to the health and welfare of California residents. Providing opportunities for a salmon sport fishery encourages consumption of a nutritious food.

The Commission anticipates benefits to the environment by the sustainable management of California's salmon resources.

The Commission does not anticipate any benefits to worker safety.

(c) Cost Impacts on a Representative Private Person or Business:

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

(e) Nondiscretionary Costs/Savings to Local Agencies:

None.

(f) Programs Mandated on Local Agencies or School Districts:

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs:

None.

VI. Economic Impact Assessment:

The regulatory amendments of subsections of Section 7.50 under consideration will set the 2014 Klamath River Basin salmon sport fishing regulations to conform to Pacific Fishery Management Council (PFMC) Fall Chinook allocation guidelines. The Klamath River Basin is anticipated to be open for sport salmon fishing at levels similar to the 2014 quotas; however the possibility of marine fishery area closures still exists. Ocean closures may in turn result in PFMC recommendations for Klamath River Basin sport salmon fishery closures for the take of adult salmon. Adverse or positive impacts to jobs and businesses will depend on the exact regulations ultimately adopted by PFMC and the Fish and Game Commission (Commission).

The Commission is considering proposed changes to Klamath River Fall Chinook (KRFC) quota management and the management of the Klamath River Basin spit area which is the area within 100 yards of the channel through the sand spit formed at the Klamath River mouth:

1) KRFC QUOTA MANAGEMENT
The proposed regulations range from 100% of last year's Klamath River Basin salmon season to 0% or no salmon fishing on adult Chinook salmon (greater than 22 inches) in 2015. Under all scenarios sport fishing will be allowed for grilse fall-run Chinook salmon (2 year-old salmon 22 inches or less) regardless of PFMC regulations, thus any adverse impacts to businesses would be less severe than under a complete closure of fishing.

The projections evaluated here are as follows: 100% of the 2014 Klamath River Basin catch limit; 50% of the 2014 basin catch limit; and 0% of the 2014 basin catch limit.

A. Effects of the Regulation on the Creation or Elimination of Jobs

Projection 1. 100% catch limit: The Commission does not anticipate any adverse impacts on the creation or elimination of jobs, as the quotas would not decrease effort nor curtail the number of visitors and thus probable visitor expenditures in the fisheries areas.

Based on a 2011 NOAA National Marine Fisheries Service (NMFS) report on In-River Sport Fishing Economics of the Klamath River, under a normal season non-resident Klamath River sport salmon anglers contribute about $2,037,424 (2013$) in total economic output to California businesses. This revenue supports about 35 jobs in the state.

An assumption of the NMFS report is that increases in expenditures by resident anglers associated with expanded fishing opportunities would be accommodated by reduced expenditures on other locally purchased goods and services – with

no net change in local economic activity. For non-resident anglers, however, increases in local expenditures associated with increases in local fishing opportunities would be accomplished by diverting money that they would otherwise spend outside the local area. Thus the economic impact analysis focuses on non-resident angler expenditures, which represent 'new money' whose injection serves to stimulate the local economy.

The NMFS study excluded the Trinity River, the largest tributary to the Klamath. The Trinity River is allocated 33% of the Klamath Basin fall-run Chinook salmon total allocation. Using the Trinity allocation as a measure of angler effort, and thus impacts on associated businesses that support anglers, the total non-resident angler contribution to the entire Klamath Basin (including the Trinity River) is estimated to be $2,709,774 (2013$) in total economic output. This revenue, again using a 33% increase to account for the Trinity River, provides an estimated total of 47 jobs in the state (assuming that personnel costs also rise with inflation). This is a conservative estimate of total economic impact as it counts only non-resident angler expenditures. Non-resident average expenditures are estimated to be $106.43 (2013$) per angler day (for lodging, food, gasoline, fishing gear, boat fuel, and guide fees) based on a NMFS sponsored survey. Resident average expenditures per angler day are estimated to be 60% less (markedly reduced lodging, gasoline and food expenditures) which yields an estimate of $42.60 per angler day. Resident anglers comprise about 36% of Klamath Basin anglers.

Projection 2. 50% catch limit: The Commission anticipates some impact on the creation or elimination of jobs. A 50% catch reduction will likely reduce visitor spending by slightly less than 50%, given price elasticities of demand for salmon fishing activity of less than one. As the "price" of fishing per unit catch increases the demand for fishing trips declines by a lesser extent, particularly in the short-run. While difficult to predict, job losses associated with a 50% reduction in the catch limit are expected to be less than half of the estimated total jobs supported by angler visits (i.e. fewer than 23 jobs).

Projection 3. 0% catch limit: In the event of fisheries closures in some or all Klamath River basin areas, the Commission anticipates less than 50% reduction in fishery-related jobs. As mentioned earlier, sport fishing for grilse fall-run Chinook salmon (2–year-old salmon less than 22 inches) will still be allowed, thus lessening any job losses. A closure on the take of adult Chinook salmon was instituted in 2006 and only grilse salmon could be legally harvested that year. The effect of the 2006 closure, as measured by angler days on the Klamath River, resulted in an approximate 50% drop in angler days, compared to the 2000- 2005 average (12,000 angler days vs. 23,300 angler days). Job creation or elimination is assumed to lag in adjustment to changes in consumer demand as is characteristic of the labor market. Thus, the potential impacts of a closure on the take of adult Chinook are estimated to result in the loss of fewer than 23 jobs.

B. Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses

Projection 1: 100% catch limit: The Commission does not anticipate any impacts on the creation of new business or the elimination of existing businesses, as the quotas would not decrease effort nor curtail the number of visitors and thus probable visitor expenditures in the fisheries areas.

Projection 2. 50% catch limit: The Commission anticipates a decline in visits to the fishery areas of less than 50%. This may result in some decline in business activity and no business creation for businesses directly related to fishing activities. However, with less effort being expended on fishing, the possibility of substitute activities and the growth of businesses to serve those activities exists.

Projection 3. 0% catch limit: In the event of fisheries closures in some or all Klamath River basin areas, the Commission anticipates a decline in regional spending and thus reduced revenues to the approximately 30 businesses that serve sport fishing activities. However adverse impacts will be mitigated by the continued opportunity to harvest grilse salmon. Additionally, the long-term intent of the proposed action is to increase sustainability in fishable salmon stocks and, subsequently, the long-term viability of these same small businesses.

C. Effects of the Regulation on the Expansion of Businesses in California

Projection 1. 100% catch limit: The Commission does not anticipate any impacts on the expansion of businesses in California as the quotas would not increase effort nor increase the number of visitors and thus probable visitor expenditures in the fisheries areas.

Projection 2. 50% catch limit: The Commission does not anticipate any impacts on the expansion of businesses in California. Decreases in expenditures by resident anglers associated with reduced fishing opportunities may be offset by increased expenditures on other locally purchased goods and services – with no net change in local economic activity. For non-resident anglers, however, decreases in local expenditures associated with decreases in local fishing opportunities may result in increases in other expenditures outside the Klamath River basin area.

Projection 3. 0% catch limit: In the event of fisheries closures in some or all Klamath River basin areas, the Commission does not anticipate any expansion of businesses in California. Decreases in expenditures by anglers associated with reduced fishing opportunities may be partially offset by increased expenditures on other locally purchased goods and services as visitors substitute salmon fishing with other recreational pursuits.

D. Benefits of the Regulation

Concurrence with Federal Law:
California's sport fishing regulations need to conform to the new Federal regulations to achieve optimum yield in California. The PFMC annually reviews the status of west coast salmon populations. As part of that process, it

recommends west coast adult salmon fisheries regulations aimed at meeting biological and fishery allocation goals specified in law or established in the Salmon Fishery Management Plan. These recommendations coordinate west coast management of sport and commercial ocean salmon fisheries off the coasts of Washington, Oregon, and California and California inland sport salmon fisheries. These recommendations are subsequently implemented as ocean fishing regulations by the NMFS and as sport salmon regulations for state marine and inland waters by the Commission.

Promotion of businesses that rely on Klamath River basin sport salmon fishing. Adoption of scientifically-based inland and ocean salmon seasons, size limits, and bag and possession limits provides for the maintenance of sufficient populations of salmon to ensure their continued existence and future salmon sport fishing opportunities, and subsequently the long-term viability of businesses that rely on Klamath River Basin sport fishing. Under a normal season, Klamath River Basin (including the Trinity River) sport salmon anglers contribute about $2,709,774 (2013$) in total economic output to the State's business sector. This is based on a 2011 NOAA National Marine Fisheries Service (NMFS) report on In-River Sport Fishing Economics of the Klamath River Basin. This revenue provides for about 47 jobs in the state.

Benefits to the environment: sustainable management of Klamath River basin salmon resources

Projection 1. 100% catch limit: The Commission anticipates benefits to the environment. It is the policy of this state to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the state for the benefit of all the citizens of the state. In addition, it is the policy of this state to promote the development of local California fisheries in harmony with federal law respecting fishing and the conservation of the living resources of the ocean and inland waters under the jurisdiction and influence of the state. The objectives of this policy include, but are not limited to, the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use. Adoption of scientifically-based Klamath River Basin salmon seasons, size limits, and bag and possession limits provides for the maintenance of sufficient populations of salmon to ensure their continued existence.

Projection 2. The Commission anticipates benefits to the environment similar to as stated in Projection 1.

Projection 3. The Commission anticipates benefits to the environment similar to as stated in Projection 1.

Benefits to the health and welfare of California residents

Projection 1. The Commission anticipates benefits to the health and welfare of California residents through the protection of aquatic and riparian habitats and

the fish and wildlife resources that depend upon them. Providing opportunities for a Klamath River Basin sport salmon fishery encourages consumption of a nutritious food. Salmon sport fishing also contributes to increased mental health of its practitioners as fishing is a hobby and form of relaxation for many. Salmon sport fishing also provides opportunities for multi-generational family activities and promotes respect for California's environment by the future stewards of California's natural resources.

Projection 2. The Commission anticipates benefits to the health and welfare of California residents similar to as stated in Projection 1.

Projection 3. The Commission anticipates benefits to the health and welfare of California residents similar to as stated in Projection 1.

Benefits to worker safety

Projection 1. The Commission does not anticipate benefits to worker safety because the proposed regulations will not impact worker conditions.

Projection 2. The Commission does not anticipate benefits to worker safety as stated in Projection 1.

Projection 3. The Commission does not anticipate benefits to worker safety as stated in Projection 1.

Informative Digest/Policy Statement Overview

The Klamath River System, which consists of the Klamath River and Trinity River basins, is managed through a cooperative system of State, federal, and tribal management agencies. Salmonid regulations are designed to meet natural and hatchery escapement needs for salmonid stocks, while providing equitable harvest opportunities for ocean recreational, ocean commercial, river recreational and tribal fisheries.

The Pacific Fishery Management Council (PFMC) is responsible for adopting recommendations for the management of recreational and commercial ocean salmon fisheries in the Exclusive Economic Zone (three to 200 miles offshore) off the coasts of Washington, Oregon, and California. When approved by the Secretary of Commerce, these recommendations are implemented as ocean salmon fishing regulations by the National Marine Fisheries Service (NMFS).

The California Fish and Game Commission (Commission) adopts regulations for the ocean salmon recreational (inside three miles) and the Klamath River System recreational fisheries which are consistent with federal fishery management goals.

For the purpose of PFMC mixed-stock fishery modeling and salmon stock assessment, salmon greater than 22 inches are defined as adult salmon (ages 3-5) and salmon less than or equal to 22 inches are defined as grilse salmon (age 2).

Klamath River Fall-Run Chinook

Klamath River fall-run Chinook salmon (KRFC) harvest allocations and natural spawning escapement goals are established by the PFMC. The KRFC harvest allocation between tribal and non-tribal fisheries is based on court decisions and allocation agreements between the various fishery representatives.

The 2015 KRFC in-river recreational fishery allocation recommended by the PFMC is currently unknown. All proposed closures for adult KRFC are designed to ensure sufficient spawning escapement in the Klamath River Basin and equitably distribute harvest while operating within annual allocations.

Klamath River Spring-Run Chinook

The Klamath River System also supports Klamath River spring-run Chinook salmon (KRSC). Naturally produced KRSC are both temporally and spatially separated from KRFC in most cases.

Presently, KRSC stocks are not managed or allocated by the PFMC. The in-river recreational fishery is managed by general basin seasons, daily bag limit, and possession limit regulations.

KRFC Allocation Management

The PFMC 2014 allocation for the Klamath River System recreational harvest was 4,128 adult KRFC. Preseason stock projections of 2015 adult KRFC abundance will not be available from the PFMC until March 2015. The 2015 Klamath River Basin allocation

will be recommended by the PFMC in April 2015 and presented to the Commission for adoption prior to its April 2015 meeting.

For public notice requirements, the Department of Fish and Wildlife (Department) recommends the Commission consider an allocation range of 0 – 67,600 adult KRFC in the Klamath River Basin for the river recreational fishery.

Current Recreational Fishery Management

The KRFC in-river recreational harvest allocation is divided into geographic areas and harvest is monitored under real time subquota management. KRSC in-river recreational harvest is managed by general season, daily bag limit, and possession limit regulations.

The daily bag and possession limits apply to both stocks within the same sub-area and time period.

Proposed Changes

No changes are proposed for the general (KRSC) opening and closing season dates, and bag, possession and size limits.

The following changes to current regulations are proposed:

KRFC QUOTA MANAGEMENT: Seasons, Bag and Possession Limits

For public notice requirements, a range of KRFC bag and possession limits are proposed until the 2015 Klamath River Basin quota is adopted. As in previous years, no retention of adult KRFC salmon is proposed for the following areas, once the subquota has been met.

The proposed open seasons and range of bag and possession limits for KRFC salmon stocks are as follows:

1. Klamath River - August 15 to December 31
2. Trinity River - September 1 to December 31
3. Bag Limit - [0-4] Chinook salmon of which no more than [0-4] fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length.
4. Possession limit - [0-12] Chinook salmon of which [0–12] over 22 inches total length may be retained when the take of salmon over 22 inches total length is allowed.

SPIT AREA MANAGEMENT

Current regulations specify that the spit area (within 100 yards of the channel through the sand spit formed at the Klamath River mouth) closes to all fishing after 15 percent of the total adult KRFC quota has been taken downstream of the Highway 101 bridge.

In 2014 the Department also evaluated restrictive measures for the spit area which included a "no catch and release" regulation for Chinook salmon legally caught in the spit area to protect Chinook stocks from excessive catch and release mortality. The regulatory time frame did not allow for sufficient time to promulgate such a regulation change. The Department informed the Commission that it would consider this change for the 2015 regulatory cycle.

The following options are being provided for Commission consideration:

Option 1 - No catch and release fishing in Spit Area - Department Proposal

After internal discussion and Yurok Tribal coordination, the Department is proposing the following change to the 2015 fall Chinook spit area regulations:

> All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area.

This regulatory proposal does not preclude anglers from leaving the spit area and fishing other areas once their adult daily bag has been taken. Anglers may fish other areas outside of the spit to fill the grilse (Chinook salmon <22 inches) component of their daily bag limit. This regulation also does do not preclude anglers from filling a daily bag composed entirely of grilse salmon while fishing the spit area.

Option 2 - All Chinook salmon must be kept in Spit Area with Blue Creek closure - Yurok Proposal

The Yurok tribe is proposing the following modifications to the Klamath River regulations in the spit area and on the main Klamath River below the confluence with Blue Creek:

1) No catch and release fishing allowed in the spit area to reduce pinniped predation on released fish, and
2) Conservation closure below the mouth of Blue Creek to reduce catch and release in a thermal refuge area and protect late-fall Chinook holding prior to entering Blue Creek.

The first modification is to the spit area at the mouth of the Klamath River to allow no release of Chinook salmon, regardless of whether they are legally caught or foul hooked. This option provides an exception from the general snagging prohibitions in Section 2.00. The second modification would add Blue Creek to the September 15 to December 31 stream mouth closures and add a new Klamath River main stem closure from June 15 to September 14 from 500 feet above to ½ mile downstream around the mouth of Blue Creek.

Option 3 – A possible combination of Options 1 and 2

The Commission may combine Option 1's prohibition on catch and release fishing in the spit area with Option 2's Blue Creek conservation closure.

1) All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area.
2) Conservation closure below the mouth of Blue Creek to reduce catch and release in a thermal refuge area and protect late-fall Chinook holding prior to entering Blue Creek.

ADDITIONAL PROPOSED CHANGES

The name of the road listed in subsection (b)(91.1)(B)2. is proposed to be corrected from "Ishi Pishi Falls road" to "Ishi Pishi Road". Cross references are proposed to be corrected in subsection (b)(195) to reduce public confusion. Other changes are proposed for clarity and consistency.

Benefits of the Proposed Regulations

The benefits of the proposed regulations are in conformance with federal law, sustainable management of Klamath River Basin salmon resources, and promotion of businesses that rely on recreational salmon fishing in the Klamath River Basin.

The proposed regulations are neither inconsistent nor incompatible with existing State regulations. The Legislature has delegated authority to the Commission to promulgate sport fishing regulations (sections 200, 202, 205, 315, and 316.5, Fish and Game Code). Commission staff has searched the California Code of Regulations and has found no other State regulations related to the recreational take of Chinook salmon in the Lower Klamath River Basin.

Attachment 3

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
FINAL STATEMENT OF REASONS FOR REGULATORY ACTION

Amend Subsections (b)(91.1) and (b)(195) of Section 7.50
Title 14, California Code of Regulations
RE: 2015 Klamath River Basin Sport Fishing Regulations

I. Date of Initial Statement of Reasons: January 12, 2014

II. Date of Pre-adoption Statement of Reasons: March 20, 2015

III. Date of Final Statement of Reasons: May 4, 2015

IV. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: December 3, 2014
Location: Van Nuys

(b) Discussion Hearing: Date: February 12, 2015
Location: Sacramento

(c) Adoption Hearing: Date: April 17, 2015
Location: Teleconference

V. Update:

At the April 17, 2015 teleconference, the Fish and Game Commission (Commission) adopted the following Klamath Basin bag and possession limits, adult quota, and conservation measures:

(1) A daily bag limit of 3 Chinook salmon of which no more than 2 fish greater than 22 inches in length may be taken when the take of adults is allowed.

(2) A possession limit of 9 Chinook salmon of which no more than 6 fish greater than 22 inches in length may be retained when the take of adults is allowed.

(3) A basin quota of 14,133 adult Chinook salmon greater than 22 inches in length.

(4) A closure of the main stem Klamath River near the confluence of Blue Creek between June 15 and December 31. The main stem Klamath River will be closed to sport fishing from 500 feet upstream of the mouth of Blue Creek to ½ mile downstream from the mouth of Blue Creek from June 15 through September 14 and within 500 feet of the Blue Creek confluence from September 15 through December 31.

(5) A mandatory retention of all legally hooked and landed Chinook salmon in

the spit area (mouth of the Klamath River). Additionally, once anglers have retained the adult component of the daily Chinook bag limit, they must cease fishing in the spit area. Anglers may continue to fish other areas of the Klamath River after leaving the spit if they have not retained their daily bag limit.

Sport fishing seasons for KRFC remain unchanged and are as follows:

(1) Klamath River - August 15 through December 31

(2) Trinity River - September 1 through December 31

The Klamath Basin quota of 14,133 adult KRFC aligns with federal regulations which provide guidance on allocations between ocean sport and commercial fisheries, inland sport fisheries, and recognized tribal fisheries.

The Commission adopted non-substantive changes for clarity and consistency.

VI. Summary of Primary Considerations Raised in Support of or Opposition to the Proposed Actions and Reasons for Rejecting Those Considerations:

See Attachment 1 titled "Summary of Public Comments and Responses."

VII. Location and Index of Rulemaking File: A rulemaking file with attached file index is maintained at:

California Fish and Game Commission
1416 Ninth Street
Sacramento, CA 95814

VIII. Location of Department of Fish and Wildlife files:

Department of Fish and Wildlife
1416 Ninth Street
Sacramento, CA 95814

IX. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulatory Action:

The use of more liberal regulations for bag limits, possession limits, and fishing methods. For KRFC, more liberal regulations would be less desirable than those proposed because they could create risk of an intense fishery reaching or exceeding the quota in a very short time. Reaching the quota in a very short time could be damaging to the local economy. Exceeding the allowable harvest could be damaging to the KRFC stocks.

(b) No Change Alternative:

The No Change Alternative would leave the current 2014 regulations in place and would not conform to the Pacific Fishery Management Council Klamath River Basin quota for 2015, nor would it address the excessive catch and release mortality within the spit area. The change is necessary to continue appropriate harvest rates and an equitable distribution of the harvestable surplus.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the adopted regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

X. Impact of Regulatory Action:

The potential for significant Statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant Statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. The proposed regulations are projected to have some impact on the net revenues to local businesses servicing sport fishermen. Visitor spending may be reduced and in the absence of the emergence of alternative visitor activities, the drop in spending could induce business contraction. However, this will not likely affect the ability of California businesses to compete with businesses in other states. The preservation of Klamath River salmon stocks is necessary for the **long-term sustainability and** success of lower and upper Klamath River Basin businesses **that** provide goods and services related to fishing. The proposed changes are necessary for the continued preservation of the resource and**, in the long-term,** prevention of adverse economic impacts.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The proposed regulations range from no fishing of KRFC in 2015 to a

normal Klamath River Basin salmon season. The Commission anticipates some impact on the creation or elimination of jobs in California. The potential employment impacts range from 0 to 23 jobs which are not expected to create, eliminate, or expand businesses in California. The Commission anticipates impacts on the creation, elimination, or expansion of businesses in California ranging from no impact to reduced revenues for approximately 30 businesses that serve sport fishing activities. However, the possibility of growth of businesses to serve substitute activities exists. Adverse impacts to jobs and/or businesses would be less if fishing of grilse KRFC is permitted than under the complete closure to all fishing. The impacted businesses are generally small businesses employing few individuals and, like all small businesses, are subject to failure for a variety of causes. Additionally, the long-term intent of the proposed action is to increase sustainability in fishable salmon stocks and, subsequently, the promotion and long-term viability of these same small businesses.

The Commission anticipates benefits to the health and welfare of California residents. Providing opportunities for a salmon sport fishery encourages outdoor recreational activity and consumption of a nutritious food.

The Commission anticipates benefits to the environment by the sustainable management of California's salmon resources.

The Commission does not anticipate any benefits to worker safety.

(c) Cost Impacts on a Representative Private Person or Business:

The Commission is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

(e) Nondiscretionary Costs/Savings to Local Agencies:

None.

(f) Programs Mandated on Local Agencies or School Districts:

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs:

None.

Updated Informative Digest/Policy Statement Overview

The Klamath River System which consists of the Klamath River and Trinity River basins is managed through a cooperative system of State, federal, and tribal management agencies. Salmonid regulations are designed to meet natural and hatchery escapement needs for salmonid stocks, while providing equitable harvest opportunities for ocean recreational, ocean commercial, river recreational, and tribal fisheries.

The Pacific Fishery Management Council (PFMC) is responsible for adopting recommendations for the management of recreational and commercial ocean salmon fisheries in the Exclusive Economic Zone (three to 200 miles offshore) off the coasts of Washington, Oregon, and California. When approved by the Secretary of Commerce, these recommendations are implemented as ocean salmon fishing regulations by the National Marine Fisheries Service.

The California Fish and Game Commission (Commission) adopts regulations for the ocean salmon recreational (inside three miles) and the Klamath River System recreational fisheries which are consistent with federal fishery management goals.

For the purpose of PFMC mixed-stock fishery modeling and salmon stock assessment, salmon greater than 22 inches are defined as adult salmon (ages 3-5) and salmon less than or equal to 22 inches are defined as grilse salmon (age 2).

Klamath River Fall-Run Chinook

Klamath River fall-run Chinook salmon (KRFC) harvest allocations and natural spawning escapement goals are established by the PFMC. The KRFC harvest allocation between tribal and non-tribal fisheries is based on court decisions and allocation agreements between the various fishery representatives.

The 2015 KRFC in-river recreational fishery allocation recommended by the PFMC is currently unknown. All proposed closures for adult KRFC are designed to ensure sufficient spawning escapement in the Klamath **River** Basin and equitably distribute harvest while operating within annual allocations.

Klamath River Spring-Run Chinook

The Klamath River System also supports Klamath River spring-run Chinook salmon (KRSC). Naturally produced KRSC are both temporally and spatially separated from KRFC in most cases.

Presently, KRSC stocks are not managed or allocated by the PFMC. The in-river recreational fishery is managed by general basin seasons, daily bag limit, and possession limit regulations.

KRFC Allocation Management

The PFMC 2014 allocation for the Klamath River System recreational harvest was 4,128 adult KRFC. Preseason stock projections of 2015 adult KRFC abundance will not be available from the PFMC until March 2015. The 2015 Klamath Basin allocation will be recommended by the PFMC in April 2015 and presented to the Commission for adoption prior to its April 2015 meeting.

For public notice requirements, the Department of Fish and Wildlife (Department) recommended the Commission consider an allocation range of 0 - 67,600 adult KRFC in the Klamath River Basin for the river recreational fishery.

Current Recreational Fishery Management

The KRFC in-river recreational harvest allocation is divided into geographic areas and harvest is monitored under real time subquota management. KRSC in-river recreational harvest is managed by general season, daily bag limit, and possession limit regulations.

The daily bag and possession limits apply to both stocks within the same sub-area and time period.

No changes are proposed for the general KRSC opening and closing season dates, and bag, possession, and size limits.

Proposed Changes

The following changes to current regulations are proposed:

<u>KRFC QUOTA MANAGEMENT</u>: Seasons, Bag, and Possession Limits

For public notice requirements, a range of KRFC bag and possession limits are proposed until the 2015 Klamath Basin quota is adopted. As in previous years, no retention of adult KRFC is proposed for the following areas once the subquota has been met.

The proposed open seasons and range of bag and possession limits for KRFC salmon stocks are as follows:

1. Klamath River - August 15 to December 31

2. Trinity River - September 1 to December 31

3. Bag Limit - [0-4] Chinook salmon of which no more than [0-4] fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length.

4. Possession limit - [0-12] Chinook salmon of which [0-12] over 22 inches total length may be retained when the take of salmon over 22 inches total length is allowed.

SPIT AREA MANAGEMENT

Current regulations specify that the spit area (within 100 yards of the channel through the sand spit formed at the Klamath River mouth) closes to all fishing after 15 percent of the total adult KRFC quota has been taken downstream of the Highway 101 bridge.

In 2014, the Department also evaluated restrictive measures for the spit area which included a "no catch and release" regulation for Chinook salmon legally caught in the spit area to protect Chinook stocks from excessive catch and release mortality. The regulatory time frame did not allow for sufficient time to promulgate such a regulation change. The Department informed the Commission it would consider this change for the 2015 regulatory cycle.

The following options are being provided for Commission consideration:

Option 1: No catch and release fishing in spit area – Department Proposal

After internal discussion and Yurok Tribal coordination, the Department is proposing the following change to the 2015 fall Chinook spit area regulations:

> All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area.

This regulatory proposal does not preclude anglers from leaving the spit area and fishing other areas once their adult daily bag has been taken. Anglers may fish other areas outside of the spit to fill the grilse (Chinook salmon ≤22 inches) component of their daily bag limit. This regulation also **does not** preclude anglers from filling a daily bag composed entirely of grilse salmon while fishing the spit area.

Option 2: All Chinook salmon must be kept in spit area with Blue Creek closure – Yurok Tribe Proposal

The Yurok Tribe is proposing the following modifications to the Klamath River regulations in the spit area and on the main Klamath River below the confluence with Blue Creek:

(1) No catch and release fishing allowed in the spit area to reduce pinniped predation on released fish, and

(2) Conservation closure below the mouth of Blue Creek to reduce catch and release **mortality** in a thermal **refugia** area and protect late-fall Chinook holding prior to entering Blue Creek.

The first modification is to the spit area at the mouth of the Klamath River to allow no release of Chinook salmon, regardless of whether they are legally caught or foul hooked. This option provides an exception from the general snagging prohibitions in section 2.00. The second modification would add Blue Creek to the September 15 to December 31 stream mouth closures and add a new Klamath River main stem closure

from June 15 to September 14 from 500 feet above to ½ mile downstream around the mouth of Blue Creek.

Option 3: A possible combination of Options 1 and 2

The Commission may combine Option 1's prohibition on catch and release fishing in the spit area with Option 2's Blue Creek conservation closure:

(1) All legally caught Chinook salmon must be retained. Once the adult Chinook component of the daily bag has been retained, the angler must cease fishing in the spit area.

(2) Conservation closure below the mouth of Blue Creek to reduce catch and release **mortality** in a thermal **refugia** area and protect late-fall Chinook holding prior to entering Blue Creek.

ADDITIONAL PROPOSED CHANGES

The name of the road listed in subsection (b)(91.1)(B)(2) is proposed to be corrected from "Ishi Pishi Falls road" to "Ishi Pishi Road." Cross references are proposed to be corrected in subsection (b)(195) to reduce public confusion. Other changes are proposed for clarity and consistency.

Benefits of the Proposed Regulations

The benefits of the proposed regulations are in conformance with federal law, sustainable management of Klamath River Basin salmon resources, and promotion of businesses that rely on recreational salmon fishing in the Klamath River Basin.

The proposed regulations are neither inconsistent nor incompatible with existing State regulations. The Legislature has delegated authority to the Commission to promulgate sport fishing regulations (Sections 200, 202, 205, 315, and 316.5 **of the** Fish and Game Code). Commission staff has searched the California Code of Regulations and has found no other State regulations related to the recreational take of Chinook salmon in the Lower Klamath River Basin.

At the April 17, 2015 teleconference the Commission adopted the following Klamath Basin bag and possession limits, adult quota, and conservation measures:

(1) A daily bag limit of 3 Chinook salmon of which no more than 2 fish greater than 22 inches in length may be taken when the take of adults is allowed.

(2) A possession limit of 9 Chinook salmon of which no more than 6 fish greater than 22 inches in length may be retained when the take of adults is allowed.

(3) A basin quota of 14,133 adult Chinook salmon greater than 22 inches in length.

(4) A closure of the main stem Klamath River near the confluence of Blue Creek between June 15 and December 31. The main stem Klamath River will be closed to sport fishing from 500 feet upstream of the mouth of Blue Creek to ½ mile downstream from the mouth of Blue Creek from June 15 through September 14 and within 500 feet of the Blue Creek confluence from September 15 through December 31.

(5) A mandatory retention of all legally hooked and landed Chinook salmon in the spit area (mouth of the Klamath River). Additionally, once anglers have retained the adult component of the daily Chinook bag they must cease fishing in the spit area. Anglers may continue to fish other areas of the Klamath River after leaving the spit if they have not retained their daily bag limit.

Sport fishing seasons for KRFC remain unchanged and are as follows:

(1) Klamath River- August 15 through December 31.

(2) Trinity River- September 1 through December 31.

The Basin quota, 14,133 adult KRFC, aligns with federal regulations which provide guidance on allocations between ocean sport and commercial fisheries, inland sport fisheries, and recognized tribal fisheries.

The Commission adopted non-substantive changes for clarity and consistency.

Attachment 4

Attachment 1
Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
1	Jim Newton	Faxed letter received 10/8/14	Requests repeal of the regulation that prohibits filleting of salmonids until at a place of permanent residence (section 1.45).	Reject: Filleting of salmon in the field creates enforcement issues concerning threatened and endangered species in coastal waters including the Klamath River.
2	Xai Her	Email received 10/17/14	Recommends a regulation that only single point barbless hooks be used for salmon in both inland and saltwater.	Reject: The use of barbless hooks is already required when fishing in anadromous waters of the Klamath River system, and further requiring single point hooks will not measurably reduce hooking mortality. The portion of the recommendation regarding other inland waters and ocean waters is outside the scope of this rulemaking.
3	Thomas O'Rourke, Chairman Yurok Tribe	Letter c/o e-mail from Diane Bowers received 11/20/15	a. Letter documenting Yurok Tribe proposals for Klamath river regulations including: b. All Fall Chinook caught in the spit area must be retained (no catch and release fishing of Fall Chinook regardless of whether the fish is legally taken). Once an angler's daily bag limit (regardless of whether it is an adult or jack) is obtained in the spit area, they must stop fishing for the day.	a. The Yurok Tribe's proposed conservation closure and a modified version of the Yurok Tribe's proposal for the spit area were included in the ISOR as potential options for the 2015 sport fishing season. b. Reject: The Commission adopted the Department alternative for the Klamath River mouth that prohibits catch and release fishing of Chinook salmon for all legally hooked fish. Once the adult component of the total daily bag limit has been retained, anglers must cease fishing in the spit area. The Department option was a compromise option to alleviate catch and release concerns while retaining anti- snagging regulations. The Yurok Tribe's proposal to require anglers to fully stop fishing for entire day unnecessarily reduces fishing opportunities in other river areas.

Attachment 1
Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			c. Sport fishing conservation closure of the main stem Klamath River near Blue Creek. No fishing from June 15 to September 14 from 500 feet upstream of the mouth of Blue Creek to ½ mile downstream of the mouth of Blue Creek, and no fishing from September 15 through December 31 within 500 feet of the mouth of Blue Creek.	c. The Commission adopted the Yurok Tribe's recommended conservation option for a sport fishing closure in the vicinity of Blue Creek.
4	Mindy Natt Yurok Tribal Council	Verbal comment 12/3/14	States that there should be no catch and release fishing in the spit area and that Commission should adopt a conservation closure at the mouth of Blue Creek during mid-June through November for Chinook salmon upstream migration. Notes that Blue Creek and the Klamath River are within reservation boundaries.	See Responses 3b and 3c.
5	Dave Hillemeier, Fisheries Program Manager, Yurok Tribe	Verbal comment 12/3/14	a. Stated that given the unique nature of the fishery at the mouth and the severity of seal and sea lion predation, the Yurok Tribe supports the option to require all Chinook salmon caught at the spit, whether foul hooked or not, be retained. b. States that the Blue Creek conservation area is very	a. See Response 3b. b. Comment noted.

	Name of Commenter	Type/Date	Summary of Comments	Response
			important both culturally and biologically.	
			c. States that the late Fall Chinook salmon in Blue Creek are genetically different (a separate evolutionally significant unit) than other Fall Chinook in the Klamath.	c. Comment noted.
			d. States that the Yurok Tribe closes the Klamath River from the third week of September to the end of November from 500' upstream to half a mile below Blue Creek. States that the Yurok Tribe supports a similar closure (500' upstream and downstream) of mouth of Blue Creek (like is in place for the Salmon, Shasta and Scott Rivers) from September 15 through December.	d. See Response 3c.
			e. Supports a conservation closure mid-June through the end of September when Klamath River water temperatures are an issue in order to prevent catching fish in cold water and dragging them into water 6°C warmer which causes extreme stress leading	e. See Response 3c.

Attachment 1
Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			to mortality.	
6	Stephen Rosenberg	2 Emails received 1/29/15	a. Does not support the full closure at Blue Creek.	a. The Commission adopted the proposed closure at the mouth of Blue Creek as a precautionary conservation measure.
			b. Recommends a closure in the vicinity of Blue Creek only when undue concentrations of fish occur - and then only in August.	b. Reject. See Response 6a. Scientific studies are needed to determine if, and under what criteria, alternate or additional closures may be necessary.
			c. Recommends artificial flies and lures only for the Blue Creek area.	c. Reject. The recommendation will not reduce the loss of stressed fish released into high water temperatures.
7	Phoebe Lenhart	Letter dated 2/7/15 but received 3/10/15	a. Requests no catch and release fishing at all on the Klamath River.	a. Reject. The recommendation to prohibit catch and release fishing on the Klamath River unnecessarily reduces fishing opportunities. Catch and release fishing is an important recreational pursuit on the Klamath and the regulations are promulgated recognizing some amount of catch and release mortality.
			b. Requests daily bag of 2 fish per adult.	b. Reject: The Commission adopted a three fish daily bag for Chinook salmon based on quota size and Department's recommendation. It is infeasible and discriminatory to adopt separate bag limit based on the angler's age.
			c. Requests no snagging.	c. Sport fishing regulations already prohibit snagging in all waters of the State.
			d. Requests fishing closure	d. Reject. See Response 6b.

Attachment 1
Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			when water temperatures exceed 70 degrees. e. Requests closure of Blue Creek and any other location viable for the preservation of fish stocks. f. Requests all gill net fishing be ruled illegal. g. Requests re-evaluation of hatchery management. h. Provide adequate enforcement of regulations with appropriate penalties.	 e. Blue Creek is already closed to fishing. See Response 3c. Commenter did not propose specific closure locations for evaluation. f. Current sport fishing regulations do not allow gill net fishing. The tribal fishery is not regulated by the Commission. g. Hatchery management is outside the scope of the Commission's authority. h. Enforcement and penalties are outside the scope of the Commission's authority. The Klamath River has a high level of enforcement and penalties are set by the county judicial system.
8	Dave Fairchild	Faxed letter received 2/8/15	a. Opposes the proposed closure at the mouth of Blue Creek. b. Suggests further scientific investigation before a decision is made regarding Blue Creek closure.	a. See Response 6a. b. Reject. See Responses 6a and 6b.
9	Joseph Falcone	E-mail letter received 2/8/15	a. Opposes the proposed closure at the mouth of Blue Creek. b. Opposes tribal net fishery.	a. See Response 6a. b. Commission does not have regulatory authority

Attachment 1
Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
				over tribal fishery.
			c. States that the economic impact to the area would be disastrous.	c. Comment noted. Most of the lower Klamath River (>95%) will remain open to salmon and steelhead fishing which will still provide significant fishing opportunities. The final economic effect related to steelhead fishing will have to be assessed post season due to the lack of adequate fishing effort data for this area.
			d. Believes that the Commission's position is that sport fishing is a major decline of a fishery.	d. The Commission recognizes multiple factors contributing to fishery declines.
10	Fred Johansen	Email received 2/10/15	a. States that the Klamath River is a navigable waterway.	a. Comment noted.
			b. States that the purpose of the Commission is to improve and provide for fishing for all or our State residents, native and others.	b. Adoption of sport fishing regulations is one of the many powers and duties of the Commission. One objective of the Commission is the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use. The Commission does not have authority over tribal fisheries.
			c. Requests opportunity for all stakeholders to participate in the discussion.	c. All proposed Klamath regulatory options were vetted at three publicly accessible Fish and Game Commission meetings. The proposed regulations were made available to the public pursuant to the requirements of Government Code Section 11346.4. The comment period was January 23 to

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
				April 17, 2015.
			d. Opposes the proposed closure at the mouth of Blue Creek.	d. See Response 6a.
			e. States that the proposed closure at the mouth of Blue Creek will have adverse economic impacts to the Yurok Tribe.	e. See Responses 9b and 9c.
11	David Finigan, Chair, Board of Supervisors Del Norte County	Letter c/o e-mail from Kylie Heriford received 2/10/15, same letter handed in at 2/12/15 meeting, and by U.S. mail on 2/18/15	a. Believes that the concept of a Lower Klamath River main stem closure was not vetted with stakeholders.	a. See Response 10c.
			b. States that no information has been made available suggesting Blue Creek Chinook salmon are present in the proposed closure area before September 15.	b. Comment noted. See Response 6a.
			c. Believes the proposed Blue Creek conservation closure is arbitrary and unscientific.	c. Comment noted. See Response 6a.
			d. States that the economic impacts (of the proposed closure at the mouth of Blue Creek) to small businesses was not fully considered.	d. Comment noted. See Response 9c.
			e. Urges the Commission to not	e. The Commission adopted the Klamath River

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			take action on this issue before the 2015 Klamath River Basin allocation is presented to the Commission in April – allowing additional time for public comment and opportunities to develop alternative proposals.	sport fishing regulations on April 17, 2015 – after receiving the 2015 Klamath River Basin allocation.
			f. Requests that the Commission ensure that all new or amended regulation proposals that affect Del Norte County be sent directly to the Del Norte County Board of Supervisors.	f. The Commission mails all its notices of proposed changes in regulations to the Del Norte County Board of Supervisors and the Del Norte County Fish and Game Advisory Commission. The Klamath River notice was mailed on January 21, 2015.
12	Mike Aughney	Email received 2/11/15	a. Opposes the proposed closure at the mouth of Blue Creek.	a. See Response 6a.
			b. States closing the waters around Blue Creek to sport fishing does nothing to protect the fishery in low water years unless they were also closed to all netting.	b. Comment noted. See Response 9b.
			c. Supports Department working with tribal biologists and Bureau of Reclamation staff to develop water management strategies beneficial to salmonids.	c. This comment is outside the scope of the proposed regulations. The Department is actively engaged in water management strategies with tribal and federal partners.
13	William Toth	Email received 2/11/15	a. Asks for information about tribal regulations.	a. See Response 9b.

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			b. Suggests a catch and release tagging study to determine mortality rates.	b. See Response 6b.
14	Craig Bradford	Email with letter attachment received 2/11/15	a. Does not support the proposed closure at the mouth of Blue Creek.	a. See Response 6a.
			b. States that non-Native Americans have a prescriptive right to fishing for steelhead and salmon in the proposed closure area.	b.Reject. The ability to fish on public waters depends upon legal access and regulations adopted by the Fish and Game Commission as prescribed in the Fish and Game Code.
			c. States that sport fishermen contribute much to the vitality of the river.	c. Comment noted.
			d. States that Native Americans abused anadromous and catadromous fish populations via illegal netting practices and snagging.	d. See Response 9b.
			e. States that Department enforcement officials are reluctant to cite Native Americans when fishing regulations are blatantly violated.	e. See Response 9b.
			f. States that steelhead fishermen are not interested in taking salmon and therefore	f. Comment noted.

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			break the tippet for quick disconnection if a salmon grabs one of their flies.	
			g. States that most fly fishermen pursue summer steelhead on a catch and release basis.	g. Comment noted.
			h. States that almost no guided clients or bank fishermen target salmon at the mouth of Blue Creek.	h. Comment noted.
			i. States that closing the mouth of Blue Creek to protect salmon unfairly impacts steelhead fishermen.	i. Reject. Because it is difficult to prevent bycatch of salmon while steehead fishing, all fishing must be prohibited to protect salmon.
			j. States that steelhead fishermen do not snag steelhead in the Blue Creek area. They use small barbless hooks to assure the steelhead's survival upon release and all fish are returned to the river.	j. Comment noted.
			k. Hopes that all Commissioners conflicted by previous tribal employment or Native American ancestry will recuse themselves from the docketed process.	k. The Commission is guided by Government Code Section 19990 and Sections 81000, et seq., regarding conflicts of interest. Commissioner Hostler-Carmesin is a current employee of the Trinidad Tribe. The Trinidad Rancheria and Commissioner Hostler-Carmesin will not gain financially from the promulgation of the Klamath

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
				River sport fishing regulations and therefore, appear not to have any conflicts of interest.
15	Frank Galea, Del Norte County Fish and Game Advisory Commission	Verbal comment 2/12/15	a. States that options concerning a conservation closure at the mouth of Blue Creek exceed original intent of minimizing catch and release mortality.	a. Comment noted. See Response 10c.
			b. States that the concept of a lower Klamath main stem closure was not vetted with sport fishery stakeholders and no information was made available suggesting presence of Blue Creek Chinook salmon in the proposed closure area before September 15.	b. Comment noted. See Responses 6a and 10c.
			c. States that the proposed Blue Creek conservation closure is arbitrary and unscientific and does not fully take into consideration economic impacts to small business, and does not take into consideration how steelhead fishing fits into any of proposals.	c. Comment noted. See Responses 6a, 9c and 14i.
			d. States that not enough notice or time was given to stakeholders to address	d. See Responses 10c, 11e and 11f.

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			proposals. Requests any and all proposed changes to regulations are sent directly to Del Norte County Board of Supervisors so that they may adequately represent their constituents.	
			e. States that early coordination is essential.	e. Comment noted. See Response 10c.
			f. Appreciates the efforts to communicate with the Board of Supervisors and the Del Norte County Fish and Game Advisory Commission.	f. Comment noted.
16	Ken Cunningham, resident fishing guide on Klamath River	Verbal comment 2/12/15	a. Opposes the proposed closure at the mouth of Blue Creek.	a. See Response 6a.
			b. States that the proposed closure at the mouth of Blue Creek will be devastating to people who fish there.	b. See Response 14i.
			c. Opposes snagging.	c. Sport fishing regulations already prohibit snagging in all waters of the State.
			d. States that other river mouths are closed only 500 feet and that it isn't right to close more than that at the mouth of Blue Creek.	d. See Response 6a.

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
17	Dave Hillemeier, Fisheries Program Manager, Yurok Tribe and Thomas O'Rourke, Chairman Yurok Tribe	Verbal comment 2/12/15, email and letter received 2/5/15	a. States that the Yurok Tribe feels these conservation concerns are important to bring forward to the Commission and appreciates that the Yurok Tribe's alternatives made it into the public process.	a. See Response 3a.
			b. States that in the spit fishery, due to presence of sea lions and seals, the Yurok Tribe thinks retaining all fish caught, whether foul hooked or not is very important. States that the Yurok Tribe does not want to close the fishery, but that it doesn't want the released fish wasted.	b. See Responses 3b and 7a. The released fish are not wasted. If the released fish die or are eaten by seals, they are still an important food source in the ecosystem.
			c. States that there is a half mile of thermal refugia against the north bank at the mouth of Blue Creek and that boats are out in the channel. States that during mid-June through the first week in September, water temperatures are 23-24°C. States that catch and release fishing is taking place – fish are played through 18°C water into 23°C water. States that there is excessive mortality when fish are caught and released in those conditions and that is the	c. See Response 3c.

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	Name of Commenter	Type/Date	Summary of Comments	Response
			Yurok Tribe's greatest concern. States that literature is available that says at 20°C, mortality increases excessively.	
18	Thomas Willson, Yurok Tribal Council – Weitchpec District	Verbal comment 2/12/15	States that traditionally his people don't play with their fish. States that catch and release fishery is basically playing with your food and if you play with your food, it will leave us. States that we have to look seven generations down.	Comments noted.
19	Ron Britschgi, Rivers West Lodge	Verbal comment 2/12/15	a. Opposes the proposed closure at the mouth of Blue Creek. b. Believes that economy and guides will suffer economic impact from Blue Creek closure.	a. See Response 6a. b. See Response 9c.
20	Richard Arimoto	Verbal comment 2/12/15	a. Supports proposed Option I changes to the spit (mouth of Klamath River). b. Opposes the proposed closure at the mouth of Blue Creek.	a. Support noted. The Commission adopted this option. b. See Response 6a.
21	Dave Axt	Email received 2/8/15	Recommends that the Department conduct fishery research on Blue Creek area of Klamath River prior to any closures.	See Responses 6a and 6b.
22	Andy Pozzi, Sonoma County Fish and	Letter received	Request to abolish Section 1.45, Title 14, CCR, (filleting of	See Response 1.

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
	Wildlife Commission	3/5/15	salmonids)	
23	Thomas O'Rourke, Yurok Tribal Chair	Email with attached letter received 4/13/15	Reiterates support for the Yurok Tribe's proposed sport fishing options (No catch and release fishing at the mouth of the Klamath River and conservation closure near Blue Creek).	See Responses 3a, 3b and 3c.
24	Bill Bowman, Friends of Del Norte	Letter received 4/14/15.	a. Supports the Yurok Tribe's proposal for catch and release at the spit and Tribe's proposed closure at the mouth of Blue Creek. b. States that recent studies have shown catch and release mortality to be surprisingly high.	a. See Responses 3b and 3c. b. Comment noted.
25	Dave Hillemeier, Fisheries Program Manager, Yurok Tribe	Verbal comment 04/17/15	a. Presented additional information about thermal refugia and catch and release fishing. b. Supports the mandatory retention in the spit fishery, but reiterates the foul-hooked option. c. Suggests consideration of an alternative such as mandatory retention of fish if they are hooked in the head. d. Supports the proposed Blue	a. Information noted. b. See Response 3b. c. Reject. See Response 3b. d. See Response 3c.

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			Creek conservation closure.	
26	Ed Salsedo	Verbal comment 04/17/15	a. States that the economic impacts are not addressed. b. States that he does not believe the Commission or Department has jurisdiction on U.S. Trust Lands or the Yurok Tribe Reservation. c. States that the Coastal Commission has the right to weigh in on the spit fishery since the proposed regulations make a major change to activities there. d. States that the barbless hook requirements are not enforced on Native American anglers. e. States that people have a right to fish. Quotes Article 1, Section 25, of the California Constitution.	a. See Response 9c. b. Non-tribal anglers fishing the Klamath River within the Yurok Tribe Reservation are regulated by Commission authority (Fish and Game Code Sections 16500-16541) c. The Coastal Commission has no authority over sport fishing regulations, but it had the opportunity to weigh in on the proposed regulations. d. See Response 9b. e. The so-called "right to fish" is neither absolute nor fundamental, but has been characterized by the courts as only a "privilege" or a "qualified right" subject to the Legislature's regulation of fishing. The California Supreme Court has long declared that the power to regulate fishing has always existed as an aspect of the inherent power of the Legislature to regulate the terms under which a public resource may be taken by private citizens (in re Quinn [1973] 35 Cal.App.3d 473; State of California v. San Luis Obispo Sportsman's

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	Name of Commenter	Type/Date	Summary of Comments	Response
				Association [1978] 22 Cal.3d 440; Paladini v. Superior Court [1918] 178 Cal. 369; California Gillnetters Association v. Department of Fish and Game [1995] 39 Cal.App.4th 1145)."
27	Stephen Rosenberg, fly fisherman	Verbal comment 04/17/15	a. States that he has kept a diary of his fishing activities at Blue Creek since 1978. b. States that he has never seen a constant thermal refugia problem with excessive concentrations of fish but that he has only seen excessive concentrations of fish in 5 years between 1978 – 2014. States that in 1982-83, 1991 and 1994, the excessive concentrations only occurred in mid to late August, and that by Sept 4 the fish were gone upstream; in 1978, the excessive concentration of fish started in mid-July and by Labor Day the fish were gone; in 2000-2002, the excessive concentration of fish started in late July and by Labor Day the problem was over; and in 2014, the excessive concentration of fish started but as soon as water flows were increased, the fish immediately moved upstream.	a. Comment noted. b. Comment noted.

	Name of Commenter	Type/Date	Summary of Comments	Response
			c. States that he has never seen excessive hooking mortality.	c. Comment noted.
			d. States that the degree to which the thermal refugia occurs depends on the geomorphology of the river at the confluence of Blue Creek and Klamath and that the situation only sets up every 10 years or so.	d. Comment noted.
			e. Opposes the proposed closure at the mouth of Blue Creek. Questions the tribe's motives.	e. See Response 6a.
28	John Stokes, recreational fisherman	Verbal comment 04/17/15	a. Opposes the proposed closure at the mouth of Blue Creek.	a. See Response 6a.
			b. States that the proposed closure at the mouth of Blue Creek will gut the entire steelhead fishery.	b. See Response 9c and 14i.
			c. Supports comments made by Stephen Rosenberg concerning how often excessive concentrations of fish occur.	c. See Response 27.
			d. States that steelhead are far less impacted by the phenomena than salmon	d. Comment noted.

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Summary of Public Comments and Responses

	Name of Commenter	Type/Date	Summary of Comments	Response
			e. Suggests using a low flow or temperature closure for regulating the Blue Creek area as is in place for many of the other coastal streams.	e. See Response 6b.
29	Eileen Cooper	Verbal comment 04/17/15	a. Supports no catch and release fishing at all when river temperatures are high. b. Supports the Yurok Tribe's proposed catch and release regulations at spit and Blue creek area.	a. See Response 6b. b. See Responses 3b and 3c.
30	Ted Souza, Friends of Del Norte	Verbal comment 04/17/15	States that catch and release fishing is a problem. States that a study by Dr. Bruce Tufts, Queen's University, Canada, shows that 7 out of 10 fish die when out of water more than 30 seconds. States that while he has practiced catch and release fishing in the past, he now believes anglers should keep what they catch or not fish at all in order to protect the fishery.	Comments noted. The Department research does not support this comment.

Attachment 5

Regulatory Language

Subsection (b)(91.1) of Section 7.50 is amended to read:

(91.1) Anadromous Waters of the Klamath River Downstream of Iron Gate Dam (Lower Klamath River Basin). The regulations in this subsection apply only to waters of the Klamath River system which are accessible to anadromous salmonids. They do not apply to waters of the Klamath River which are inaccessible to anadromous salmon and trout, for example, portions of the Klamath River system upstream of Iron Gate Dam, portions of the Trinity River system upstream of Lewiston Dam, and the Shasta River and tributaries upstream of Dwinnel Dam. Fishing in these waters is governed by the General Regulations for non-anadromous waters of the North Coast District (see Section 7.00(a)(4)).

(A) Hook and Weight Restrictions.

1. Only barbless hooks may be used. (For definitions regarding legal hook types, hook gaps and rigging see Chapter 2, Article 1, Section 2.10.)

2. During closures to the take of adult salmon, anglers shall not remove any adult Chinook salmon from the water by any means, such as by dragging the fish on shore or using a net.

(B) General Area Closures.

1. No fishing is allowed within 750 feet of any Department of Fish and Wildlife fish-counting weir.

2. No fishing is allowed from the Ishi Pishi ~~Falls road~~Road bridge upstream to and including Ishi Pishi Falls from August 15 through December 31. EXCEPTION: members of the Karuk Indian Tribe listed on the current Karuk Tribal Roll may fish at Ishi Pishi Falls using hand-held dip nets.

3. No fishing is allowed from September 15 through December 31 in the Klamath River within 500 feet of the mouths of the Salmon, the Shasta and the Scott rivers and Blue Creek.

4. No fishing is allowed from June 15 through September 14 in the Klamath River from 500 feet above the mouth of Blue Creek to ½ mile downstream of the mouth of Blue Creek.

(C) Klamath River Basin Possession Limits.

1. Trout Possession Limits.

a. The brown trout possession limit is 10 brown trout.

b. The hatchery trout or hatchery steelhead possession limits are as follows:

(i) Klamath River - 4 hatchery trout or hatchery steelhead.

(ii) Trinity River - 4 hatchery trout or hatchery steelhead.

2. Chinook Salmon Possession Limits.

a. Klamath River downstream of the Highway 96 bridge at Weitchpec from January 1 to August 14 and the Trinity River downstream of the Old Lewiston Bridge to the confluence of the South Fork Trinity River from January 1 to ~~August 31.~~ August 31: 2 Chinook salmon.
~~(i) 2 Chinook salmon.~~

b. Klamath River from August 15 to December 31 and Trinity River from September 1 to ~~December 31.~~December 31: 9 Chinook salmon. No more than 6 Chinook salmon over 22 inches total length may be retained when the take of salmon over 22 inches total length is allowed.
~~(i) 9 Chinook salmon. No more than 3 Chinook salmon over 22 inches total length may be retained when the take of salmon over 22 inches total length is allowed.~~

(D) Klamath River Basin Chinook Salmon Quotas.

The Klamath River fall Chinook salmon take is regulated using quotas. Accounting of the tribal and non-tribal harvest is closely monitored from August 15 through December 31 each year. These quota areas are noted in subsection (b)(91.1)(E) with "Fall Run Quota" in the *Open Season and Special Regulations* column.

1. Quota for Entire Basin.

The ~~2014~~2015 Klamath River Basin quota is ~~4,128~~ 14,133 Klamath River fall Chinook salmon over

Attachment 6

STATE OF CALIFORNIA–OFFICE OF ADMINISTRATIVE LAW

NOTICE PUBLICATION/REGULATION SUBMISSION

REGULAR

STD. 400 (REV. 01-2013)

(See Instructions on reverse)

For use by Secretary of State only

20

OAL FILE NUMBERS	NOTICE FILE NUMBER	REGULATORY ACTION NUMBER	EMERGENCY NUMBER
	Z-2015-0113-08	2015-0528-02S	

For use by Office of Administrative Law (OAL) only

2015 MAY 28 PM 4:19

OFFICE OF ADMINISTRATIVE LAW

NOTICE

REGULATIONS

ENDORSED - FILED
In the office of the Secretary of State of the State of California

JUN 04 2015

2:00 PM

AGENCY WITH RULEMAKING AUTHORITY: Fish and Game Commission

AGENCY FILE NUMBER (If any)

A. PUBLICATION OF NOTICE (Complete for publication in Notice Register)

1. SUBJECT OF NOTICE: Klamath River sport fishing
TITLE(S): 14
FIRST SECTION AFFECTED: 7.50
2. REQUESTED PUBLICATION DATE: January 23, 2015

3. NOTICE TYPE: [X] Notice re Proposed Regulatory Action [ ] Other
4. AGENCY CONTACT PERSON: Sherrie Fonbuena
TELEPHONE NUMBER: (916) 654-9866
FAX NUMBER (Optional): (916) 653-5040

OAL USE ONLY — ACTION ON PROPOSED NOTICE: [ ] Approved as Submitted [ ] Approved as Modified [ ] Disapproved/Withdrawn
NOTICE REGISTER NUMBER:
PUBLICATION DATE:

B. SUBMISSION OF REGULATIONS (Complete when submitting regulations)

1a. SUBJECT OF REGULATION(S): Klamath River sport fishing

1b. ALL PREVIOUS RELATED OAL REGULATORY ACTION NUMBER(S):

2. SPECIFY CALIFORNIA CODE OF REGULATIONS TITLE(S) AND SECTION(S) (Including title 26, if toxics related)

SECTION(S) AFFECTED (List all section number(s) individually. Attach additional sheet if needed.)

ADOPT:
AMEND: 7.50
REPEAL:

TITLE(S): 14

3. TYPE OF FILING

[X] Regular Rulemaking (Gov. Code §11346)
[ ] Resubmittal of disapproved or withdrawn nonemergency filing (Gov. Code §§11349.3, 11349.4)
[ ] Emergency (Gov. Code, §11346.1(b))
[ ] Certificate of Compliance: The agency officer named below certifies that this agency complied with the provisions of Gov. Code §§11346.2-11347.3 either before the emergency regulation was adopted or within the time period required by statute.
[ ] Resubmittal of disapproved or withdrawn emergency filing (Gov. Code, §11346.1)
[ ] Emergency Readopt (Gov. Code, §11346.1(h))
[ ] File & Print
[ ] Other (Specify)
[ ] Changes Without Regulatory Effect (Cal. Code Regs., title 1, §100)
[ ] Print Only

4. ALL BEGINNING AND ENDING DATES OF AVAILABILITY OF MODIFIED REGULATIONS AND/OR MATERIAL ADDED TO THE RULEMAKING FILE (Cal. Code Regs. title 1, §44 and Gov. Code §11347.1)

5. EFFECTIVE DATE OF CHANGES (Gov. Code, §§ 11343.4, 11346.1(d); Cal. Code Regs., title 1, §100)

[ ] Effective January 1, April 1, July 1, or October 1 (Gov. Code §11343.4(a))
[ ] Effective on filing with Secretary of State
[ ] §100 Changes Without Regulatory Effect
[X] Effective other (Specify) 6/4/15 202F&GC, 11343.4(b)(4) Govt Code

6. CHECK IF THESE REGULATIONS REQUIRE NOTICE TO, OR REVIEW, CONSULTATION, APPROVAL OR CONCURRENCE BY, ANOTHER AGENCY OR ENTITY

[ ] Department of Finance (Form STD. 399) (SAM §6660)
[ ] Fair Political Practices Commission
[ ] State Fire Marshal
[ ] Other (Specify)

OK per agency request 6/4/15

7. CONTACT PERSON: Sherrie Fonbuena
TELEPHONE NUMBER: (916) 654-9866
FAX NUMBER (Optional):
E-MAIL ADDRESS (Optional): Sherrie.Fonbuena@fgc.ca.gov

8. **I certify that the attached copy of the regulation(s) is a true and correct copy of the regulation(s) identified on this form, that the information specified on this form is true and correct, and that I am the head of the agency taking this action, or a designee of the head of the agency, and am authorized to make this certification.**

SIGNATURE OF AGENCY HEAD OR DESIGNEE: Sonke Mastrup
DATE: 5/28/15

TYPED NAME AND TITLE OF SIGNATORY: Sonke Mastrup, Executive Director

For use by Office of Administrative Law (OAL) only

ENDORSED APPROVED

JUN 04 2015

Office of Administrative Law

Regulatory Language

Subsection (b)(91.1) of Section 7.50 is amended to read:

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(A) Hook and Weight Restrictions.

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1. No fishing is allowed within 750 feet of any Department of Fish and Wildlife fish-counting weir.

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2. Chinook Salmon Possession Limits.

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~~(i) 2 Chinook salmon.~~

b. Klamath River from August 15 to December 31 and Trinity River from September 1 to ~~December 31.~~December 31: 9 Chinook salmon. No more than 6 Chinook salmon over 22 inches total length may be retained when the take of salmon over 22 inches total length is allowed.
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The Klamath River fall Chinook salmon take is regulated using quotas. Accounting of the tribal and non-tribal harvest is closely monitored from August 15 through December 31 each year. These quota areas are noted in subsection (b)(91.1)(E) with "Fall Run Quota" in the *Open Season and Special Regulations* column.

1. Quota for Entire Basin.

The ~~2014~~2015 Klamath River Basin quota is ~~4,128~~ 14,133 Klamath River fall Chinook salmon over

22 inches total length. The department shall inform the commission, and the public via the news media, prior to any implementation of restrictions triggered by the quotas. (NOTE: A department status report on progress toward the quotas for the various river sections is updated weekly, and available at 1-800-564-6479.)

2. Subquota Percentages.

a. The subquota for the Klamath River upstream of the Highway 96 bridge at Weitchpec and the Trinity River is 50% of the total Klamath River Basin quota.

(i) The subquota for the Klamath River from 3,500 feet downstream of the Iron Gate Dam to the Highway 96 bridge at Weitchpec is 17% of the total Klamath River Basin quota.

(ii) The subquota for the Trinity River main stem downstream of the Old Lewiston Bridge to the Highway 299 West bridge at Cedar Flat is 16.5% of the total Klamath River Basin quota.

(iii) The subquota for the Trinity River main stem downstream of the Denny Road bridge at Hawkins Bar to the confluence with the Klamath River is 16.5% of the total Klamath River Basin quota.

b. The subquota for the Lower Klamath River downstream of the Highway 96 bridge at Weitchpec is 50% of the total Klamath River Basin quota.

(i) The Spit Area (within 100 yards of the channel through the sand spit formed at the Klamath River mouth) will close when 15% of the total Klamath River Basin quota is taken downstream of the Highway 101 bridge.

(E) Klamath River Basin Open Seasons and Bag Limits.

All anadromous waters of the Klamath River Basin are closed to all fishing for all year except those areas listed in the following table. Bag limits are for trout and Chinook salmon in combination unless otherwise specified.

Body of Water	***Open Season and Special Regulations***	***Daily Bag Limit***
1. Bogus Creek and tributaries.	Fourth Saturday in May through August 31. Only artificial lures with barbless hooks may be used.	2 hatchery trout or hatchery steelhead**
2. Klamath River main stem from 3,500 feet downstream of Iron Gate Dam to the mouth.		
a. Klamath River from 3,500 feet downstream of the Iron Gate Dam to the Highway 96 bridge at Weitchpec.	January 1 to August 14.	0 Chinook salmon 2 hatchery trout or hatchery steelhead**
	Fall Run Quota ~~7022~~2,403 Chinook Salmon August 15 to December 31, ~~2014~~2015.	3 Chinook salmon - no more than ~~1~~2 fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length. 2 hatchery

		trout or hatchery steelhead**
	Fall Run Quota Exception: Chinook salmon over 22 inches total length may be retained from 3,500 feet downstream of Iron Gate Dam to the Interstate 5 bridge when the department determines that the adult fall-run Chinook salmon spawning escapement at Iron Gate Hatchery exceeds 8,000 fish. Daily bag and possession limits specified for fall-run Chinook salmon apply during this exception.	
b. Klamath River downstream of the Highway 96 bridge at Weitchpec.	January 1 to August 14.	2 Chinook salmon 2 hatchery trout or hatchery steelhead**
	Fall Run Quota ~~2,064~~7,067 Chinook Salmon August 15 to December 31, ~~2014~~2015.	3 Chinook salmon - no more than ~~1~~2 fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length. 2 hatchery trout or hatchery steelhead**
	Fall Run Quota Exception: Spit Area (within 100 yards of the channel through the sand spit formed at the Klamath River mouth). This area will be closed to all fishing after 15% of the Total Klamath River Basin Quota has been taken. All legally caught Chinook salmon must be retained. Once the adult (greater than 22 inches) component of the total daily bag limit has been retained anglers must cease fishing in the spit area.	
3. Salmon River main stem, main stem of North Fork downstream of Sawyer's Bar bridge, and main stem of South Fork downstream of the confluence of the East Fork of the South Fork.	November 1 through February 28.	2 hatchery trout or hatchery steelhead**
4. Scott River main stem downstream of the Fort Jones-Greenview bridge to the confluence with the Klamath River.	Fourth Saturday in May through February 28.	2 hatchery trout or hatchery steelhead**
5. Shasta River main stem	Fourth Saturday in May through August	2 hatchery

downstream of the Interstate 5 bridge north of Yreka to the confluence with the Klamath River.	31 and November 16 through February 28.	trout or hatchery steelhead**
6. Trinity River and tributaries.		
a. Trinity River main stem from 250 feet downstream of Lewiston Dam to the Old Lewiston Bridge.	April 1 through September 15. Only artificial flies with barbless hooks may be used.	2 hatchery trout or hatchery steelhead**
b. Trinity River main stem downstream of the Old Lewiston Bridge to the Highway 299 West bridge at Cedar Flat.	January 1 to August 31.	2 Chinook salmon 5 brown trout 2 hatchery trout or hatchery steelhead**
	Fall Run Quota ~~6842~~2,332 Chinook Salmon September 1 through December 31, ~~2014~~2015.	3 Chinook salmon - no more than ~~4~~2 fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length. 5 brown trout 2 hatchery trout or hatchery steelhead**
	Fall Run Quota Exception: Chinook salmon over 22 inches total length may be retained downstream of the Old Lewiston Bridge to the mouth of Indian Creek when the department determines that the adult fall-run Chinook salmon spawning escapement at Trinity River Hatchery exceeds 4,800 fish. Daily bag and possession limits specified for fall-run Chinook salmon apply during this exception.	
c. Trinity River main stem downstream of the Highway 299 West bridge at Cedar Flat to the Denny Road bridge at Hawkins Bar.	January 1 through August 31.	2 Chinook salmon 5 brown trout 2 hatchery trout or hatchery steelhead**
	September 1 through December 31.	Closed to all fishing.
d. New River main stem downstream of the confluence of the East Fork to the confluence with the Trinity River.	September 15 through November 15. Only artificial lures with barbless hooks may be used.	2 hatchery trout or hatchery steelhead**
e. Trinity River main stem downstream of the Denny Road	January 1 to August 31.	2 Chinook salmon

bridge at Hawkins Bar to the mouth of the South Fork Trinity River.		5 brown trout 2 hatchery trout or hatchery steelhead**
	Fall Run Quota ~~6842~~2,331 Chinook Salmon September 1 through December 31, ~~2014~~2015. This is the cumulative quota for subsections 6.e. and 6.f. of this table.	3 Chinook salmon - no more than ~~4~~2 fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length. 5 brown trout 2 hatchery trout or hatchery steelhead**
f. Trinity River main stem downstream of the mouth of the South Fork Trinity River to the confluence with the Klamath River.	January 1 to August 31.	0 Chinook salmon 5 brown trout 2 hatchery trout or hatchery steelhead**
	Fall Run Quota ~~6842~~2,331 Chinook Salmon September 1 through December 31, ~~2014~~2015. This is the cumulative quota for subsections 6.e. and 6.f. of this table.	3 Chinook salmon - no more than ~~4~~2 fish over 22 inches total length until subquota is met, then 0 fish over 22 inches total length. 5 brown trout 2 hatchery trout or hatchery steelhead**
g. Hayfork Creek main stem downstream of the Highway 3 bridge in Hayfork to the confluence with the South Fork Trinity River.	November 1 through March 31. Only artificial lures with barbless hooks may be used.	2 hatchery trout or hatchery steelhead**
h. South Fork Trinity River downstream of the confluence with the East Fork of the South Fork Trinity River to the South Fork Trinity River bridge at Hyampom.	November 1 through March 31. Only artificial lures with barbless hooks may be used.	2 hatchery trout or hatchery steelhead**
i. South Fork Trinity River downstream of the South Fork	November 1 through March 31.	0 Chinook salmon

Trinity River bridge at Hyampom to the confluence with the Trinity River.		2 hatchery trout or hatchery steelhead**

...

Subsection (b)(195) of Section 7.50 is amended to read:

(195) Trinity River and tributaries downstream of Lewiston Dam.	See Klamath River ~~Regulations subsection (b)(91.1)(F)6~~7.50(b)(91.1).

* Wild Chinook salmon are those not showing a healed adipose fin clip and not showing a healed left ventral fin clip.
**Hatchery trout or steelhead in anadromous waters are those showing a healed adipose fin clip (adipose fin is absent). Unless otherwise provided, all other trout and steelhead must be immediately released. Wild trout or steelhead are those not showing a healed adipose fin clip (adipose fin is present).

Note: Authority cited: Sections 200, 202, 205, 215, 220, 240, 315 and 316.5, Fish and Game Code. Reference: Sections 200, 202, 205, ~~206,~~ 215 and 316.5, Fish and Game Code.

Attachment 7

YUROK TRIBE

190 Klamath Boulevard • Post Office Box 1027 • Klamath, CA 95548

November 19, 2014

California Fish and Game Commission
1416 Ninth St.
Room 1320
Sacramento CA, 95814

Re: Lower Klamath River fishing regulations

Dear Commissioners:

The Yurok Tribe formally recommends modifications to the Lower Klamath River recreational fishery regulations. Yurok typically does not become involved with the management of State fisheries unless we consider an issue to be a conservation concern that affects the health of our fishery resource. We propose two modifications to the lower Klamath River regulations within the boundaries of the Yurok Reservation: 1) there should be no catch-and-release fishing allowed in the spit area, where the Klamath River flows through the sand bar to meet the ocean, due to high levels of pinniped predation upon released fish, and 2) we recommend adoption of a conservation closure at the confluence and immediately downstream of Blue Creek (approximately river mile 17) to minimize catch and release fishing for fish that are seeking thermal respite, and to protect late fall-run Chinook that are holding prior to entering Blue Creek.

As you may recall, we provided comments to the Commission during the February and April meetings last year (see attachments) regarding these proposed regulatory modifications, but learned that we were too late to affect change for the 2014 regulation process. Per recommendation of your staff, we are providing recommendations for consideration at your December 2014 meeting, with the hope that these proposed regulations will comprise at least one of the options for public consideration/comment as you move through your 2015 regulatory process.

Recommendation 1 *Catch and Release fishing in the spit-area*
Previous regulations have allowed catch-and-release fishing in the spit area that has resulted in unquantified, but substantial predation upon released fish by the numerous pinnipeds occupying this area. During some previous years, the most successful anglers have released dozens of fish within a given day.

We recommend the Commission adopt regulations requiring all fall Chinook caught within this area be retained, and that there be no catch and release fishing of fall Chinook. Once an

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angler's daily bag limit for Chinook (regardless of whether it is an adult or jack) is obtained, they must stop fishing for the day. We propose the following:

Body of Water	Open Season and Special Regulations	Daily Bag Limit
Klamath River Spit (within 100 yards of the channel through the sand spit formed at the Klamath River mouth)	All Chinook salmon (regardless of size) captured must be harvested (i.e. no releasing Chinook salmon). Once the daily bag limit for Chinook is obtained, fishing must stop for the day.	"x" Chinook salmon (regardless of size)

Such a regulation would allow the fishery to continue—which is important for shore- based anglers as well as the local economy—while minimizing excessive mortality associated with releasing fish in the presence of sea lions, such predation is a problem that undeniably needs to be addressed and we hope to work with the Commission in doing so.

Yurok are well aware that many of the fish caught in this fishery are not legally hooked, but snagged outside of the mouth. I appreciate the concern this causes for some regarding the retention of fish that are snagged, because of the perceived precedent this may have to other areas of the state where snagging occurs. However, it's important to realize the uniqueness of this fishery given the presence of pinnipeds preying upon released fish. It is also important to realize that this fishery takes place within the boundaries of the Yurok Reservation, a sovereign nation and Co-Manager of the resource. The wasting of fish is contrary to our culture and a violation of our own Fishing Rights Ordinance.

Recommendation 2 *Blue Creek Conservation Closure*

We recommended the Commission adopt a conservation closure at the mouth of Blue Creek. This conservation closure would serve two purposes: 1) it would provide thermal refugia—free of catch-and-release fishing—for adult salmon (spring and fall Chinook) and summer-run steelhead that migrate up the Klamath River during the summer months (mid-June through mid-September) when ambient water temperatures are excessively warm, and 2) during mid-September through November, it would protect late-run fall chinook that are staging to enter Blue Creek, similar to the closures that are currently in place at the mouths of the Salmon, Scott, and Shasta Rivers.

During the summer months, especially during years of low flow, water temperatures in the mainstem Klamath River often reach 73 - 79° F, well above the optimal migration range and near the acute lethal limit for adult Chinook salmon (Bell 1990, Strange 2010[1]). At these times, adult salmon and steelhead will stop migrating and hold in the cold water effluent

[1] Bell, M.C. 1991. Fisheries Handbook of Engineering Requirements and Biological Criteria.
Strange, J.S. 2010. *Upper Thermal Limits to Migration in Adult Chinook Salmon: Evidence from the Klamath River Basin.* Transactions of the American Fisheries Society 139: 1091 – 1108.

from the mouth of Blue Creek to approximately half mile downstream. During many low flow years, such as we just experienced in 2014, this area holds up to several thousand adult salmonids (steelhead and Chinook), that are escaping the intolerably warm Klamath River. Video footage of a 100 meter stretch of the 2,000 meters these fish in during August 2014 is available at: https://www.youtube.com/watch?v=jpX6lCJZeuA

We believe fish that make it to the thermal refugia should be allowed respite. It is inappropriate to harass (via hook and line) these fish at a time when they are so physiologically vulnerable. Furthermore, often these fish (steelhead and/or salmon) will be hooked while holding in the thermal refugia, then played for an extended period of time in the ambient river conditions that are several degrees warmer (sometimes at lethal levels), and then eventually released. Forcing fish to go through such dramatic temperature changes, while putting them through excessive stress, is contrary to fish culture practices associated with rearing and/or releasing fish, and undoubtedly results in excessive stress and mortality. We recommend that this thermal conservation closure extend from the mouth of Blue Creek to half mile downstream of the wetted channel of Blue Creek.

The second reason for the conservation closure at the mouth of Blue Creek is to protect the genetically unique adult late-fall run Chinook salmon that return to spawn from mid-October through December. These fish are known to hold in the confluence pool in the Klamath River until substantial rains stimulate their migration up Blue Creek. Blue Creek late-fall run Chinook are the stronghold of the Lower Klamath and likely the source population for other Lower Klamath Tributaries. We request that fish holding in this area be given protection from harvest pressure similar to what is given to Chinook returning to the Salmon, Scott, and Shasta Rivers. California regulations currently provide the protection for these stocks:

"No fishing is allowed from September 15 through December 31 in the Klamath River within 500 feet of the mouths of the Salmon, the Shasta and the Scott rivers." We recommend adding Blue Creek to this prevision.

In summary, we recommend the Commission allow the above-mentioned regulatory changes be considered during the upcoming public hearing process for Klamath River sport fishing regulations, and we hope this process results in the adoption of such regulations to conserve the resource that is so important to our people. If you have any questions regarding this letter, or would like to schedule a meeting with our Council, please don't hesitate to contact myself or Dave Hillemeier (Fisheries Program Manager) at the address in the letterhead.

Finally, I would like to reiterate my invitation to the Commission We would welcome the Commission to visit the Yurok Reservation and meet with our Tribal Council. Such a meeting would allow us to discuss issues of mutual concern in regard to the management of the Klamath River fishery and provide you an opportunity to visit the Lower Klamath River via a boat ride if your schedules allow.

Sincerely,

Thomas O'Rourke, Chairman

YUROK TRIBE

190 Klamath Boulevard • Post Office Box 1027 • Klamath, CA 95548

April 8, 2014

California Fish and Game Commission
1416 Ninth St.
Room 1320
Sacramento CA. 95814

Re: Klamath River fishing regulations

Dear Commissioners:

I am writing to express concern with proposed sport fishing regulations for the "spit area" in the Lower Klamath River, which is located within the boundaries of the Yurok Reservation. While we support the continuation of the spit fishery (i.e. we oppose the closure of the spit fishery, as proposed in Option #3 that is being considered by the Commission), we believe it is essential that catch and release fishing in this area be prohibited, to minimize the excessive predation upon released fish by marine mammals. We request that the Commission adopt regulations prohibiting catch and release fishing in this area for the upcoming 2014 season.

We typically do not comment on the management of other fisheries, unless we consider an issue to be a conservation concern. The unquantified, but obviously excessive loss of caught and released fish to marine mammal predation in the spit area is a conservation concern. This problem was most pronounced last year, when fish spent an unusual amount of time within the spit area, resulting in some anglers catching and releasing several dozen fish per day. While catch and release fishing in the presence of marine mammals has been a concern of the Tribe for the past couple decades, as noted in a white paper we presented to the Commission in 1996[1], the problem escalated far beyond acceptable levels during 2013.

As noted in the testimony and handout (attached) that was submitted to you on behalf of the Tribe on February 5, 2014, we are concerned that excessive mortality from marine mammal predation is associated with catch and release fishing in this area. Therefore, we recommend that all fish caught in this area be retained, and that catch and release fishing be prohibited. When our Fisheries Program Manager, Dave Hillemeier, recommended such a regulation at

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[1] The following quote is from an issues paper the Yurok Tribe submitted to the Fish and Game Commission on March 6, 1996: "In addition to hooking mortality, a major concern the Yurok Tribe has with the catch and release fishery in the lower river is the mortality associated with sea lion and seal predation after fish are released. Over 300 seals and several sea lions were seen by Yurok Tribal net harvest monitors in the estuary while fish were being caught and released by sport fishermen... "

the February 5th Commission meeting, it was noted by the Commission, and their attorneys, that such a regulation is within the bounds of the three options currently being considered by the Commission; i.e. such a regulation could be adopted for the 2014 fall season. At a subsequent meeting in Eureka, the Commission's Executive Director noted that the Commission may have been incorrect, however after the meeting he did acknowledge that such a regulation may be possible, but challenging, to implement this year. Our recommendation is that the Commission adopt language similar to the following for 2014 season:

Body of Water	Open Season and Special Regulations	Daily Bag Limit
Klamath River Spit (within 100 yards of the channel through the sand spit formed at the Klamath River mouth)	All Chinook salmon (regardless of size) captured must be harvested (i.e. no releasing Chinook salmon). Once the daily bag limit for Chinook is obtained, fishing must stop for the day.	"x" Chinook salmon (regardless of size)

Such a regulation would allow the fishery to continue, which is important to shore anglers as well as the local economy, while minimizing the excessive mortality associated with releasing fish in the presence of sea lions; a problem that undeniably needs to be addressed.

We had also recommended at your February 5th meeting (see attachment) that the Commission adopt a conservation closure at the mouth of Blue Creek, to provide thermal refuge for migrating adult salmon and steelhead, as well as to protect staging late-fall run Chinook salmon returning to Blue Creek. We learned at this meeting that we were making this proposal too late in your process for consideration in the 2014 regulations, and it did not fall within the bounds of other options already being considered. Therefore, we look forward to discussing this issue with the Commission as you are crafting regulations for 2015.

Finally, I would like to take this opportunity to invite the Commission to visit the Yurok Reservation to meet with the Yurok Tribal Council. Such a meeting would allow us to discuss issues of mutual concern in regard to the management of the Klamath River fishery. We would also welcome you for a boat ride on the Lower Klamath River to experience first-hand the beauty of our land, the fishery in progress, the spit area, and the area near Blue Creek where we are proposing a conservation closure. If you have any questions regarding this letter, or would like to schedule a meeting with our Council, please don't hesitate to contact myself or Dave Hillemeier (Fisheries Program Manager) at the address in the letterhead.

Sincerely,

Thomas O'Rourke, Chairman

Yurok Tribal Comments to the California Fish and Game Commission regarding Lower Klamath River Recreational Fishing Regulations

February 5, 2014

The following recommendations are submitted on behalf of the Yurok Tribe in regard recreational fishing regulations for the Lower Klamath River. We normally do not make recommendations regarding the management of other fisheries, unless there is a conservation concern, which is the basis for these recommendations. We recommend that catch and release fishing in the estuary of the Klamath River be prohibited due to the excessive predation by marine mammals on released fish. We also request that a conservation closure be implemented within the cold water refugia at the confluence and immediately downstream of Blue Creek (river mile 17), to provide thermal refuge for adult salmon and steelhead migrating up the Klamath River when ambient river temperatures are inhospitable; we also recommend a closure during late-September through November, when late-fall chinook are staging to enter Blue Creek, similar to the closures you currently have in place at the mouths of the Salmon, Scott, and Shasta Rivers.

The Yurok reservation is located on the Lower 44 miles of the Klamath River. The fishery resource of the Klamath River is integral to the Yurok way of life for subsistence, cultural, and economic purposes. We go to great lengths to manage our fishery for future generations and request that you do the same when managing Klamath fisheries. Both of these proposed conservation measures we are recommending are for in-river sport fishing that occurs within the boundaries of the Yurok Reservation and is managed under the authority of the California Fish and Wildlife Service.

Catch and Release Fishing in the Estuary of the Klamath River

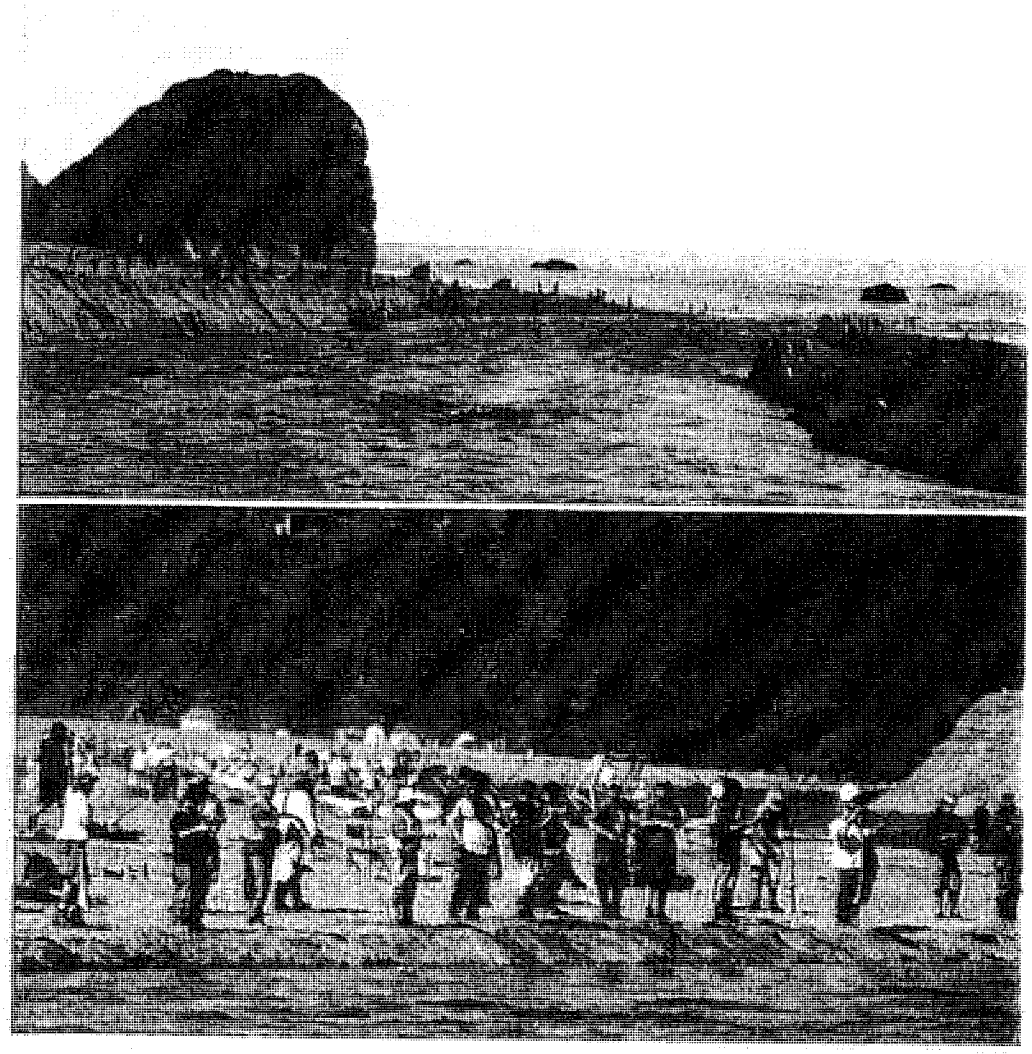
As you may be aware, hook and line fishing at the mouth of the Klamath river, in what is known as the "chute"(where the river meets the ocean), was extraordinary during the late summer of 2013. Due to apparent water quality conditions in the estuary, and the long chute that formed along the spit, the sand bar that separates the river from the ocean, adult salmon spent extended periods of time migrating up and down the chute, rather than entering the estuary. As a result, extremely large numbers of fish were caught by angling (typically by "lining" - a type of "snagging"). There were several problems that arose from this relatively unique situation, such as fish being buried and left in the sand, non-tribal anglers selling fish to Tribal members so they could then be sold in our commercial fishery (against the regulations for both fisheries); however, the worst problem from our perspective was one that has been around for years, fish being caught and released to the waiting sea lions and seals.

While fishermen are notorious for "fish stories", embellishments weren't necessary during the 2013 chute fishery, as catches were off the charts. Some anglers literally caught dozens of fish/day (some more than 60), for many days/weeks during the season. While such fishing is typically considered good, the chute fishery last year was a major conservation concern because most of these fish were released, in an exhausted condition, to a gauntlet of predatory seals and sea lions. Often times sport Fishers would catch their limit of three adults, and then continue fishing under the pretense of fishing for a jack

(or steelhead). All the fish that were caught while fishing for this jack had to be released, resulting in many exhausted fish being eaten by the seals and sea lions lined up near the bottom of the chute/surf interface.

We recommend, as we did back in 1996 to the Fish and Game Commission, that catch and release fishing not be allowed in the presence of marine mammals. While the problem was exacerbated in 2013 due to the relatively large number of fish that were caught, it is a problem any time that catch and release fishing occurs in the presence of pinnipeds. Any fish that are caught in the estuary should be harvested, not released to be eaten by sea lions/seals. We recommend that only "catch and keep" fishing occur in the estuary, or at least in the lower portion of the estuary (e.g. downstream of the Requa boat ramp).

Figures 1 and 2. Pictures of the fishery in the Klamath River "chute" during late summer, 2013 (photos courtesy of Thomas Dunklin).



Figures 3 and 4. Pinnipeds at the lower end of the Klamath River "chute" during the 2013 fishery (photos courtesy of Thomas Dunklin).

Blue Creek Refugia

The Yurok Tribe recommends the Fish and Game Commission adopt an additional conservation closure at the confluence and immediately downstream of Blue Creek (river mile 17). This conservation closure would serve two purposes: 1) during the summer months (mid-June through mid-September) it would provide thermal refugia for adult salmon (spring and fall Chinook) and steelhead that migrate up the Klamath River when ambient water temperatures are excessively warm, and 2) during mid-September through November, it would protect late-run fall chinook that are staging to enter Blue Creek during the fall months, similar to the closures that are currently in place at the mouths of the Salmon, Scott, and Shasta Rivers.

During the summer months, especially during years of low flow, water temperatures in the mainstem Klamath River often reach 73 - 79° F (Figure 5 – Yurok Tribal Fisheries Program data), well above the optimal migration range and near the acute lethal limit for adult Chinook salmon (Bell 1990, Strange 2010[1]). During these times, adult salmon and steelhead will stop migrating and hold in the cold water effluent from the mouth of Blue Creek to approximately ½ mile downstream, including "Blue Hole" which is along the bedrock outcropping just downstream of the confluence (Figure 7). During many low flow years, this area holds several hundred, up to a couple thousand, adult salmonids (steelhead and Chinook), that are escaping the intolerably warm Klamath River. These fish are basically on thermal life support.

We believe fish that make it to the thermal refugia should be allowed respite. It is inappropriate to harass (via hook and line) these fish at a time when they are so physiologically vulnerable. Furthermore, often these fish (steelhead and/or salmon) will be hooked while holding in the thermal refugia, but then played for an extended period of time in the ambient river conditions that are several degrees warmer (sometimes at lethal levels) to be eventually released. Forcing fish to go through such dramatic temperature changes, while putting them through excessive stress, is contrary to fish culture practices associated with rearing and/or releasing fish, and undoubtedly results in excessive mortality. We recommend that this thermal conservation closure extend from the mouth of Blue Creek to ½ mile downstream of the wetted channel of Blue Creek, the area where we've detected thermal refugia.

The second reason for the conservation closure at the mouth of Blue Creek is to protect the genetically unique adult late-fall run Chinook salmon that return to spawn from late October through December. These fish are known to hold in the confluence pool in the Klamath River until substantial rains stimulate their migration up Blue Creek. Blue Creek late-fall run Chinook are the stronghold of the Lower Klamath and likely the source population for other Lower Klamath Tributaries.

Blue Creek and other Lower Klamath (downstream of the Trinity River) late-fall run Chinook are genetically unique from other Klamath Basin stocks. The Klamath Basin chinook population upstream of

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[1] Bell, M.C. 1991. Fisheries Handbook of Engineering Requirements and Biological Criteria.
Strange, J.S. 2010. *Upper Thermal Limits to Migration in Adult Chinook Salmon: Evidence from the Klamath River Basin.* Transactions of the American Fisheries Society 139: 1091 – 1108.

the confluence of the Klamath and Trinity Rivers is part of the Upper Klamath-Trinity ESU, while the Lower Klamath River Chinook population, comprised primarily of fish from Blue Creek, is part of the California Coastal Chinook Salmon ESU. We request that fish holding in this area be given protection from harvest pressure similar to what is given to Chinook returning to the Salmon, Scott, and Shasta Rivers. California regulations currently provide the following protection for these stocks:

"No fishing is allowed from September 15 through December 31 in the Klamath River within 500 feet of the mouths of the Salmon, the Shasta and the Scott rivers."

Figure 5. Water temperature in the mainstem Klamath River above Blue Creek, June 1 – September 30, 2013.

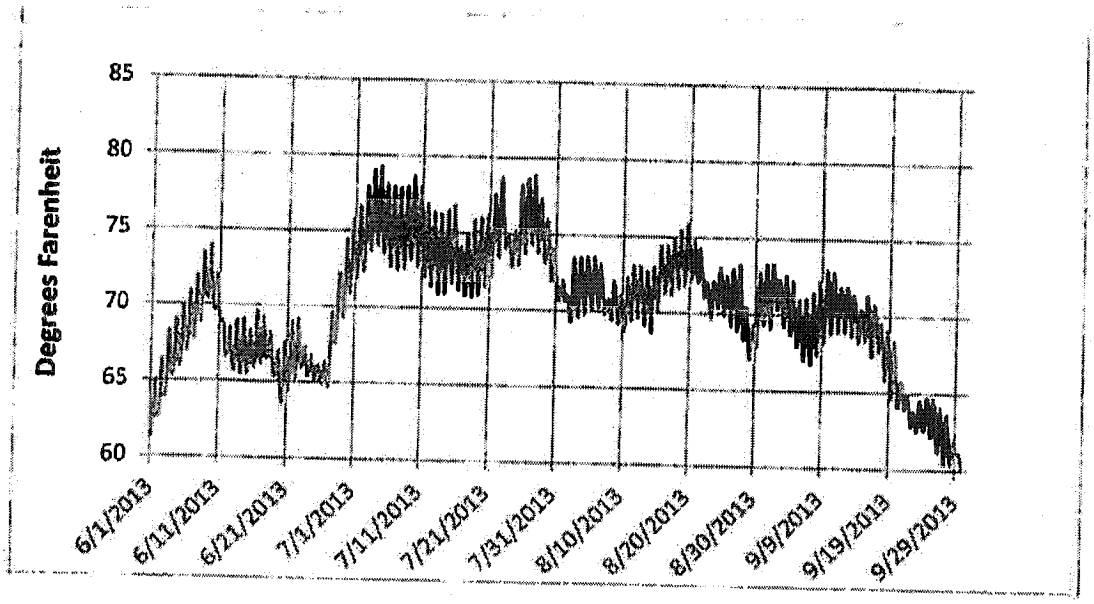

Figure 6. Blue Creek confluence and area of thermal influence (Google Earth, 7/30/2011)

FGC

From: Diane Bowers <dbowers@yuroktribe.nsn.us>
Sent: Thursday, November 20, 2014 1:24 PM
To: FGC
Cc: Dave Hillemeier
Subject: Lower Klamath river fishing regulations
Attachments: SKM_C654e14112014220.pdf

Submitted on behalf of the Yurok Tribe

From: Konica-MinoltaBizhubC-654e@yuroktribe.nsn.us [mailto:Konica-MinoltaBizhubC-654e@yuroktribe.nsn.us]
Sent: Wednesday, November 19, 2014 10:23 PM
To: Dave Hillemeier; Diane Bowers
Subject: Message from KM_C654e

Attachment 8

Rep. Jared Huffman insists federal agencies act to prevent Klamath River fish kill

Aug 3, 2015 | Press Release

Huffman: "The U.S. Bureau of Reclamation must preserve cold water in Trinity Lake to prevent a repeat of the tragic 2002 salmon run."

WASHINGTON—Congressman Jared Huffman, D-San Rafael, has called on the U.S. Department of the Interior to act quickly to prevent a repeat of a massive fish kill on the lower Klamath River as extreme drought conditions threaten struggling salmon.

The deadly parasite that killed up to 68,000 salmon in 2002, commonly known as ich, is infecting this year's run of salmon as they try to survive hot, warm water by crowding into the lower Klamath tributary Blue Creek. The largest portion of the fall run of salmon is likely to begin within the next two or three weeks, and could drastically increase crowding and the spread of the disease.

"I have asked Secretary Sally Jewell to work closely with the Yurok and Hoopa tribes and Humboldt County on a plan to release additional water from the Trinity River, which will boost flows on the Klamath," Huffman said. **"The U.S. Bureau of Reclamation must preserve cold water in Trinity Lake to**

prevent a repeat of the tragic 2002 salmon run disaster."

The 2002 fish kill caused severe damage to tribal trust resources and commercial and sport fisheries for years to come, undermining the regional economy.

In a letter to Secretary Jewell, Huffman asked for up-to-date information on water diversions, temperature, and the incidence of disease on the Klamath and Trinity rivers. He also asked that the bureau minimize any additional export of water from Trinity Lake and to reexamine its future operations on the rivers in light of the unprecedented California drought. Huffman also asked that Reclamation draw on Humboldt County's contractual right to 50,000 acre feet of water from the Trinity River as well as additional flows the tribes, county and agencies have requested to improve conditions on the Klamath.

"Humboldt County's allocation of 50,000 acre feet should be used to protect the fisheries our region depends on," said Humboldt County Fifth District Supervisor Ryan Sundberg. **"We hope the Interior Department recognizes this as an available resource and used that and other sources of water to avoid another horrible fish kill this year."**

"We take this threat to our fish very seriously, and we're looking at every option to protect our fish," said Thomas P. O'Rourke, Chairman of the Yurok Tribe. **"We don't want to go through another catastrophe like the fish kill in 2002, and we will do anything we can to avoid that outcome this year."**

"The Hoopa Valley Tribe and North Coast communities remain concerned about the health of Klamath and Trinity rivers," said Hoopa Valley Tribe Fisheries Director Mike Orcutt. **"We hope and pray that the Interior Department will take appropriate actions to prevent a fish kill this year."**

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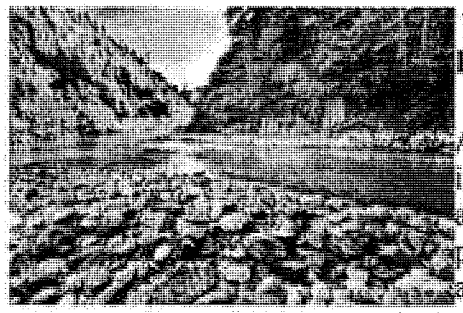
Blue Creek fishing closure: Parties air their grievances

By Laura Jo Welter, The Triplicate July 16, 2015 03:34 pm



The cooler water from the mouth of Blue Creek enters warmer mainstem Klamath, providing thermal refugia for many fish. Courtesy Dave Jensen

Yurok Tribe hosts public forum to discuss recent disagreements about Blue Creek

Another dry year has the lower Klamath River crawling with tepid water and in low supply, putting its fish population in a vulnerable position — this is an issue that should be considered when making fishing policy decisions, people generally agree, but they don't agree on how the matter should be addressed.

The Yurok Tribe hosted a public forum in Klamath on Monday evening to discuss these differences of opinion following the California Fish and Game Commission's controversial decision to close the Blue Creek-Klamath confluence to sportfishing, beginning last month. It was a meeting well attended by fishing guides, tribal members, public officials and environmentalists.

"The process"

Fishers and Del Norte County supervisors criticized the commission for closing the Blue Creek confluence without due notice to make complaints. By the time supervisors Chris Howard and Gerry Hemmingsen marched their board's grievances to a June 10 Fish and Game Commission meeting in Mammoth Lakes, the decision had already been made to establish a no-fishing buffer zone near the mouth of Blue Creek, between a half mile downstream of the creek to 500 feet above it until mid-September. After that, until the end of the year, the restricted area will be reduced to 500 feet above and below.

Hemmingsen maintained Monday that in addition to the potential impacts on the county's economy if guides aren't able to pull out fish where they reside, he also objects to "the process" that led to the closure.

"This was kind of a push-through deal," he said.

In June, the commission advised the Board of Supervisors to follow pertinent issues more closely to avoid being surprised by policy changes. On Monday, Friends of Del Norte Don Gillespie called out the Board of Supervisors for spending taxpayer money on a too-late, 10-hour trek to Mammoth Lakes, when they could have spoken up earlier. Hemmingsen told the Triplicate last month, however, that the supervisors had written letters to the commission on the issue without hearing a response.

Commissioner Jacque Hostler-Carmesin, of McKinleyville, acknowledged that keeping track of Fish and Game's upcoming decisions is a considerable task.

"It's very difficult if you don't keep up with the rule-making calendar that comes out in December," she said,

adding that she only has three days to read 2,000–3,000 pages pertaining to the meeting's agenda, a feat she said was impossible.

Tribal officials were heard by the commission, however, which took their sportfishing regulation recommendations into consideration this year.

Supporting science

Executive Director Troy Fletcher, who facilitated Monday's meeting, said the Yurok Tribe has been striving to address the Klamath's dwindling fishery for years now, and the closure at Blue Creek is, in part, a result of that.

Having recommended to the Fish and Game Commission a policy that disallows catch and release fishing at the mouth of Blue Creek as well as at the mouth of the Klamath, the commission opted to close the creek's confluence completely, since the state requires that all wild steelhead that are caught be released.

It's well documented that anadromous fish don't take kindly to warm water, and this was the basis for the tribe's recommendation.

Throngs of cold-water fish congregate in the thermal refugia at the mouth of Blue Creek, the first cool-water haven salmonids meet, some 17 miles up the main stem, after heading inland from the chilly Pacific Ocean.

That makes for prime fishing at this spot, particularly in exceptionally hot and dry years, and the fact that it's an important refuge for fish is indisputable, Yurok Fisheries Program Manager Dave Hillemeier addressed the group.

"You know that because you know where the fish are," he said.

But once the fish are dragged on a hook into the warmer water, before being released, their chance of survival lessens with every minute of exposure, their mortality rate increasing as temperatures climb above 20 degrees Centigrade, Hillemeier said, citing a 1995 Trinity River study.

Recent main stem temperatures have been hovering around 23.5 degrees centigrade until last week's thunderstorms cooled the river some, Hillemeier said.

Mike Coopman, of Mike Coopman's Guide Service, said he appreciated the open dialogue at the meeting, but he still wanted to see specific numbers pertaining to the mortalities at Blue Creek. It's possible the stress the fish suffered when hooked could be alleviated, he suggested, if the they were released in the cooler water.

"I'm going to tell you, the mortality rate is not what people were projecting — I can see the bottom of that river just like anybody else. I landed 75 fish a day in my boat alone at Blue Creek last year," Mick Thomas of Lunker Fish Trips attested. "The whole bottom of the river would be lined with fish.

Fisheries biologist Terry Roelofs, a professor emeritus at Humboldt State University, told the Triplicate that the only reason the fish are hunkered down in Blue Creek like that, and seemingly for the picking, is precisely because of the dire conditions of the low-flowing Klamath.

With virtually no snow in the Trinity Alps or the Marble Mountains this winter, Klamath's exceedingly low flows — lower even than they were in 2002, when the Klamath saw the largest fish kill on record — have officials bracing for another die-off.

"That makes perfect sense" that the commission would opt to protect the fish's singular stronghold, Roelofs said, by restricting the fishing there — the closure was warranted years ago.

"The cold water isn't even flowing at the surface, but through the rocks at Blue Creek. And when the Klamath is almost lethally hot, hundreds and hundreds of fish are packed in there," Roelofs said.

When fish are crowded at such high concentrations and for extended periods of time, Hellemeier pointed out, the conditions are ripe for the parasite Ich to incubate. An Ich infestation is responsible for the killing of over 68,000 salmon in 2002. By the time Ich is detected, the four days it takes for a water release to reach the lower river is too late to prevent a die-off.

Chinook salmon and other anadromous fish hang out by the thousands at the mouth of Blue Creek, making the area both an attractive fishing hole and an important area to conserve. Courtesy Barrie Kovish

"It's not our doing"

Tribal member James Dunlap lamented that inflexible policies don't address the shifting problems at hand, though in the meantime they manage to affect the livelihood of people who rely on the fisheries for income.

"You're trying to curtail problems with abusers and problems in our fisheries as well with a crapload of laws, but (the abusers are) not here, and they're not going to follow the policies anyway. It is going to hurt the guys that do follow the rules," Dunlap said.

Margaret Carlson lives on the river, near the confluence with Blue Creek. She said she had won fishing rights in 1978, along with the Yurok Tribe, and she wasn't about to let them go.

"I'm getting too old to fish, but I will catch my catch. I will fill my smoke house, and I will see to it that my children are protected because I am an organized tribe. I organized before the Yurok ever was a tribe. And that Blue Creek there, it belongs to us, and it is our prayer ground," she announced with authority. "I don't like to see the fish being depleted, but it's not our doing, and they're not stopping the people that are farming ahead of us that are poisoning the water."

Margaret's grandson Pergish Carlson, of Blue Creek Guide Service, echoed Mick Thomas' sentiment when he described diving in Blue Creek, and swimming with 500 salmon. He said he was the only Yurok living on tribal land with a guide service, and he did not intend to stop fishing and lose his way of life, though he'd already seen a loss in revenue.

Hearing all of these comments, Commissioner Hostler-Carmesin assured the group that the Fish and Game Commission was not planning an indefinite closure at Blue Creek, as fishing guides feared. It would be reassessed again in the coming year, taking the public's remarks into consideration.

In the meantime, Yurok Tribe officials are agreeable to more studies that would measure the population of fish hiding out in the cool waters trickling from Blue Creek and the stressors that impact them, which may result in better informed policy decisions in the future.

Regular meetings, involving fishing guides, tribal members and county officials were suggested, too, as a means to keep people in the know, and ensure that everybody has a chance to be heard.

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CALIFORNIA TRAPPERS ASSOCIATION

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September 24, 2015

The Honorable Jack Baylis, President
California Fish and Game Commission
1416 Ninth Street, Suite 1320
Sacramento, CA 95814

RE: Reconsideration of Bobcat Trapping Regulations

Dear President Baylis,

The California Trappers Association (CTA) hereby petitions the California Fish and Game Commission (Commission) to reconsider its decision on June 11, 2015 to ban the trapping of bobcats.

In its decision, the Commission failed to fully consider and address the biological and economic impacts of a total ban on the trapping of bobcats in California. The California Department of Fish and Wildlife (Department) indicated very clearly that the trapping of bobcats at current and recent harvest levels presents no harm to the state's bobcat population. In addition, the Commission failed to adequately address a ban's net increase in enforcement costs to the Department as well as the potential for and impact of transference of take of bobcats by methods other than trapping.

Even more alarming is the fact that the Commission failed to meet its responsibilities to adopt regulations in accordance with the California Environmental Quality Act (CEQA), particularly as it relates to the Commission's failure to complete an environmental document pursuant to the Commission's regulatory requirements. The Commission is required to prepare an environmental document for every regulatory change, except in the case of listing a threatened or endangered species. A trapping ban poses numerous potential impacts to the environment, wildlife populations and survivability rates of various species that the Commission failed to address, and its claim that there would be an enhancement of non-consumptive use benefits is a fallacy unless data provided in an environmental document demonstrates the veracity of that assertion. Without an environmental review of the implications of a ban, the Commission cannot adequately assess the potential negative impacts of its action on the environment. In short, the attempt to assert a categorical exemption in the Commission's regulatory action, while expedient, is wholly inappropriate and not provided for by law.

Note that the expectation for adherence to the CEQA framework is not isolated to my organization and our affiliates. In fact, it seems strangely inconsistent that the very organizations (Project Coyote, Center for Biological Diversity, Natural Resources Defense Council, etc.) that advocated for a complete trapping ban of bobcats in California failed to encourage the Commission to complete an environmental document beforehand given the fact that it was these very same groups that initiated legal action against Mendocino County for having failed to develop a CEQA-constrained

environmental document when the County hired the Wildlife Services of the U. S. Department of Agriculture to conduct its predatory animal control program, including the trapping and removal of bobcats.

Thank you for your consideration and timely review of this formal request for reconsideration, which is consistent with the existing process at the time of its submission. It is our fervent desire and preference that we work through this situation with the cooperation of the Commission rather than pursuing action through the alternative options legally available to us. The courtesy of a formal response, addressed to my attention, is kindly requested.

Sincerely,

Mercer Lawing
President, California Trappers Association

cc: Mr. Edmund G. Brown, Jr., Governor, State of California
Ms. Jacque Hostler-Carmesin, Commissioner, California Fish and Game Commission
Mr. Jim Kellogg, Commissioner, California Fish and Game Commission
Mr. Eric Sklar, Commissioner, California Fish and Game Commission
Mr. Anthony Williams, Commissioner, California Fish and Game Commission
Mr. Sonke Mastrup, Executive Director, California Fish and Game Commission
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September 24, 2015

VIA ELECTRONIC MAIL & U.S. POST

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Re: Comments on Wildlife Resources Committee Procedures

Dear Mr. Mastrup:

We again write on behalf of our client the National Rifle Association of America to comment on the Wildlife Resources Committee's lack of established procedure and governing rules. Our office sent the Commission's Executive Director a letter on April 14, 2014, raising concerns that the originally proposed rules for the WRC would be improper as "underground regulations" because they had not been adopted pursuant to the proper rulemaking process. That letter also outlined nine other specific issues that are confusing or otherwise unclear as to plans for the future operation of the WRC.[1]

Our office followed up with the Executive Director about that letter. We were informed that the Commission had since addressed our client's concerns. Not seeing any evidence of that, on July 11, 2014, we sent a formal request that this Commission require that rules and procedures be established for the WRC through the normal regulatory approval process before the WRC takes any further

[1] A copy of the letter is attached as Exhibit 1.

action.[2] Around the same time Safari Club International submitted a letter raising similar concerns, and NSSF attorneys also submitted a letter correctly explaining the legal shortcomings for how the WRC is operated. Due to a lack of response to these correspondence, our office then followed up with an official petition on July 28, 2014, which the Commission accepted and referred it to staff for evaluation and recommendation.[3]

Despite all these efforts, our client's concerns have not been addressed *over a year later*. To date no official procedures for the WRC have been adopted. To the contrary, it seems like how the WRC runs is ever-changing, leaving stakeholders cynical about the process and with many questions that need to be answered, including:

> What is the process for arranging a WRC meeting? Who decides the date, location, and format?
>
> Who dictates what items will be discussed at the WRC? How are issues decided to be placed on the agenda for any given meeting? Is there a process for the public to suggest items for consideration by the WRC?
>
> Who decides (or what is the process for deciding) what actions the WRC will take, i.e., whether a recommendation will be made to the full Commission? What happens if one Commissioner disagrees with a recommendation? Is there a record kept of that? Is the Commission or the public informed of the disagreement?
>
> What form does a recommendation take? Who prepared it?
>
> Are any meeting minutes or notes of proposed actions prepared? If so, by whom? Are any meeting minutes or notes kept? If so, are they made available?
>
> Does the WRC comply with the Bagley-Keene Act as it must? If so, does it have established procedures to maintain compliance? Who created those procedures?

Until these (and other) questions are answered and the lack of transparency for what the WRC is doing is addressed, it is inappropriate for the WRC to engage in any more activity related to the Commission's policy making. Yet, the exact opposite seems to be occurring.

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[2] A copy of the letter is attached as Exhibit 2.

[3] A copy of the petition is attached. as Exhibit 3

Not only does the WRC continue to operate without any formal governing procedures in place, but it is *expanding* its operation. The October Commission meeting agenda includes, among other items, "Appointments to predator workgroup." While not entirely clear (which is an additional issue that needs to be addressed), it appears this item means the Commission will be discussing nominations and appointments to the WRC's so-called Predator Policy Workgroup ("PWG"). The propriety of such an expansion is dubious standing alone, but with so many questions remaining about the proper procedure and structure for the WRC itself, doing so is beyond the pale for a public entity.

Moreover, it is unclear whether it is even legal to form the PWG. Nothing in the statute creating the WRC provides for it.[4] Assuming it is legal, it remains unclear whether the Commission or the WRC would be the body responsible for creating it and regulating it. Accordingly, before the WRC expands with subcommittees like the PWG, the following questions should be answered:

> What is the source of authority to create the PWG? Assuming there is such authority, why is its creation not subject to the official rulemaking process? Would the Commission be able to create a workgroup under itself without going through the formal rulemaking process?
>
> Who has authority to dictate the criteria or process for nominating PWG members? Are such nominations subject to the official rulemaking process?
>
> Assuming such authority exists in either case, does it reside in the Commission or the WRC?
>
> Will the public have an opportunity to weigh in on the criteria for nominating PWG members?

Of course, the same queries regarding the lack of procedure for the WRC generally apply to the PWG, but addressing those now would be to put the cart before the horse. Our client is not alone in its concerns here. Even WRC staff recently recommended "[t]hat structure, function, and specific tasks for the predator workgroup be clearly identified."[5]

Needless to say, established rules and procedures are needed for the WRC now. Important matters are currently being addressed while many stakeholders remain uncertain about how to participate in the process because of the constantly changing process. The effect is to thwart the original purpose of the WRC, which was to facilitate input from stakeholders on matters of interest

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[4] *See* Fish and Game Code § 106.

[5] See Item 7 on Page 8 at:
http://www.fgc.ca.gov/meetings/2015/Sep/WRC_MeetingBinder_20150907.pdf

regarding natural resources that the Commission may want to consider.

For these reasons, we respectfully request that the above questions be answered and that the WRC cease taking any actions until official rules and procedures governing it are adopted following a public comment period. If you have any questions, please feel to contact our office.

Sincerely,
Michel & Associates, P.C.

Sean A. Brady

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April 14, 2014

VIA EMAIL, U.S. POST
& HAND DELIVERY

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smastrup@dfg.ca.gov

Re: Comments on Proposed Regulations and Notice of Improper Wildlife Resources Committee Procedures

Dear Mr. Mastrup:

We write on behalf of our client, the National Rifle Association of America, to comment on proposed policies and to notify you of apparent improprieties in the proposed adoption of policy and procedures related to the Wildlife and Marine Resources Committee (respectively "WRC" and "MRC").

The agenda for the Fish & Game Commission ("Commission") meeting of February 5, 2014, includes the following agenda item: "DISCUSSION OF DRAFT POLICY AND PROCEDURES FOR WILDLIFE AND MARINE RESOURCES COMMITTEES" (the "Draft") A copy of the Draft is available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

The Draft, as written, is a "regulation[1]" under state law. So the Commission appears to be

[1] Government Code section 11342.600 states, in its entirety,

> '[r]egulation' means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure.

Further, as used in section 11342.600, the term "state agency" includes every state commission. Gov't

improperly attempting to create "underground regulations[,]" i.e., regulations that are not valid because they were not adopted in accordance with the proper procedural guidelines.

I. The Proposed Procedures Must Be Properly Enacted Before They Can Be Implemented

California law is clear about the prohibition on the issuance or use of underground regulations:

> No state agency shall issue, utilize, enforce, or attempt to enforce any guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule, which is a regulation as defined in Section 11342.600, unless the guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule has been adopted as a regulation and filed with the Secretary of State pursuant to this chapter.

Gov't Code § 11340.5(a).

Case law confirms that the proposed rules in the Draft would be improper "underground regulations" if they arose as part of the implementation of the duties created by Fish and Game Code section 105 and 106, which, respectively, created the MRC and WRC. *See Engelmann v. State Bd. of Educ.*, 2 Cal. App. 4th 47, 62 (1991) (holding Board of Education was required to go through rule making process found in the Administrative Procedures Act when creating the guidelines and manuals for the mutli-level review process used for selecting the textbooks that could be used in public schools).

Accordingly, the Commission should follow normal regulatory standards (e.g., a series of three properly noticed Commission meetings used to introduce, discuss, and vote on a proposed regulation that was noticed via publication in the state's Regulatory Notice Register) to move forward with the creation of the proposed policies/regulations. Once the proper process has been complied with and the regulations have been filed with the Secretary of State, only then can the regulations be relied upon by the WRC.

II. Substantive Comments Regarding the Proposed Regulations

1. Based on the lack of notice regarding the formation and dissolution of the Predatory Policy subcommittee, it is clear the WRC needs rules to explain exactly how and when subcommittees will be formed. The Draft should be revised accordingly.

2. Fish & Game Code section 106 does not actually authorize or suggest the WRC is to perform its *own* meetings; the Commission should explain to the public why the Commission is going beyond its statutory mandate.

3. The WRC should have at least two members; there appears to be no difference between

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Code § 11000. Thus, the Commission is clearly a state agency for the purposes of section 11342.600.

a Commissioner's own abilities and a one-person WRC, and having two members will decrease the possibility of hasty or unfairly biased decision making.

4. The Draft should include a provision that, when the Commission makes its yearly appointment to the Committee, it should, to the extent practicable, appoint two WRC members who have differing backgrounds (e.g., a hunter and a member with non-hunting interests) to help ensure that recommendations have been "vetted" as much as possible before they get to the Commission.

5. Because the WRC is required to make recommendations (i.e., take "action[,]" as that term is defined in Government Code section 11122), that means final decisions will need to be made, which could be problematic if there are two Commissioners sitting on the WRC (e.g., a "tie"). The proposed regulations should address how any disputes between WRC members shall be resolved.

6. The WRC is, "to the extent practicable," to "attend meetings of the department staff, including meetings of the department staff with interested parties, in which significant wildlife resource management documents are being developed." Fish & Game Code § 106. Are these meetings all going to be open to the public and publicly noticed? Is there going to be a public record of these meetings occurring? If they are not, and further assuming the department has discretion as to who it meets with in private concerning the development of "significant wildlife resource management documents[,]" there are real transparency and equal access problems here.

7. Because the WRC was created by statute and because it includes more than one member, it is subject to the requirements of the Bagley-Keene Act. Gov't Code §§ 11121, 11123. Regardless, if it is the Commission's position is that the WRC, or any "subcommittees" it produces, will not be treated as if subject to the Bagley-Keene Act, the Commission should explain to the public the considerations that the Commission has found to outweigh the public's interest in open government.

8. Three Commissioners should never participate in any WRC meeting. The Draft obscures, at the least, the limits of Government Code section 11122.5(c)(2)(6). That section states:

> [a] majority of the members of a state body [e.g., the Commission] shall not, outside of a meeting authorized by this chapter, use a series of communications of any kind, directly or through intermediaries, to discuss, deliberate, or take action on any item of business that is within the subject matter of the state body . . . . The prohibitions of this article do not apply to . . . attendance of a majority of the members of a state body at an open and noticed meeting of a standing committee of that body, ***if*** the members of the state body who are not members of the standing committee attend only as observers.

(Emphasis added).

It seems, however, that someone within the Commission or related staff wants to blur the lines about non-committee member Commissioners attending committee meetings. This can be seen via a comparison of the Draft and the prior "approved" MRC rules previously posted on the Commission's website.

Compare the following.

- In the event that another Commissioner wishes to attend a meeting of the MRC, and there are two members of the MRC present at the meeting, that Commissioner may attend the meeting but must recuse himself or herself from any discussions related to Commission business. [2]

- Non-chair Commissioner [sic] may attend committee meetings.[3]

There is no legitimate reason to make this language *less* clear than it was in the prior draft. Further, it is debatable if the passage, as originally stated, is an accurate representation of the limitation stated in section 11122.5(c)(2)(6). Having three Commissioners on the dias during a committee meeting is inappropriate. If the Commission is going to have a meeting, it should be clearly noticed as a *Commission* meeting. History has show that non-committee Commissioners are likely going to speak at committee meetings even though doing so is patently inappropriate, and the rules should be absolutely clear to everyone, *including Commissioners and staff*, that non-committee Commissioners cannot legally speak at committee meetings.

9. WRC meetings should not be video recorded and posted on the internet. It was mentioned at the last WRC meeting that the cost of such service would be a problem. Though no actual cost information was provided, with the availability of YouTube and inexpensive digital cameras (perhaps even state-owned cellular phones), that statement is difficult to accept. Indeed, if the Commissioners and staff are all having travel costs reimbursed, it seems that the cost of video, which would *guarantee public access*, is likely much less than that which is already expended.

During the meeting of February 5, 2014, the Commission discussed the possibility of live-streaming WRC meetings. During that discussion, you mentioned that live-streaming meetings costs approximately six to eight thousand dollars per meeting, and the it was unclear if the Department of Fish and Wildlife had the money in its budget needed to live-stream the meetings. Because of the importance of public participation,

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[2] http://www.fgc.ca.gov/meetings/committees/MRCrulesandprocedures052213.pdf.

[3] http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

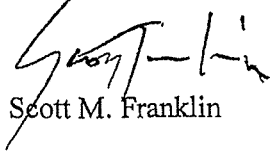
live streaming and later web access should be considered a priority.

10. To the extent that the Draft states committee meetings "may be taped and broadcast on the internet at the discretion of the Commission[,]" this provision should be clarified, as it can reasonably be interpreted as a prohibition on the public recording committee meetings, subject only to express permission of the Commission. *See* Gov't Code § 11124.1 (members of the public have the right to use a video recording device to record meetings of state bodies).

III. Conclusion

In summary, the Commission should incorporate all of the above comments into a new draft set of regulations that can be considered and adopted through the appropriate procedural mechanisms.

Sincerely,
Michel & Associates, P.C.



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July 11, 2014

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Re: Request Wildlife Resources Committee Procedure and Meeting Protocols Be Put In Place *Before* That Committee Makes Any Recommendations to the Fish & Game Commission

Honorable Commissioners:

We write on behalf of our client the National Rifle Association.

Recently while conducting meetings, the Commission and the WRC have blurred the lines between a true Commission hearing, where policy decisions can legally be made and official actions can be taken, and WRC meetings where apparently the only action possible is the WRC making a recommendation for the Commission to consider. This letter is a formal request that the Fish & Game Commission (Commission) require the Wildlife Resources Committee (WRC) to establish and publicize rules and procedures under which it will operate before the WRC takes any further substantive action, and that such procedural rules be vetted through the normal regulatory approval process before they become effective.

1. The Commission is Sending Mixed Signals About the Authority of the WRC

There is confusion about the role and authority of the WRC because at Commission and WRC meetings, the Executive Director, as well as Commissioners Sutton and Baylis, have inaccurately stated that WRC meetings are a form of, or can operate as, official Commission meetings. The Commissioners and Commission staff have also made numerous other confusing and conflicting comments about the role, limitations, and procedural rules of the WRC. Commissioner Sutton said that the WRC meetings are of an "informal nature." But there has been no clarification about whether

the WRC is going to be the only opportunity for public comment on issues raised at WRC meetings, or if the public will have opportunity to comment on all issues agendized for Commission meetings, even if that issue was already discussed (or not) at a WRC meeting. This is compounded by the fact that WRC meeting videos are not available online, notwithstanding multiple requests from various segments of the stakeholder community for that type of access.

If the WRC meeting will provide for a longer format pre-discussion of a discussion that will take place again before the full Commission, then no binding action (other than perhaps a recommendation to the Commission action) takes place at a WRC meeting. If that is the case, then the Commission should say so unequivocally. This clarification would drastically reduce the amount of confusion being created by the uncertain state of the WRC's procedures and its authority.

2. *The Commission Must Establish Procedural Rules for the WRC Before It Allows the WRC to Address Substantive Issues*

Based on the recently released agenda for the July 28, 2014, WRC meeting, it appears that the Commission is moving forward with potentially substantive decision making at the upcoming next WRC meeting, even though the procedures for how the WRC will operate, and significantly, how the public can participate in WRC meetings, have not been publicized and apparently do not exist. Because there is no system or procedures in place, our clients, other stakeholders, and the interested public are unable to effectively participate in the rule and policy making process.

This office sent the Executive Director of the Commission a letter on April 14, 2014, raising concerns that the previously proposed WRC rules would be improper as "underground regulations." That letter also outlined nine other specific issues that are confusing or otherwise unclear as to plans for the future operation of the WRC. A copy of the letter is attached.

Our office recently followed up with the Executive Director about that letter. We were informed that the Commission has addressed the concerns raised our letter of April 14, 2014. We respectfully disagree. No new proposed procedural rules have been published, nor have we received a response letter addressing the issues noted in the letter of April 14, 2014.

So we now ask the Commission to please tell us; how have our client's concerns as recited in our April 14, 2014 letter, been addressed?

3. *The Commission Seems Biased, Favoring Participation by Anti-Hunting Groups Over Pro-Hunting Groups*

Holding WRC meetings without established procedures facilitates the impression that different rules apply to different stakeholders. Certain stakeholders appear to have more access and to information about WRC activities and plans. This not only creates an appearance of impropriety and fosters an antagonistic situation, it will result in increased investigations by watchdog associations suspecting bias in the way the Department and Commission are conducting their affairs.

If published rules are put in place, it would not only provide some clarity, it would also help limit unfair treatment, reduce the appearance of bias or conflicts of interest, alleviate concerns of bias,

and facilitate a more productive regulatory process.

4. Stakeholder Presentation Materials Should Be Made Publicly Available Well Before WRC Meetings

Furthermore, it was only because this office asked the Executive Director that we found out that the deadline for making a request to make a presentation at the July 28, 2014, WRC meeting was July 7, 2014. Assuming this was a deadline that was applicable to all who wanted to make a presentation to the WRC, shouldn't it have been publicized? And if that deadline did not apply to every group that wanted to make a presentation, our clients object to any content-based scheduling advantage that is being granted to other stakeholders.

If the purpose of the WRC is to have the most enlightened discussion possible concerning issues headed to the full Commission for consideration, then stakeholders and the public should not be surprised by new information presented for the first time at WRC meetings when there is no opportunity to prepare a rebuttal.

It is our understanding that there is a currently unwritten rule that presenters at WRC meetings are required to give the Executive Director a copy of presentation materials a few weeks prior to the WRC meeting. Though our clients don't necessarily agree with such a rule, if it is going to be enforced, why couldn't that information be circulated publicly beforehand?

5. The Commission's Attempt to Create an "Alternate" WRC Member Is Disconcerting

Another unsettled and troubling issue related to the WRC is the attempt (foiled by a loss of quorum at the June 4, 2014, meeting of the Commission) to create an "alternate" WRC "member" position. By law, the WRC is only required to have one member, so the claim that two members are need for meetings is inaccurate. Fish & Game Code § 106 ("The commission shall form a wildlife resources committee from its membership consisting of at least one commissioner.").

The WRC has *two* committee "members," Commissioners Kellogg and Baylis. If only one of committee "members" is unable to attend a WRC meeting, there is still no quorum or other procedural limitation that prevents a single WRC committee member from going forward with a WRC meeting.

The fact that some Commissioners are pushing very hard to have a third Commissioner appointed as a "member" to the WRC, even though there is no need to do so, raises concerns that by having three Commissioners at WRC meetings, those Commissioners would then attempt to act as the Commission and take a binding vote on Commission business.

At the January 15, 2014, WRC meeting, both the Executive Director and Commissioner Baylis indicated that had the three Commissioners present at that meeting wanted to, they could have acted as the Commission (an assertion we vigorously disagree with). Though the January 15, 2014, meeting was technically a Commission meeting, it was also an illegal meeting because it was not properly noticed as a Commission meeting.

If the Commission tries to use a noticed WRC meeting as an opportunity to take a Commission

vote on a controversial topic, that will result in litigation.

The Commission should consider the implications of the WRC's current methods of operation, and should draft a new set of proposed procedures for the WRC. In doing so, the "alternate" issue should be resolved.

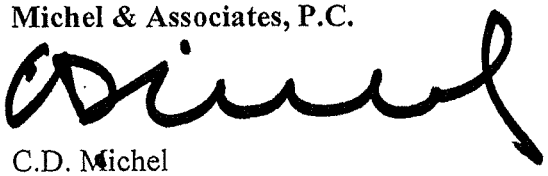
6. *Reservation of Rights*

Because it is not clear to us what the limitations are about making comments at the upcoming WRC and at later, related Commission meetings, our clients expressly reserve all rights to make a comment/presentation and at the July 28, 2014, WRC meeting and the August 6, 2014 Commission meeting, regardless of whether our client participates in one or both of these meetings.

7. *Conclusion*

The next WRC meeting should be used to formalize a set of proposed procedural rules that can be reviewed and approved by the Commission through its normal regulatory process. Otherwise the WRC's actions will continue to cause stakeholders and the public to believe that the Commission has lost its objectivity, and that it is now a biased politicized body. This directly conflicts with the reason the Commission was created in the first place. See *Young v. Dep't of Fish & Game*, 124 Cal. App. 3d 257, 273 (1981) (noting that the constitutional amendment that resulted in the Commission being a constitutional body "was to remove the old Fish and Game Commission from political influence").

Sincerely,
Michel & Associates, P.C.



C.D. Michel

CDM/smf

Enc.: April 14, 2014 Letter

cc: Sonke Mastrup
Executive Director
CALIFORNIA FISH & GAME COMMISSION
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EXHIBIT 3

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July 28, 2014

SENT VIA E-MAIL
& HAND DELIVERED

California Fish and Game Commission
c/o Executive Director Sonke Mastrup
P.O. Box 944209
Sacramento, CA 94244-2090

sonke.mastrup@fgc.ca.gov

Re: Petition for Rule Making by the Fish & Game Commission Regarding the Need for Formal Procedures and Rules for the Proper and Fair Operation of the Wildlife Resources Committee

Dear Mr. Mastrup:

This Petition, submitted by the National Rifle Association of America ("NRA") pursuant to Government Code sections 11340.6 and 11340.7, requests that the California Fish & Game Commission (the "Commission") enact regulations to ensure public participation and fair debate vis-à-vis the Wildlife Resource Committee (the "WRC").

I. STANDING OF PETITIONERS

Petitioner NRA is an Internal Revenue Code § 501(c)(4) nonprofit corporation, incorporated in the State of New York in 1871, with principal offices and place of business in Fairfax, Virginia. NRA has approximately five million members, and hundreds of thousands of members in California.

The founders of NRA desired to create an organization dedicated to marksmanship, or, in the parlance of the time, to "promote and encourage rifle shooting on a scientific basis." NRA's bylaws, at Article II, Section 5, state that one of the purposes of NRA is "[t]o promote hunter safety, and to promote and to defend hunting as a shooting sport and as a viable and necessary method of fostering the propagation, growth, conservation, and wise use of our renewable wildlife resources."

NRA has been a party to or supported multiple lawsuits throughout the nation supporting and

defending the right to keep and bear firearms for hunting, sport shooting, and self-defense. Indeed, one of NRA's key functions is to preserve the tradition of hunting, by protecting it from unreasonable and unnecessary restrictions.

NRA has an established record of advocating against restrictions on hunting based on scientifically unsupported claims of alleged environmental harm.

Petitioner David Halbrook resides in Victorville, California, and has been a hunter for basically his entire life. Mr. Halbrook has hunted various big and small game in California in the past, and he intends to hunt in California in the future. Mr. Halbrook is a member of NRA and is the executive director of the Hunt For Truth Association.

Based on the foregoing, the petitioners have standing to make the requested regulatory changes.

II. REQUESTED REGULATORY CHANGES

Petitioners hereby seek the amendment of California Code of Regulations ("CCR"), title 14, via the addition of a new section dedicated to the procedural aspects of the operation of the WRC, including, but not limited to, public meetings held by the WRC.

The following provisions, based on draft language created by the Commission, should be included in the new section.

(A) Section 108 of the Fish and Game Code requires the commission to adopt rules to govern the business practices and processes of the Commission. Section~~s 105 and~~[1] 106 of the Fish and Game Code require the commission to establish ~~a minimum of two committees, the Marine Resources Committee and~~[2] the Wildlife Resources Committee~~, respectively~~.

(B) A minimum of one, but no more than two members of the Commission will be appointed to the Wildlife Resources C~~c~~ommittee~~s~~ at the first Commission meeting of each calendar year. To the extent feasible, the Commission shall place at least one Commissioner with substantial hunting experience on the Wildlife Resources Committee.

(C) All public are welcome to attend and participate meetings as defined in subsection (a).

(D) The Commission will establish the meeting schedule for the WRC ~~committees~~ each year

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[1] ~~Strikeout~~ and underline are used herein to reflect deletions and additions, respectively, that Petitioner proposes be made regarding language previously put forth by the Commission in the Draft.

[2] Petitioner is not taking any position on what regulations should or should not be adopted for the operation of the Marine Resources Committee, but reference thereto is omitted herein because this Petition does not concern the operation of the Marine Resources Committee.

as part of the annual rulemaking calendar the prior November and may schedule additional meetings as needed.

(E) Agenda will be approved at the Commission meeting before the committee meeting. Agendas will be developed by staff and will be comprised of standing items and topics requested by: ~~referred by~~ the Commission, ~~topics requested by~~ the Department, ~~and/or~~ state agencies, and federal agencies~~, and standing items~~. Public requests for agenda items must be made to the Commission and subsequently referred to the ~~appropriate committee~~ Wildlife Resources Committee.

Agenda items to be considered for the year will be adjusted based on urgency, need, and interest as determined by the Commission. Findings and recommendations will be made to the Commission for possible action by the ~~two chairs~~ Wildlife Resources Committee. If the Wildlife Resources Committee has two members, any finding or recommendation it makes must be unanimous.

(F) All Wildlife Resources Committee meetings ~~of committees~~ shall be noticed at least 10 days prior to the meetings. Meeting agendas will be noticed on the Commission's website and distributed electronically.

(G) Commission staff will secure appropriate meeting venues for Wildlife Resources Committee meetings with preference given to those that are provided free of charge. Meetings will be run by at least one of the Wildlife Resources Committee members or the designee, ~~two chairs~~ and facilitated by Commission staff.

(H) ~~In general~~ Unless specific conditions dictate otherwise, meetings will be structured to provide participants opportunities to engage in detailed discussions with Commission staff, Department staff, the presenter (if applicable), and stakeholders. ~~Meetings~~ The Wildlife Resources Committee will strive to provide an informal setting at its meetings, where all participants will have an opportunity to provide input into the conversation. However, if required, the ~~chairs~~ Wildlife Resource Committee retains the option to apply a more structured setting whereby discussion and public comment are governed by speaker cards and time limits.

(I) Non-~~chair~~ member Commissioners may attend Wildlife Resource Ccommittee meetings, however, they are expressly prohibited from participating in anything other than an observational capacity. Non-member Commissioners shall not make any comment, either directly or indirectly, during a Wildlife Resources Committee meeting.

(J) Commission staff shall prepare a ~~M~~meeting ~~S~~summary following each Wildlife Resources Committee meeting that summarizes the main discussion points and any recommendations developed by the Wildlife Resources Committee ~~committee chairs~~. Draft meeting summaries shall be provided to the Department and Wildlife Resources Committee ~~committee chairs~~ prior to finalization for review and comment. The final meeting summary shall be posted on the Commission's website and serve as the formal record of the meeting. Any recommendations developed by a committee shall be clearly

identified in the meeting summary and presented to the Commission for consideration at a future Commission meeting.

(K) Wildlife Resources Committee meetings shall be audio recorded. Wildlife Resource Commission meetings ~~may~~ shall be ~~taped~~ video recorded and broadcast on the internet ~~at the discretion of~~ unless the Commission ~~and available~~ makes a specific finding that, as to a specific fiscal year, funding is not reasonably available for video recording. This provision does not in any way inhibit any right that members of the public have concerning the use of a recording device to record public meetings of a state body.

Furthermore, the following provisions, drafted by the Petitioner, should also be included in the new section requested hereby.

(L) A meeting is subject to the Bagley-Keene Act if (a) any portion of the meeting relates to one or more matter within the Commission's jurisdiction, and (b) the meeting is attended (whether in person or otherwise) by all of the following: at least one Wildlife Resources Committee member (or a Wildlife Resources Committee designeee), at least one Department of Fish & Wildlife (the "Department") employee, and at least one person who is neither a member of the Department nor affiliated with the Commission (e.g., non-committee member Commissioners or Commission Staff). This provision only applies to meetings that concern, at least in part, nonmarine wildlife resource issues.

(M) The ability of the public to speak at a Wildlife Resources Committee meeting on a particular item does not preclude a member of the public from attending a later Commission meeting and commenting on that item, or a related item, during the Commission meeting but prior to the Commission taking action on the relevant item.

(N) If the Wildlife Resources Committee has a designee, the name of that designee shall be announced at a Commission meeting prior to that designee acting as the designee of the Wildlife Resources Committee.

(O) The WRC shall strive to adhere to an "equal time" model to the extent practicable, to prevent an unreasonable disparity of non-public Wildlife Resources Committee meetings being granted to specific parties holding disparate viewpoints.

(P) The Wildlife Resources Committee shall not create any sub-committee or other entity without express approval by the full Commission after the Commission has taken public comment on the issue. All subcommittes or similar entities created by Wildlife Resources Committee with Commission approval shall meet only as a part of Wildlife Resources Committee meetings, and all communications between members of these entities shall be treated as public records.

(Q) A log should be kept of all Wildlife Resources Committee-related meetings attended by Wildlife Resources Committee members or the Wildlife Resources Committee designee.

III. JUSTIFICATION FOR THE REQUESTED REGULATORY CHANGES

A. Any Rules Used by and for the WRC Are Regulations, Thus They Must Be Approved through the Proper Regulatory Process

The agenda for the Fish & Game Commission ("Commission") meeting of February 5, 2014, included the following agenda item: "DISCUSSION OF DRAFT POLICY AND PROCEDURES FOR WILDLIFE AND MARINE RESOURCES COMMITTEES" (the "Draft"). A copy of the Draft is available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

The Draft, as written, is a "regulation" under state law. Government Code section 11342.600 states, in its entirety,

> '[r]egulation' means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure.

As used in section 11342.600, the term "state agency" includes every state commission. Gov't Code § 11000. Thus, the Commission is clearly a state agency for the purposes of section 11342.600. Section 11342.600 is in accord with Fish & Game Code section 108, which "requires the commission to adopt rules to govern the business practices and processes of the Commission."[3]

Should the Commission attempt to utilize any rules regarding the operation of the Wildlife Resources Committee without having them adopted via proper regulatory rulemaking, that would violate Government Code section 11340.5(a). That section states:

> No state agency shall issue, utilize, enforce, or attempt to enforce any guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule, which is a regulation as defined in Section 11342.600, unless the guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule has been adopted as a regulation and filed with the Secretary of State pursuant to this chapter.

Case law confirms that the Wildlife Resources Committee would be using illegal "underground regulations" if the Commission allowed the Wildlife Resources Committee to operate by a set of rules that were not properly enacted. *See Engelmann v. State Bd. of Educ.*, 2 Cal. App. 4th 47, 62 (1991) (holding Board of Education was required to go through rule making process found in the Administrative Procedures Act when creating guidelines and manuals for a mutli-level review process used for selecting textbooks that could be used in public schools).

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[3] *See* the Draft, available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf

B. Equal Access and Transparency Interests Will Be Served if the Petition Is Granted

The Petitioner sent a letter to the Commission on April 14, 2014, outlining why the Wildlife Resources Committee needed rules adopted pursuant to the proper regulatory process. A copy of that letter is attached and incorporated by reference. Put simply, that letter outlined the various potential pitfalls related to the draft rules that the Commission circulated earlier this year, rules that, it seemed, the Commission wanted to adopt without adhering to the proper regulatory process. Because three months have passed since that letter and the July 28, 2014, meeting of the Wildlife Resources Committee is being held without any binding rules or regulations, the Petitioner is now forced to make this formal demand that the lack of regulations be addressed.

Indeed, to prevent any possible argument that a Commission decision was made as the result of a fault in the undefined Wildlife Resources Committee public comment process in place as of July 28, 2014, the Petitioner strongly suggests that the Wildlife Resources Committee not make any final decisions or recommendations at that meeting.

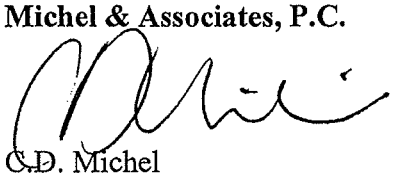
IV. THE COMMISSION HAS THE LEGAL AUTHORITY TO ADOPT THE REQUESTED REGULATORY CHANGES

Section 108 of the Fish and Game Code requires the commission to adopt rules to govern the business practices and processes of the Commission. Thus, the regulations sought hereby are clearly within the Commission's regulatory authority. *See also* Gov't Code § 11340.6 ("any interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation").

V. CONCLUSION

For the reasons stated herein, this Petition should be granted.

Sincerely,
Michel & Associates, P.C.



C.D. Michel

cc:
cc: Senior Assistant Attorney General Christopher Ames
(Christopher.ames@doj.ca.gov)

enc:
Letter of April 14, 2014

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Thursday, August 6, 2015

California Fish and Game Commission
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sonke.mastrup@fgc.ca.gov

RE: Daniel Yoakum & HEOK Experimental Seal Exclusion Net

Dear Mr. Mastrup:

This past Tuesday Daniel Yoakum gave a presentation to the Commission on the subject of his request for permission to use an HEOK Experimental Seal Exclusion Net for the upcoming fishing season in the San Francisco Bay. HEOK refers to „herring eggs on kelp“ fishing under Title 14, California Code of Regulations, Section 164.

First, let me say that there is nothing new or experimental about a predator exclusion net. It is a common practice in Canadian HEOK fishing. See the following publication at p. 124 at http://www.dfo-mpo.gc.ca/Library/351581.pdf.

> Fisheries and Oceans Canada
> Pacific Region Integrated Fisheries Management Plan, Pacific Herring,
> November 7, 2013, to November 6, 2014, at page 124
> Appendix 10 – Commercial Plan for Special Use Herring
>
> > „4.4.4 Predator Deterrence
> > „• The following standards for bird net and predator net systems were piloted during the 2010/11 season and will continue for 2012/13:
> > „• Impoundments that employ a predator deterrence system must meet the following conditions:
> > „• A bird net consisting of contiguous netting with a maximum mesh size of 50 mm by 50 mm (2 inch by 2 inch). The bird net must be pulled tight across the frame of the impoundment.
> > „• A predator net consisting of contiguous netting with a maximum mesh size of 25 mm. The predator net must surround the webbing of the impoundment completely, maintain a space of at least 30 cm (12 inches) between the predator net and the webbing, and maintain a minimum of 3 m (9 feet) above the substrate under the enclosure at all times.

At the Commission meeting there was also discussion of Mr. Yoakum’s being the subject of a misdemeanor trial in Marin County Superior Court next month: Case 188636E. In that connection, let me be candid with you, since I am Mr. Yoakum’s defense counsel. The Commission has a competitor, and it is not Canada. The Marin County Superior Court has re-

written the Commission's regulations. That is, the Court re-defined HEOK fishing to mean "when the tackle hits the water" [verbatim].[1] Because the court system operates independently of the Commission, the courts are allowed to ignore the Commission's definitions. See, for example, the 1974 Attorney General Opinion at 58 Ops. Cal. Atty. Gen. 311 [Opinion No. CR 74-6].

Mr. Yoakum had raised the question as to when precisely must one post signs and lights and so on during a HEOK fishery. According to the Marin Court, a game warden can make an arrest when the smallest piece of kelp touches the water. The record shows that the DFG officer, Ian Bearry, who arrested Mr. Yoakum on February 20, 2014, never used such rules in defining HEOK fishing.

The rules of other jurisdictions do not support „when the tackle hits the water". Alaska's published rules are the exact opposite of the Marin Court and are in the public domain at http://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2013.01.pdf, as follows:

> Regional Information Report No. 1J13-01
> 2013 Southeast Alaska Herring Spawn-On-Kelp Pound Fishery Management Plan by
> Dave Gordon, Dave Harris, Troy Thynes, and Scott Walker
> March 2013
> Alaska Department of Fish and Game
> Division of Commercial Fisheries
> Pages 7 - 9
> Units of Gear
>
>> „For the purpose of this fishery, a closed pound is considered to be *fishing* once herring have been introduced into the closed pound structure; a closed pound is considered to have *stopped fishing* once all of the herring have been released and all spawn-on-kelp product has been removed from the closed pound structure. For the purpose of this fishery, an open pound is considered to be *fishing* once kelp has been attached to the open pound structure; an open pound is considered to have *stopped fishing* once the entire spawn-on-kelp product has been removed from the open pound structure."

The regulations for Canada, the Oregon Administrative Rules [§§ 635-004-200 ff.], and the Washington Administrative Code [§§ 220-49-063, 220-49-064] have nothing that supports "when the tackle hits the water".

The big question is whether the Commission or Department disagrees with the Marin Court's definition of "when the tackle hit the water" for Title 14, California Code of Regulations, Section 164 and the HEOK Experimental Seal Exclusion Net.

Because Daniel Yoakum and his HEOK Experimental Seal Exclusion Net are under the Commission's review, we are asking that a spokesperson for the Commission or Department

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[1] Please note that in the attachment the Marin County Appellate Division backed off from „tackle hits the water" and chose softer wording: „when the tackle is placed in the water": case CV1501504.

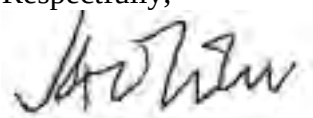
state simply „yes“ or „no“ as to whether „tackle hits the water“ defines HEOK fishing in California.

Can you do this? If the answer is „no,“ then the HEOK Experimental Seal Exclusion Net is a viable proposal and should be approved as it would be in Canada.

I will be happy to keep you informed about HEOK rulemaking developments in the courts.

Thank you for your early attention to this request.

Respectfully,



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FILED

MAY 11 2015

KIM TURNER, Court Executive Officer
MARIN COUNTY SUPERIOR COURT
By: D. Taylor, Deputy

APPELLATE DIVISION
SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF MARIN

DANIEL HUEBURNE YOAKUM, Petitioner, vs. SUPERIOR COURT OF THE COUNTY OF MARIN, Respondent.	Action No.: CV1501504 (Reference: CR188636E) ORDER DENYING PETITION FOR WRIT OF MANDATE AND LIFTING STAY

Petitioner DANIEL HUELBURNE YOAKUM (hereinafter, "Petitioner") has filed this petition for a writ of mandate, contending that Respondent Court's order of April 23, 2015, denying his motion to dismiss on constitutional grounds, was incorrect.

The factual basis of Petitioner's motion is as follows. Petitioner was charged with a violation of 14 CCR 164(j)(1) (illegal method of take for herring eggs on kelp [line marking requirements]) in a First Amended Complaint which alleges that Petitioner unlawfully took herring eggs on kelp for a commercial purpose with lines that were not marked at the beginning and the end with a light that may be seen for at least a distance of 100 yards, and were not further identified with the herring-eggs-on-kelp permit number in 14 inch high, two inch wide black Roman alphabet letters and Arabic numerals painted on a white background permanently affixed in the line. The First

Amended Complaint charges this violation of 14 CCR 164(j)(1) as a misdemeanor under the authority of Fish and Game Code §12000.

On April 20, 2015, Petitioner herein filed a "Constitutional Challenge to 14 CCR 164(j)(1); Violation of Procedural Due Process" in CR 188636E. In that challenge, Petitioner argued that the statute and regulation are unconstitutionally vague, in that (1) a person of common intelligence must speculate as to when "fishing" begins within the meaning of 14 CCR 164(j)(1),[1] and (2) the regulation vests a Fish and Game officer with arbitrary discretion to determine when "fishing" is taking place in violation of the regulation.

The trial court denied the Petitioner's motion to dismiss, stating that the regulation was not vague and that the act of "fishing" begins when the tackle is placed in the water.

This petition followed. In it, for the first time Petitioner elaborates on his procedural due process argument, apparently arguing that Petitioner had a constitutional right to a permit revocation hearing before criminal charges could be filed against him.

This court agrees with the trial court's analysis and conclusions. Petitioner has the burden of proving the unconstitutionality of 14 CCR 164(j)(1) and of Fish and Game Code §12000 (Brown v. Superior Court (1971) 5 Cal.3d 509, 520). He has not succeeded in doing so.

In arguing that Petitioner (and others similarly situated) must guess as his peril as to what is meant by the term "fishing" in the statutory scheme, Petitioner relies on a New Jersey case which held that "presence and possession" of an operable firearm is not "hunting" in New Jersey (State v. Bradley (2004) 375 N.J. Super. 24; 855 A.2d 242). That case does not help Petitioner. The regulation in question does not prohibit *possession* of fishing equipment; it prohibits *using* the fishing equipment in a fashion which violates the regulation.

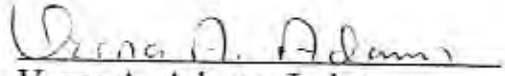
[1] The term "fishing" is defined in 14 CCR 164(e)(1) as "the act of suspending giant kelp [*Macrocystis pyrifera*] for the purpose of taking herring eggs, and/or the subsequent act of removing herring eggs on kelp from the water for the purposes of transport or harvest."

Petitioner does not provide sufficient support for his allegation that the regulation in question encourages law enforcement to act arbitrarily, or permits them to do so.

Finally, nothing in the Fish and Game Code, nor regulations adopted pursuant to it give a person who is accused of violating either the right to insist on a civil hearing before being cited for violation of the statute and regulations.

For the foregoing reasons, the Petition for a Writ of Mandate is denied and this court's stay order of April 27, 2015 is lifted. CR188636E is set in Department M on May 29, 2015 at 9:00 A.M., and that date will remain as set.

Dated: 5-11-15



Verna A. Adams, Judge

STATE OF CALIFORNIA)
COUNTY OF MARIN)

Action No. CIV 1501504
Related No. CR188636E

(PROOF OF SERVICE BY MAIL - 1013a, 2015.5 C.C.P.)

I am an employee of the County of Marin and am over the age of eighteen years and not a party to the within above-entitled action. My business address is Civic Center, Hall of Justice, San Rafael, CA 94903. On May 11, 2015, I served the within ORDER DENYING PETITION FOR WRIT OF MANDATE AND LIFTING STAY to all interested parties, by placing a true copy thereof enclosed in a sealed envelope with postage thereon fully prepaid, in the United States Post Office mail box at San Rafael, CA, addressed as follows:

Ilson New (SBN 31983) 601 Van Ness Avenue, #E326 San Francisco, CA 94102	Luke B. Leichty (SBN 300434) Deputy District Attorney Marin County District Attorney's Office 3501 Civic Center Drive, Room 130 San Rafael, CA 94903
Commissioner, California Department of Fish and Game P. O. Box 944209 Sacramento, CA 94244	

I certify (or declare), under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

KIM TURNER
Court Executive Officer

Dated: May 11, 2015

By: _____
Diane Taylor, Deputy Clerk

ATCC
AL TAUCHER CONSERVATION COALITION

U.S. SPORTSMEN'S ALLIANCE

September 8, 2015

The Honorable Jack Baylis, President

California Fish and Game Commission

1416 Ninth Street, Suite 1320

Sacramento, CA 95814

RE: Predator Working Group Participant Selection

Dear President Baylis:

The United States Sportsmen's Alliance ("USSA") is a national organization dedicated to the protection and promotion of America's sporting pursuits. For nearly forty years, USSA has sought to reinforce the role of hunters, fishermen, and trappers in the furtherance of the North American Wildlife Management model, and partners with the Al Taucher Conservation Coalition ("ATCC") to promote conservation efforts here in California. ATCC is an organization comprised of more than 27 state and national conservation, union, and volunteer organizations, and represents the interests of more than one million Californians who contribute over 3.6 billion dollars to California's growing economy.

ATCC is formally seeking clarification of actions the Commission recently took at the Commission's 5-AUG-15 meeting in Fortuna whereby individuals were publicly appointed to the Predator Policy working group ("PWG"). These appointments appear to be in stark conflict with the protocol the Commission previously set forth whereby parties interested in participating in the PWG could submit their applications in response to the Commission's solicitation, and then be selected according to their qualifications the Commission set forth after an application period of thirty days.

The California Fish and Game Commission is tasked with a very important role in conserving California's natural resources and safeguarding the ability of all Californians to recreate in Nature according to the dictates of their conscience, and as with any action that could potentially impact communities of Californians, our state's flora and fauna, agricultural enterprises, and recreational opportunities, it is

ATCC
AL TAUCHER CONSERVATION COALITION

U.S. SPORTSMEN'S ALLIANCE

of paramount importance that the Commission establish and adhere to a well-defined process of involving stakeholder and public input. As you know, ATCC has been supportive of the effort to establish policies by which to guide the activities of the Wildlife Resources Committee ("WRC"), so it is concerning to our member organizations that the process has not been observed in this case; doing so only serves to further alienate and disenfranchise public input and invites distrust and antagonism to the governance of our state's natural resources and those tasked with setting forth policy.

I look forward to the Commission's prompt response to my concerns.

Sincerely,

Michael Flores
Al Taucher Conservation Coalition

From:	Diane Pleschner-Steele
To:	Jack Baylis
Cc:	Mastrup, Sonke@FGC; Ashcraft, Susan@FGC; Charlton Bonham; Shuman, Craig@Wildlife
Subject:	Fwd: Congratulations!!
Date:	Tuesday, August 11, 2015 1:20:16 PM
Attachments:	2013_CA Wetfish Statement of Importance.pdf CPS_infographic-larger.pdf CA Squid Marketing Summary.pdf SavingSeaFood - D.B. PLE...ifornia Squid Marketing".pdf

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Hi President Baylis (Jack) et al,
I'm sorry I was unable to attend the Fortuna Commission meeting in person to welcome Commissioners Williams and Sklar, and congratulate them on their appointment to the Marine Resources Committee. I would greatly appreciate it if you and Commission staff can forward this note to them both, as well as Commission members Jacque Hostler-Carmesin and Jim Kellogg.

I did watch the meeting online (at least the parts that I could — due to technical difficulties the feed was interrupted frequently).
I reviewed the archive this morning, with particular interest in Ken Bates' testimony again on the squid FMP and your comments. The conversation was remarkably similar to earlier discussions, and so I'm forwarding again the email that I sent to you following the February meeting because my comments are still relevant, and this information is important to consider as the Commission moves forward. This information may be particularly useful for the new commissioners, who are new to these issues.

I would greatly appreciate your review of my earlier email, and with particular reference to your comments again about "fresh" squid and the percentage of squid exported. For the benefit of the new commissioners I'm also attaching a backgrounder on California's historic wetfish industry and CWPA, and an info graphic that summarizes the importance of this industry to California.

As you noted in your comments, market squid is among California's largest, most valuable fisheries. Squid is also the economic driver of our wetfish industry, the foundation of California's fishing economy. In the ongoing discussion over how to provide for sustainable fishing communities, it will be critically important to acknowledge and protect the financial investment that the wetfish industry has made already, and the benefits this fishery contributes to California, supporting fishing infrastructure, the economy itself and, through CWPA, collaborative research.

On that topic, as I mentioned in my February email, our squid research program is gaining valuable insight into squid behavior, in cooperation with both the Department and Southwest Fishery Science Center, and we would love the opportunity to present an update to the MRC and Commission at an appropriate time. Please point me in the proper direction re: the process for securing time on the agenda.

I'll look forward to working with you and the Commission, and particularly to meeting the new Commissioners, new members of the MRC, re: further discussion on these issues.

All the best,
d.

Diane Pleschner-Steele
Executive Director
California Wetfish
Producers Association
805.693.5430
Fax: 805.686.9312
PO Box 1951
Buellton, CA 93427

[redacted]
[redacted]

Begin forwarded message:

From: Diane Pleschner-Steele <[redacted]>
Subject: Congratulations!!
Date: February 11, 2015 at 6:53:47 PM PST
To: Jack Baylis [redacted]

Hi President Baylis (Jack),
Congratulations on your appointment as new Commission president!! Thank you also for your ongoing special interest in the squid fishery. I watched the meeting online today and paid close attention to Commissioners' comments on your desire to support sustainable harbor communities. I also watched the testimony and read the written comments from the fishermen who are seeking the three experimental squid permits. Their pleas are compelling.

When I was writing features for Pacific Fishing and other magazines many years ago (in my earlier life), I spent a lot of time in northern CA. I trolled for salmon with my husband out of Noyo Harbor, and we wintered over up there one year in the 1980s when he was diving sea urchins, so I'm well aware of the harbor culture. That harbor sustained itself on a seasonal mix of salmon, Dungeness crab, pink shrimp and groundfish, especially blackcod and rockfish, and sea urchins also became an important fishery. The cuts in groundfish quotas and buyback of many of the draggers in N.CA. really impacted not only Ft. Bragg/Noyo, but also Eureka and Crescent City. In those days groundfish was the year-round volume fishery complex that really supported the infrastructure, along with salmon in summer, Dungeness in winter, and sea urchins.

I think it's safe to say that we all are interested in sustaining vibrant harbor communities in California — and that includes Half Moon Bay, Monterey, Moss Landing, Ventura, Port Hueneme, San Pedro — all of which rely on market squid to maintain infrastructure and economic vitality over time. it's important to view the "big picture" in ongoing discussions, in my opinion. As you're aware, and as we discussed over lunch in the family dining room at State Fish Company in San Pedro in

December 2013 — more than a year ago (good grief! time flies!!), market squid is the economic driver of California's historic wetfish industry, and protecting this fishery is essential too, as it represents the lion's share of California's fishing economy.

I heard two issues emerge from today's discussion: first was the urgency of the fishermen who want experimental squid permits ASAP, soon enough to fish this season. The overarching issue, however, is the big picture look at sustaining fishing communities as a whole.

In that regard, the wetfish fisheries have always relied on a complex of fisheries, with squid the most important when it's available. Wetfish fishermen understand the dynamics of all the coastal pelagic (CPS) stocks — we've had an amazing period of high squid productivity over the past few years, but as our research is now showing, that cycle is changing. We're again facing El Niño conditions in S.CA. this year, which we believe contributed to the superabundance of squid in Monterey and northern CA last season. But when the "real" El Niño hits, still predicted for later this year and into next spring, squid typically take a hike altogether.
Long story short, a sustainable harbor, whether it's Eureka, Noyo, Monterey or San Pedro, needs more than one highly dynamic stock to keep the ice plants and fuel docks open.

I will look forward to further discussion on the big picture issue of sustainable harbor communities. I"ll be bringing these issues to the CWPA Board prior to the MRC meeting in March, and I hope we can offer some ideas on how to help achieve long-term goals.

Meantime, I would appreciate the opportunity to talk to you further about a couple of things that I heard you say with regard to marketing local "fresh" squid. You quoted an estimate from some source that more than 90 percent of CA squid is exported. Perhaps you'll recall the presentation that I made when this topic came up at a Commission meeting some time ago — based on a poll of processors at that time, I estimated that close to 30 percent of our squid harvest is consumed here in the domestic market, whether processed here (at double the cost) or exported for cleaning and reimported.
The two key points that I learned in my survey: except for a very small volume that goes to ethnic markets primarily in LA and SF, the overwhelming preference in the local market is for cleaned squid — and because squid's shelf life in fresh state is only a couple of days with impeccable handling, freshness is preserved by flash freezing the squid as quickly as possible. I'm attaching FYI my earlier presentation, along with a piece that we published in response to an op ed in the LA Times by Paul Greenberg, who got a few things wrong…

I also wanted to let you know that our squid research is providing some fascinating insights into squid behavior. We received a small contract from the SW Fisheries Science Center last summer to extend our surveys into Monterey, as far north as Half Moon Bay. We ran two surveys last summer and just completed a third survey in Monterey in January. We will be able to repeat the Monterey cruises again this year, in addition to

our core surveys in the S.CA. Bight. We would love to present an update to the Commission at an appropriate time later this year (after our summer survey would be best timing for us). Please point me in the proper direction to learn the process for securing time on the agenda.

Thanks again for your dedication to marine resources (all resources) and your interest in the squid fishery. And again, Congratulations!! I'll look forward to working with you and the other Commissioners on emerging fishery issues.

All the best,
d.

Diane Pleschner-Steele
Executive Director
California Wetfish
Producers Association
805.693.5430
Fax: 805.686.9312
PO Box 1951
Buellton, CA 93427

[redacted]

California Market Squid Marketing 101

A summary of global and domestic market data

CA Squid Market Overview

- CA squid is one of more than 300 known squid species distributed throughout most of the world's oceans
  - Ranked as one of the smaller species
  - Mantle length typically 2/4 inch vs. 3/5, 4/6 or 5/8 etc.

- Compared to other squids, CA squid (*L. opalescens*) is thin-walled: "a smaller squid with smaller diameter rings and thinner walls, it does not have the same 'wow' in fried or antipasto preparations. It does not work as well for stuffed preparations either. Also it does not have the same bite and is more easily over cooked. "

- The overall preference in U.S. is NOT for California squid. There are many different types of squid available in the market from East coast / Peru/ Falkland islands/ Asia.
  - ALL have thicker mantles and larger size rings, making them more desirable in the market.

- All that said, CA squid is absolutely wonderful IF prepared properly

- Each species has its own characteristics that different markets favor.

Squid Imports … for context

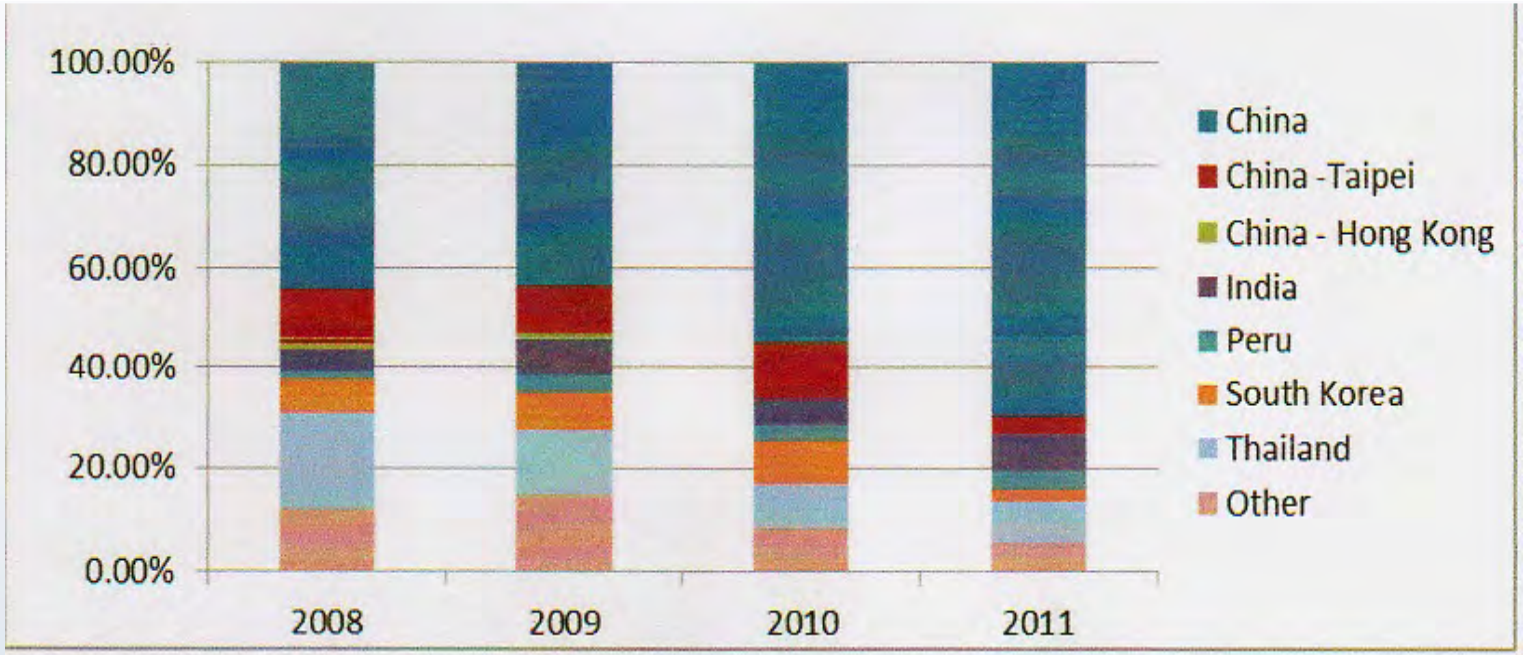


Figure 4. U.S. Squid Imports By Country, 2008-2011 (Data from NMFS 2012)

- China accounts for about 25% of global oceanic squid production, and constitutes more than half of U.S. squid imports
- India accounts for about 3% of global squid production (2010) and makes up 5-7% of U.S. squid imports
- Thailand accounts for about 3% of global squid production (2010) and contributes about 8% of U.S. squid imports.

Volume of imported squids

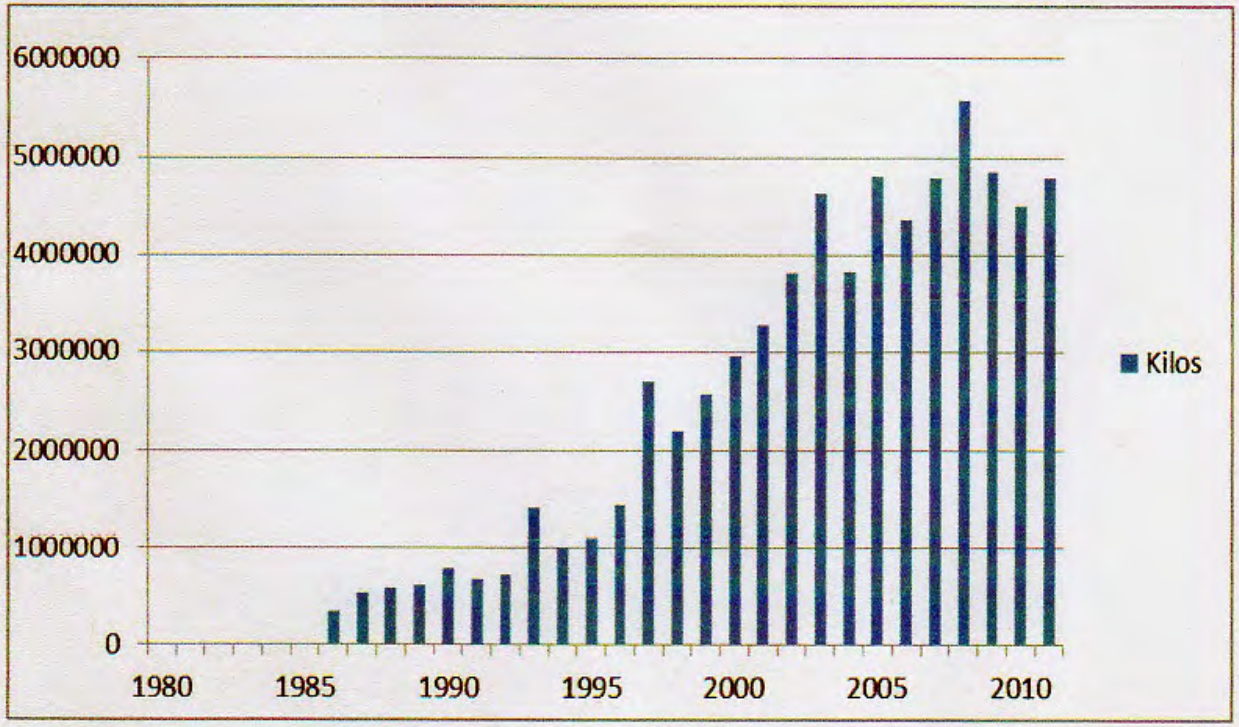


Figure 3. Total U.S. Squid Imports 1980 – 2011 (Data from NMFS 2012)

- Global cephalopod fisheries average about 3 million mt annually (4% of world fish trade)
- In 2013, the U.S. imported 16,583,048 kilos of squids – of which 6,579,403 kilos were Loligo NSPF or L. opalescens (70% from Asia – 53% from China)

CA Squid in a Global Market

- CA squid fishery is 5th largest in U.S. by weight, also CA's most valuable fishery (in non-El Niño years)
- Average annual landings 2010-13 (prelim): 125,738 st (114,069 mt)
  - Vs. global production of squids (cephalopods) 3 ,652, 632 mt (FAO 2010)
- Exports = @70% of total CA squid landings
  - Example: 2010 exports were 92,559 mt (70.7% of total landings)
  - Valued at $107 million and reached 42 countries (Sweetnam 2011)
- Domestic market sales generally to restaurants, ethnic (Asian, Mediterranean) fresh fish markets (small volume) or for use as bait (PFMC 2011)

CA Squid in Domestic Market

- **Fresh sales**
  - Seasonal – squid is typically available fresh in Monterey during summer months (Apr-Nov) and in S.CA. during winter months (Oct-Mar)
  - ***Highly unusual*** for squid to be available in both areas simultaneously
  - Fresh demand = very small volume (@5 tons/wk total) delivered via truck to Asian and Mediterranean specialty markets primarily in San Francisco and Los Angeles
- Fresh squid is highly perishable!
  - Only approx. 2 day shelf life with perfect handling
- Most restaurant/retail markets prefer FROZEN, CLEANED squid

CA Squid in Domestic Market – 2

- **Frozen processing**
  - Many CA processors produce consumer packs, i.e. 1 lb, 3 lb, 5 lb, whole frozen squid for domestic market
  - **"Fresher frozen" whole CA squid is available yearlong in domestic markets**
- Most markets prefer FROZEN, CLEANED squid
  - Some CA processors produce cleaned squid for local markets
    - 1)small volume of customers want California
    - 2) processors keep skilled crews working – but all and all –not a moneymaker
  - Some California squid is exported to Asia and reimported as cleaned squid – round trip freight cost around $0.10 lb labor in Asia $7./00 per **day** vs. Californian wages with tax / insurance/health around $12./+ per **hour.**

CA Squid in Domestic Market – 3

- **Competition with Imported Squid**
  - Frozen CLEANED squid imported from China / Asia costs about $1.60 / $1.80 per pound (container quantity)
    - Handling through the distribution chain may add to this cost
  - Cost to clean squid in CA
  - Close to $3/lb. (and squid is still smaller than desired)
    - Example: Sales price of CA squid at $1,800 per metric ton
      - 50% yield in cleaning process
      - Net cost of squid = $1.63/lb just for the product BEFORE adding any labor cost at $12.+ per hour
- Market research has shown that high-end retail / restaurant markets will pay "a little more" for CA seafood
- **But most markets are not willing to pay double**!

CA Squid Marketing Summary

- CA squid competes in a global marketplace
  - Squid is priced by size and most is 3/5, 5/8 inch. Loligo opalescens (CA squid) are typically smaller, i.e. 2/4.
  - There are also Illex (Atlantic) and Todorodus (Japan) in this market
  - **"Fresher frozen" whole CA squid is available yearlong in domestic markets**
- Most markets prefer FROZEN, CLEANED squid
  - CA processors would produce more cleaned squid IF:
    - Local markets would be willing to pay the added cost
    - More domestic markets would prefer CA squid over larger, meater product (now CA squid is 'good alternative' if other squids are not available)

A final word…

- CA squid is economic driver of wetfish industry and wetfish industry is foundation of CA's fishing economy
  - Volume supports infrastructure in numerous harbor communities
- CA squid seine fleet is among the most efficient in world
  - Produces 2,000 pounds of protein for 6 gallons of diesel
  - Lowest carbon footprint, even exporting squid for cleaning
- Strong La Niña conditions present in past few years have abated
  - In most years the squid fishery does not close.

CALIFORNIA WETFISH PRODUCERS ASSOCIATION
PO Box 1951 • Buellton, CA 93427 • Office: (805) 693-5430 • Mobile: (805) 350-3231 • Fax: (805) 686-9312 • www.californiawetfish.org

Representing California's Historic Fishery

Visit www.CaliforniaWetfish.org for more information

BACKGROUNDER 2013

CALIFORNIA'S WETFISH INDUSTRY
A TRADITIONAL INDUSTRY WITH A CONTEMPORARY OUTLOOK

California's fishing industry was built largely on 'wetfish', so called because historically the fish were canned 'wet from the sea', with minimal preprocessing. Sardines, mackerel, anchovy and market squid {now called coastal pelagic species} have contributed the lion's share of California's commercial seafood harvest since before the turn of the 20th century. California's wetfish industry was founded by immigrant fishermen, and the enterprise of these fishing families helped to build the ports of Monterey and San Pedro, as well as San Diego and San Francisco. Today's wetfish industry is a traditional industry with a contemporary outlook: streamlined and more efficient but still peopled by fourth and fifth-generation fishing families. Today the sons and daughters continue the enterprise begun by their fathers and grandfathers 100 years ago.

In recent years (2010-2012), landings of **coastal pelagic species** {CPS} represented an average **82 percent of the total statewide commercial seafood harvest by volume**, and approximately **37 percent of the dockside value**. Market squid was California's most valuable fishery in two of the three years, contributing more than $206 million in ex-vessel value over the time period. Market squid also is the economic driver of the wetfish industry. Due to squid's ultra short shelf life fresh, processors produce mostly "fresher frozen" squid in retail and restaurant packs to serve local and domestic markets, and squid also represents a significant percentage, both by volume and value, of the Golden State's seafood exports.

Coastal pelagic species are among California's most important seafood exports. In a state that imports close to 90 percent of its seafood, California's wetfish complex contributes importantly to the Golden State's fishing economy, and in addition, helps substantially to offset the seafood trade imbalance.

Major Wetfish Exports – 2011	**150,202,828 kilos**	**$195,418,835**
Total CA {2011 export values}	186,859,917 kilos	$402,700,721
% All Wetfish	**80.4%**	**48.5%**
% Squid	**69.6% by weight**	**44.3% by export value**

Transformed from its storied beginnings, California's wetfish industry today remains an essential part of California's fishing heritage and culture, as well as a key contributor to California's economy.

ECONOMIC IMPORTANCE TO THE STATE OF CALIFORNIA

Coastal pelagic species comprise the foundation of many harbor communities; the volume crossing the dock is critically important to maintain harbor infrastructure and dockside employment.

Port	2011 Wetfish % of Total Port Landings	2011 Wetfish % of Total Port XV Value
Monterey Harbor	97.5%	76.3%
Moss Landing	96.2%	66.3%
Ventura	98.7%	82% (squid)
Port Hueneme	99.9%	99.9%
San Pedro	99.6%	93.4%
Terminal Island	97.7%	81.4%
2010-2012 Contribution to Statewide Landings	**82%**	**37%**

The CPS complex represents the lion's share of fishery revenue paid to the Department of Fish and Wildlife.
Over the past decade the wetfish industry has contributed close to $20 million in landing taxes and license fees to harvest coastal pelagic species.

Market squid fishing permit fees are the highest of any fishery in California; transferable vessel and brail permits cost $2,721 in 2013, while light boat permits cost. $821.50. In 2013 the market squid fleet numbered 152 vessels in all, including 66 transferable vessel permits, 8 non-transferable vessel permits, and 44 brail permits. In addition, there were 31 light boat permits, which assist the fleet in locating and aggregating squid, but are not allowed to catch squid themselves. Not all vessels are active during the fishing season.

THE WETFISH FLEET:

CPS finfish species are typically harvested with round-haul nets (purse seine, drum seine, lampara). CPS finfish are managed under the federal CPS Fishery Management Plan. California's CPS fleet operates under a federal limited entry program with **65 transferable permits** issued (62 are currently active). Vessels range in size from approximately 30-90 feet in length and 20-140 gross registered tons in capacity. Purse seine vessels require **5-8 crewmen** to operate, including the skipper.

Market squid, a monitored species under the CPS FMP, is actively managed by the State of California under the Market Squid Fishery Management Plan. A state limited entry program was established in 2004, sharply reducing fleet size from more than 160 vessel permits to **77 transferable purse seine vessel permits** (66 purchased permits in 2013).. Approximately **45-50 of the squid vessels also maintain CPS finfish permits** (on the same vessel) and fish for both squid and CPS species, depending on season and availability.

California's wetfish fleet is one of the "greenest" fleets in the world, with one of the lowest CO_2 footprints, according to studies by internationally acclaimed scientists Tyedmers, Hilborn and Parrish. This is due to the fleet's operational profile: the efficiency of harvesting a volume of high-quality seafood close to port. This fleet uses only 6.8 gallons of diesel to produce one ton (2,000 pounds) of protein, on average, based on harvest and fuel consumption data derived from a cross-section of wetfish vessels. Even adding greenhouse gas (GHG) emissions produced by processing / shipping, California's wetfish fleet still excels, as long-haul shipping has the lowest emissions of any mode of transport. Compare this ratio to groundfish trawl at 114 gallons per ton of seafood, or beef at 333.9 gallons per ton. This efficiency will become increasingly important in the future, as the world becomes more aware of the looming crisis caused by climate change and ocean acidification.

THE MARKETS:

Wetfish processing is concentrated in about **10-12 family-owned companies**, most of whom have operated in Monterey, San Pedro or points in-between for decades, and generations. **Each company employs 30 to more than 450 permanent employees,** who process and pack wetfish in myriad forms for domestic consumption and export to more than 26 countries worldwide.

Excerpt from SOUTHERN CALIFORNIA CPS PROCESSOR COST-EARNINGS REPORT
– THE IMPORTANCE OF SARDINES IN THE SOUTHERN CA CPS FISHERY [2004]

> Overall, the S.CA. sardine/wetfish industry employs between 1,400 and 1,500 workers, including seasonal employees, and the maximum packing capacity is estimated between 1,900 and 2,000 tons per 24-hour day, in aggregate.

Excerpt from MONTEREY REGION CPS PROCESSOR COST-EARNINGS REPORT
– THE IMPORTANCE OF SARDINES IN THE MONTEREY BAY AREA CPS FISHERY [2005]

> Overall, the Monterey Bay area sardine/wetfish industry employs at least 420 workers, including seasonal employees, and the maximum packing capacity is estimated at approximately 1,100 tons per 24-hour day, in aggregate.

In 2013 the City of Monterey commissioned a Fishing Community Sustainability Plan. An economic assessment of the wetfish industry in the Monterey Bay Area projected 720 jobs, including seasonal workers, and packing capacity of 1,400 tons per day.

The wetfish industry is alive and well, in both Monterey and Southern California. Indeed, California's historic wetfish industry is the foundation of California's commercial fishing economy.

THE PORTS:

Monterey and Moss Landing in central California, and **Ventura, Port Hueneme and San Pedro** in southern California, are the primary ports of landing for the wetfish industry. Smaller volumes may also be landed in **San Diego** and **San Francisco**. Since 1982, approximately 10-20 percent of landings have been offloaded in Monterey ports, and 80-90 percent of landings are offloaded in southern California ports, with the major share of those landings offloaded in San Pedro and Terminal Island.

Vessels seine for market squid in Monterey Bay

San Pedro wetfish fleet heads out from port

Wetfish industry leadership established the nonprofit **California Wetfish Producers Association (CWPA)** in 2004. Members include fishermen and processors who produce most of the total statewide wetfish harvest. CWPA's mission includes sponsoring cooperative research to ensure sustainable fisheries and facilitating communications within and outside the wetfish industry.

This industry has heavily invested in research since early times, from the beginnings of the California Cooperative Fishery Investigations (CalCOFI). Today CWPA's cooperative research program continues the tradition, expanding knowledge of market squid and sardine, collaborating with the Department of Fish and Wildlife and Southwest Fishery Science Center.

CALIFORNIA PORTS RELY ON HEALTHY CPS FISHERIES

HALF MOON BAY*
85% of port landings
33.8% of dockside value

MOSS LANDING*
94.4% of port landings
63.9% of dockside value

MONTEREY HARBOR*
88.8% of port landings
44.4% of dockside value

VENTURA*
97% of port landings
71% of dockside value

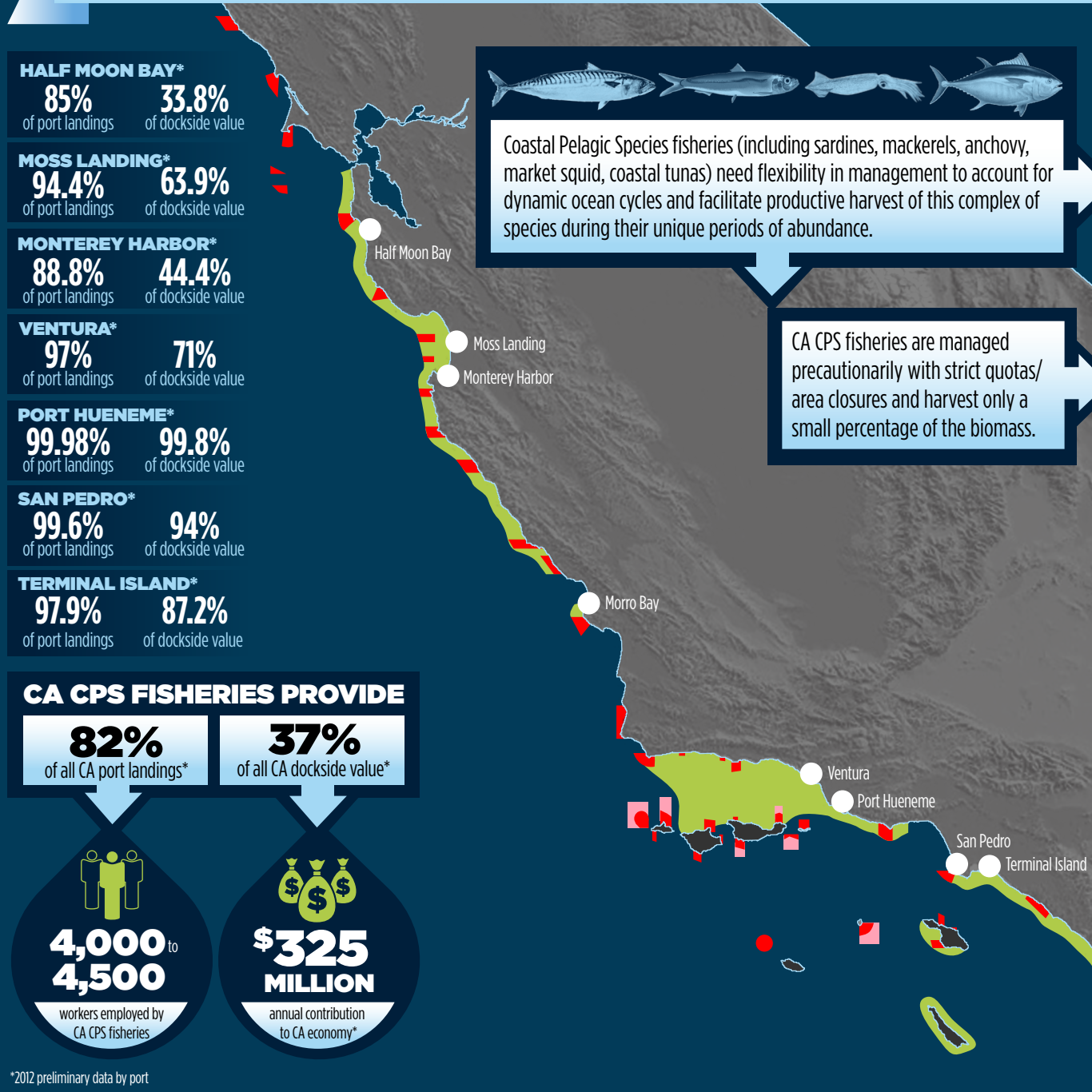
PORT HUENEME*
99.98% of port landings
99.8% of dockside value

SAN PEDRO*
99.6% of port landings
94% of dockside value

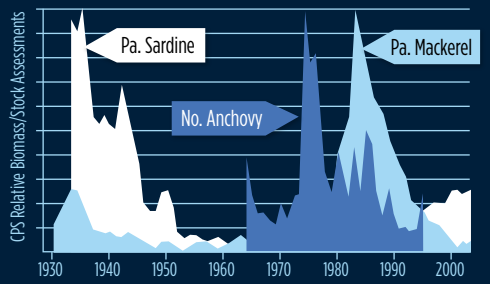
TERMINAL ISLAND*
97.9% of port landings
87.2% of dockside value

Coastal Pelagic Species fisheries (including sardines, mackerels, anchovy, market squid, coastal tunas) need flexibility in management to account for dynamic ocean cycles and facilitate productive harvest of this complex of species during their unique periods of abundance.

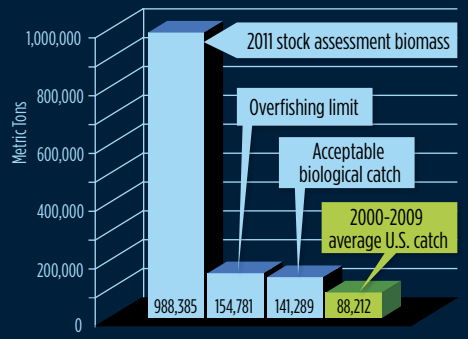
CA CPS fisheries are managed precautionarily with strict quotas/ area closures and harvest only a small percentage of the biomass.



DYNAMIC NATURAL FLUCTUATIONS OF CPS



STRICT SARDINE QUOTAS



LOW CARBON FOOTPRINT

To preserve quality, fishing areas for CA CPS are limited to day trips nearby the ports. This makes CA CPS among the most efficient, "greenest" fisheries in the world - with one of the lowest carbon footprints in the world. For example: CA CPS fisheries on average produce 2,000 pounds of protein for 6 gallons of diesel fuel.

CA CPS FISHERIES PROVIDE

82% of all CA port landings*

37% of all CA dockside value*

4,000 to **4,500** workers employed by CA CPS fisheries

$325 MILLION annual contribution to CA economy*

*2012 preliminary data by port

D.B. PLESCHNER: Some Inconvenient Truths about California Squid Marketing

Greenberg missed the boat on a number of issues, including the overall carbon footprint of seafood, but equally important, the reasons why most of the squid that California exports is consumed overseas!

Read the original Paul Greenberg op-ed in the Los Angeles Times

*August 5, 2014 (**SeafoodNews.com**) -- The following opinion piece appeared today on **SeafoodNews.com**:*

In his op-ed to the Los Angeles Times last week, author Paul Greenberg could have dodged some critical misstatements and inaccuracies about the marketing of California squid - the state's largest catch.

All he had to do was check with local sources, including the California Wetfish Producers Association, which represents the majority of squid processors and fishermen in the Golden State and promotes California squid.

Instead, Greenberg missed the boat on a number of issues, including the overall carbon footprint of seafood, but equally important, the reasons why most of the squid that California exports is consumed overseas!

To set the record straight, here are some inconvenient truths you wouldn't know about squid by reading last week's op-ed:

First, size matters and price rules when it comes to California market squid, which are one of the smallest of more than 300 squid species found worldwide. The U.S. "local" market really prefers larger, "meatier" squid, notwithstanding Greenberg's 'locavore' movement.

Greenberg acknowledged the labor cost to produce cleaned squid in California adds at least $1.50 per pound to the end product. In fact, local production costs double the price of cleaned squid, due to both labor (at least $15 per hour with benefits) and super-sized overhead costs, including workers' comp, electricity, water and myriad other costs of doing business in the Golden State.

Del Mar Seafood is one processor in California that micro-processes cleaned squid at the request of markets like the CSA that Greenberg mentioned. In fact, virtually all California squid processors do the same thing at the request of their customers. But at 1,000 pounds per order, we would need 236,000 CSAs, restaurants or retail markets paying $1.50 more per pound to account for the total harvest. If the demand were there, we'd be filling it!

Greenberg also misconstrued the issue of food miles. Respected researchers like Dr. Peter Tyedmers, from Dalhousie University in Canada, found that transport makes a minor contribution to overall greenhouse gas (GHG) emissions, when considering the carbon footprint of seafood (or land-based foods). Mode of production is far more important.

Here's another surprise: California squid is one of the most efficient fisheries in the world - because a limited fleet harvests a lot of squid within a short distance of processing plants.

Studies show that the California wetfish fleet, including squid, can produce 2,000 pounds of protein for only 6 gallons of diesel. Squid are then flash frozen to preserve freshness and quality. Keep in mind that even with immaculate handling, fresh squid spoil in a few days.

As counterintuitive as it may seem, even with product block-frozen and ocean-shipped to Asia for processing, California's squid fishery is one of the 'greenest' in the world. One recent survey estimated that about 30 percent of California squid is now either processed here or transshipped to Asia for processing (other Asian countries besides China now do the work) and re-imported.

China, although important, is only one export market that craves California squid. With a growing middle class billions strong, Chinese consumers can now afford California squid themselves. Many countries that import California squid prefer the smaller size, and California squid goes to Mediterranean countries as well. In short, most of the squid that California's fishery exports are consumed overseas. Why? The U.S. palate for squid pales in comparison to Asian and European demand.

Also important to understand: California squid is the economic driver of California's wetfish industry - which produces more than 80 percent of the total seafood volume landed in the Golden State. California squid exports also represent close to 70 percent by weight and 44 percent of value of all California seafood exports. Our squid fishery contributes heavily to the Golden State's fishing economy and also helps to offset a growing seafood trade imbalance.

The sad reality is that price really does matter and most California restaurants and retail markets are not willing to pay double for the same - or similar - small squid that they can purchase for half the price.

Nonetheless, we do appreciate Greenberg's pitch for local seafood. Our local industry would be delighted if, as he suggested, all Californians would be willing to pay $1.50 a pound more for California squid. We may be biased, but in our opinion California squid really is the best!

D.B. Pleschner is Executive Director of the California Wetfish Producers Association, a nonprofit designed to promote sustainable wetfish resources.

Print this Page

Close Window

From: Hazel
To: [redacted] FGC
Subject: Urban Coyote Problems in California Communities
Date: Friday, September 11, 2015 9:15:32 PM

Name: Hazel
Email: [redacted]
MESSAGE: Please help us make our neighborhoods safe again. The coyotes are out of control coming in our backyards killing our cats attacking our dogs on lease and off. Killing off all the ducks and geese at El Dorado park. Our children need to be safe. We bought out homes in the city so we didn't have to worry about large wild rabid dogs. Please help us take our city back. When I walk my grandkids over to Stearns park and we have kitty heads and paws laying around..Just how do you explain that to little ones? Thank you for your time.
Location (City or Zip Code): Long Beach, Calif 90815

Time: September 12, 2015 at 4:15 am
IP Address: 100.9.199.226
Contact Form URL: [redacted]
Sent by an unverified visitor to your site.

From: Kimberly Leonard
To: [redacted] FGC
Subject: Urban Coyote Problems in California Communities
Date: Sunday, September 13, 2015 9:53:17 AM

Name: Kimberly Leonard
Email: [redacted]
MESSAGE: The City of Lakewood won't return calls. We are living as prisoners in our own homes. Our pets cant even go to the restroom outside in our own backyard unless we are carrying a bat or something. There is no going to the restroom for the at all one the sin goes down. Coyotes jump the fences to go into our back yards. My son and I have ran into a pack of 7 one night that were hunting by going onto every porch to see what they had. We cant even enjoy the parks or nature trail without a coyote jumping out or finding cat heads or legs strung out everywhere.

School just started and the second day kids were followed by coyotes while walking to school. I can go on and on with gruesome stories but Ill leave it to this for now

Thank you
Location (City or Zip Code): 90713

Time: September 13, 2015 at 4:53 pm
IP Address: 108.0.217.198
Contact Form URL:[redacted]
Sent by an unverified visitor to your site.

From:	Frances LiBrandi
To:	[redacted] FGC
Subject:	Urban Coyote Problems in California Communities
Date:	Sunday, September 13, 2015 4:47:21 PM

Name: Frances LiBrandi
Email: [redacted]
MESSAGE: Stop the madness. Long Beach needs to do something to stop the Coyotes before they start to attack its citizens. Where I live it is a major stopover for Coyotes (Lakewood Village by LBCC).
Location (City or Zip Code): Long Beach, CA 90808

Time: September 13, 2015 at 11:47 pm
IP Address: 108.0.211.84
Contact Form URL: [redacted].
Sent by an unverified visitor to your site.

William Lemos, PH. D.
Post Office Box 944
Mendocino, CA 95460
[redacted]

RECEIVED
CALIFORNIA
FISH AND GAME
COMMISSION
2015 JUN 18 PM 2:23
MLS

15 June 2015

Re: Human Waste and Abalone Collecting

Dear Supporter of a Safe and Healthy Mendocino Coast:

People flock to the North Coast each year during abalone season. They are taking home abalone, urchin, rockfish and kelp, but some are also leaving behind human waste in the form of used toilet paper and feces.

As part of the Mendocino Abalone Watch, I patrol parking lots and coves where abalone divers and rock pickers enter and exit the water. This season I have found widespread evidence of human waste in bushes and trees just beyond the fringes of parking lots.

This disgusting practice must stop.

Obviously, this is a health problem and something needs to be done about it. I suggest initiating the following education and abatement program:

1.) Begin educating the public about where restrooms can be found by posting signs at all popular dive and rock picking spots directing people to the available public restrooms;
2.) During abalone season (April through June and August through November) portable restrooms need to be placed on State Parks properties in the Mendocino area at Caspar South Headlands, Road 500D, Jack Peters Creek, Mendocino Headlands Arch Rock, and Gordon Lane;
3.) Have County deputies, CFW and Parks personnel cite people who are caught contributing to this problem;
4.) With the issue of next year's abalone report card, publish a notice that this practice will not be tolerated and there will be a fine if a person is caught doing so.

Red abalone is a tremendously important resource for the North Coast. Unfortunately, the popularity of this recreational sport does come with a price tag. Please, let's do what we can to eliminate this unacceptable bycatch of this ever-increasingly popular sport.

Respectfully,

William Lemos Ph.D.

William Lemos, PH. D.
Mendocino Abalone Watch

Cc: California Fish and Game Commission
California Department of Fish and Wildlife
California Secretary of Natural Resources
California Sate Parks
Mendocino County Board of Supervisors
Mendocino County Sheriff's Department
Mendocino County Environmental Health Department
Elected Officials in U.S Senate, Congress, Sate Senate, and State Assembly
Mendocino Beacon
Fort Bragg Advocate
Anderson Valley Advertiser
Santa Rosa Press Democrat
Tom Stienstra, SF Chronicle
Mendocino Abalone Watch
Natural Resources Defense Council
Ocean Conservancy

From:	Richard Fox
To:	FGC
Subject:	Fw: blue creek
Date:	Monday, August 17, 2015 3:26:39 PM
Attachments:	The Yurok tribe pushed for several closures that only affect sport anglers including the half mile section around Blue Creek and at the mouth of the river but.docx

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On Monday, August 17, 2015 2:58 PM, Richard Fox [redacted] wrote:

On Monday, August 17, 2015 2:42 PM, Richard Fox [redacted] wrote:

My name is Richard Fox. I am a retired school teacher from Eldorado co. I have fished the Blue creek area the last 15 years and am extremely disappointed in the commissions decision to close this area this year. This is an area that has been fished for over 100 years, and all of a sudden, with no warning, it is closed down. My brothers and I spend close to $4000 a year coming up from the south. I don't understand how anybody could be so asinine as to close an area like blue creek on the word of any individual or group. especially when they, themselves don't have to abide by the closure. After the rule was put into place, the yurok people have been fishing that very spot. That is like the fox(yurok) being left to guard the hen house(blue creek). I listened to the commission in June make some unbelievable statements. One said " let's close it down, and see what happens". What a ridiculous statement, especially after their own wild life dept. suggested otherwise. One also said, "what difference does that one area make, when you have the whole river to fish". Tell that to the Presidents of the USA that have come there just to fish that area. They also mentioned that if it weren't for the fish, there would be no fisherman. There is one more part of that triangle. If there were no fisherman, there would be no F & G commission. We pay for their Job. This whole matter is just plain unbelievable. How a body of appointed officials could screw something up so badly is beyond me. I hope every business run by the said tribe, closes up shop, do to fisherman like us that will not be patronizing their businesses anymore. It is time to fight this illegal transaction with litigation. It is time to recognize it for what it is, a scam. Please inform me if there is anything going on to reverse this illegal action, Richard Fox

The Yurok tribe pushed for several closures that only affect sport anglers including the half mile section around Blue Creek and at the mouth of the river but **none** that would hamper their gillnetting. Funny how the biggest harvesters only want to close sport fishing "to protect the fishery" while they do NOTHING to stop the rape of this fishery by their own tribal gillnets. What a crock as gillnets take 1000s of endangered silver salmon and wild steelhead annually and wiped out the entire sturgeon run on this river in the late 1980s with their gillnets.

But "trust us natives "as we have the "best interest of the salmon in mind". It's our religion, our heritage... yadda yadda yadda. I have spent four decades fishing the Klamath and have seen first hand the pillage and rape of this fishery by those who claim they have some heredity right, tradition or religion to destroy this fishery.

Ever since the gillnets have been allowed the local economy has swirled slowly down the drain. Most of the local markets, restaurants, campgrounds and businesses have closed but we now have a Casino, and once again this year a huge pot raid by the feds on tribal land that was tapped into the local watershed depriving salmon of water. Of course the tribe knew nothing of said grows.

Just my .02

August 19, 2015

The Honorable Eric Sklar Commissioner
California Fish and Game Commission
1416 9th Street, Ste. 1320
Sacramento, CA 95814

Re: Fish and Game Commission Meeting on August 5, 2015. Adoption of Option 2 on the Proposed Bobcat Protection Act Regulations [Amend Sections 478, 478 and 702, Title 14, CCR, Implementation of the Bobcat Protection Act of 2013 (Fish and Game Code Section 4155)]

Dear Commissioner Sklar,

I'm writing this letter in response to your adoption of "Option 2" at the recent Fish and Game Commission meeting in Fortuna on August 5. I had the opportunity to meet you the evening before the meeting at the Eel River Brewing Company Restaurant; I also introduced you to my two oldest children, my 5 year old son and my 3 year old daughter. I was able to speak at the meeting in opposition to options 1 & 2, and I wrote the commission a letter dated July 20, 2015, which became a part of the official packet of the agenda item.

I urge you, and the other commissioners, to reconsider, your adoption of "Option 2". I am most certain the commission can work with the California Trappers Association and Trappers in general, to find a solution to implement AB 1213, which will not result in a statewide ban of bobcat trapping, or an "*essential*" state wide ban (Option 1). There are several compelling reasons to reconsider your decision, the most compelling being that bobcat trapping is (*was*) a winter recreational sport enjoyed by my young family and may other families such as mine, and a consequence of "Option 2" is the loss of my "*non-consumptive use*" of a training utility and winter recreation in the outdoors with my family?

I became involved in trapping so that I could spend time in the outdoors with my family. The memories my 5 year old son and 3 year old daughter have made while on the trap line, or working in the fur shed, are more meaningful to my wife and I than words can explain. In addition to memories, kids who trap with their families learn so much about the outdoors and the animals that inhabit them. These children learn a great appreciation for our bountiful outdoor resources that the kids from urban areas cannot even come close to grasping. Thirdly; the work ethic instilled while trapping is huge. Locating an appropriate place to set the cage, the work involved in preparing a bed and gathering brush for the cage, the daily visits to the cage. And that's the easy stuff!!! If there was a successful catch my kids would spend countless hours with me in the shop preserving and preparing the pelts of the game we harvested. This opportunity to instill a sense of hard work, and reward for your hard work, is now lost thanks to your decision to ban bobcat trapping. In California, where we embrace diversity and tolerance of differing views, doesn't it seem ironic that a few animal rights activist, from the inner cities, urban areas, and far reaches of southern California are dictating the way I live, and recreate with my family in the great outdoors of Siskiyou County?

At the meeting you mentioned you are a hunter, but you eat what you kill, and this puts you on a different playing field than the trappers. Mr. Sklar, I guarantee you, any funds my family earned from bobcat trapping went towards milk, or other groceries, to be consumed by my young children. I certainly hope you meant it when you said you would consider reinstating trapping given the

appropriate circumstances. If bobcat trapping is reinstated I would like to cordially invite you for a day on the trap line, and in the fur shed. I'm certain the experience would be greatly informative for you, and you would positively walk away with a different view on bobcat trapping, and trapping in general. I honestly want to make myself a benefit to the commission, by being available to answer any questions, and offer information and knowledge to the commission, which would help you make better and more informed decisions in the future, relative to trapping.

Sincerely,

Robert Martin 8-19-15

Robert Martin Date

[redacted]

cc: Mr. Sonke Mastrup, Executive Director, California Fish and Game Commission
Commissioner Eric Sklar
Commissioner Jack Bayliss
Commissioner Jim Kellogg
Commissioner Jacque Hostler-Carmesin
Governor Edmund G. Brown, Jr.
Mr. Charlton Bonham, Director, California Department of Fish and Wildlife

From: CatWoman
To: FGC
Subject: THANK YOU!
Date: Friday, August 07, 2015 7:30:32 AM

Thank you so much for the 3 of you who made total prohibition a law. I don't know if this was due to the awareness brought about by the death of Cecil - or if you were already planning to vote this way - but either way, my domestic relatives and I thank you for this prevention of a cruel and un-necessary action.

Diana Gregory
Belmont, CA

From:	Mastrup, Sonke@FGC
To:	FGC
Subject:	FW: Background info.
Date:	Monday, July 13, 2015 8:57:06 PM
Attachments:	ProjectCoyote_letter_PredatorWorkingGroup_Title14_3.5.15.pdf Hopkins Abstract CA F&G Commission 1Apr_15.pdf Hopkins Letters to F&G Comm Banning Trap bobcat 12Feb_15.pdf CAF&GCommission_BobcatTrappingPredatorKillingPCSABFeb.215[1].pdf CA Predator regs, codes & policies Project Coyote letter WRC .pdf Crabtree_coyote_letter_ & summary of effects of predator exploitation Project Coyote 2013.pdf PC_WKC Science Letter_Final1.17.15.pdf MotherJones_WKCs_3.10.15.pdf PC-SLC-Factsheet-Ranching-with-Predators[3].pdf Huff_Post_CA_bans_contests.pdf ~WRD000.jpg

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Public forum

From: Eric Sklar[redacted]
Sent: Monday, July 13, 2015 8:26 PM
To: Mastrup, Sonke@FGC
Subject: FW: Background info.

Forwarding this email to make sure it is logged.

From: Camilla Fox, Project Coyote [redacted]
Sent: Monday, July 13, 2015 1:31 PM
To: Eric Sklar
Subject: Background info.

Dear Eric,

In advance of our meeting on Wednesday, I want to share some background information about Project Coyote and our areas of interest with regard to the Fish and Game Commission and the Wildlife Resources Committee (WRC).

Based in Marin County, Project Coyote (a national non-profit organization) is a coalition of educators, scientists, predator-friendly ranchers and citizen leaders promoting coexistence between people and wildlife through education, science and advocacy.

Project Coyote has played a lead role in promoting reform of California's predator management policies, regulations and statutes. We successfully pressed that predator management reform be prioritized by the WRC (with Commissioner Baylis' support and leadership) and are hopeful that this will continue to be a priority for both the WRC and the Commission.

One of the first areas that we addressed through this process was predator killing contests. With the support and leadership of Commissioners Sutton, Rogers and Baylis, the Commission closed the loopholes on this practice making it illegal to provide prizes and inducements for the killing of most terrestrial mammals. (Please see attached background.)

We believe the next step in this process is for the WRC and Commission to develop a predator stewardship

and conservation plan that would address issues related to 1) the appropriateness of unlimited killing of predators (including coyotes, foxes and bobcats), 2) how the state can better address conflicts with predators in both urban and agricultural areas, and 3) how the state can collaborate with NGOs like Project Coyote to better educate the public, ranchers and others about coexistence.

With regard to implementation of the Bobcat Protection Act, currently we are supporting Option 2. For reasons outlined in the attached materials, Project Coyote and allied organizations support a statewide ban on bobcat trapping.

As we will explain in greater detail when we meet on Wednesday, we approach wildlife management from the standard of "best available science" (a standard recognized by state and federal wildlife agencies in creating wildlife management regulations and policies). We also believe that ethics plays a key role in wildlife management in addition to science. These points also are outlined in the attached materials.

You can also view several of our related video clips of the Commission meetings that addressed our priority areas of concern w/ regard to predator management reform:

https://www.youtube.com/watch?v=_0v3vo2WGvA

https://www.youtube.com/watch?v=_Loo2l-vy_U

https://www.youtube.com/watch?v=l0dLrdCX6KU

https://www.youtube.com/watch?v=kxeLnObcfXI

Thank you and Rick, Keli and I are very much looking forward to meeting you on Wednesday.

Camilla

—

CAMILLA H. FOX | FOUNDER & EXECUTIVE DIRECTOR
PROJECT COYOTE | www.ProjectCoyote.org
HQ OFFICE: P.O. Box 5007 Larkspur, CA 94977 | 415.945.3232
FACEBOOK: ProjectCoyote | TWITTER: @ProjectCoyote

PROJECT COYOTE

FOSTERING COEXISTENCE

To: Wildlife Resources Committee & Predator Policy Working Group
From: Camilla Fox & Rick Hopkins
Re: Comments re: "Proposed options for addressing Structural Issues in Title 14"
Date: March 5, 2015
cc: CA Fish & Game Commission; Department of Fish and Wildlife Director Chuck Bonham

On behalf of our California supporters, Project Coyote submits the following initial comments regarding the "Proposed options for addressing Structural Issues in Title 14" put forth by Commission staff at the WRC meeting on January 14, 2015.

Regarding the stated goal for this phase of "reviewing the state of predator management in California" and more specifically addressing "structural concerns" in Title 14, we have the following concerns:

The proposed review of "identifying and addressing inconsistencies" in existing policies and regulations is inadequate in scope, inconsistent, and incomplete in the regulations and policies addressed.

1- The proposed changes to the sections of Title 14 have not been fully vetted; they contravene sound science, modern, ethical wildlife management. The proposed changes violate the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA) and both the State and Federal Endangered Species Acts (CESA & FESA).

Our concerns are detailed below.

While we agree that inconsistencies in Title 14 need to be addressed, only some regulations within Title 14 are now being vetted and considered for amendments. Other sections need to be addressed, and Project Coyote's letter (11/11/13 see Attachment 1) submitted substantive comments on regulations and policies we believe warranted vetting and revisions Not one of those inconsistencies that we pointed out a year and four months ago have been addressed to date. Why have these regulations and policies been ferreted out for consideration? It appears from the published documents and timeline provided by Commission staff that these are the only structural inconsistencies in Title 14 that Commission and Department staff consider warrant vetting and revisions. If this is not the case, Commission staff needs to make this clear in public documents and inform the public when other inconsistencies will be addressed in this process of reforming California's policies and regulations pertaining to predator management.

Project Coyote asks that Commission staff clarify this at the upcoming March 12th meeting and

in writing so that all interested stakeholders are made aware of this (and for those who cannot attend on March 12th). We also ask that Commission staff revisit the documents submitted by Project Coyote, the Humane Society of the United States and others who took the time to reply to the Wildlife Resource Committee and Commission staff's request for input on the subject of necessary revisions to California's policies and regulations related to predator management with the stated goal of modernizing predator management in California and ensuring all policies, regulations and statutes are consistent and reflect best and current science.

It must also be pointed out that the proposed amendments to select regulations were lobbied for by narrow interest groups including the Animal Pest Management Services, the California Farm Bureau Federation and the Shasta County Cattlemen's Association as reflected in the documents associated with this Predator Policy Working Group meeting agenda.

Comments re: "possible solutions to structural inconsistencies":

1- Section 460 Fisher, Marten, River Otter, Desert Kit Fox and Red Fox – functionally fully protected species

FROM COMMISSION STAFF REPORT: "Proposed 'possible solutions': Insert language exempting certain permitted activities (depredation, scientific collecting, incidental take permits, etc.) Clarify that 460 only prohibits take for fur (original intent).

Neither CDFW, nor any stakeholder (e.g., California Farm Bureau Federation) has made a cogent argument as to why these five species of predators should be subject to increased human mortality. No evidence has been presented to document substantial levels of damage or cost from these species. Therefore, we find this change unwarranted based on the lack of evidence and the fact that lethal control methods are generally ineffective in appreciably reducing conflicts.

2- Title 14, Ch. 5: Furbearing Mammals Section 465.5. Use of Traps

We are concerned that the proposal to possibly allow "animal pest control operators under a contract for pest control services be authorized to place traps within 150 yards of a structure used as a permanent or temporary residence without notification of residents" could place non-target animals- both domestic (dogs and cats) and wildlife- in danger. Animal pest control operators frequently use snares to capture and kill coyotes, foxes and other species deemed a "nuisance" by some. This regulation was specifically put in place to protect non-target animals and to protect the rights of private property owners. Animal Pest Management Services and other private pest control firms would prefer to not be restricted by the requirement of obtaining landowner permission of residences within 150 yards of a structure. However, doing away with landowner permission completely contravenes the basic premise of why this regulation was put in place to protect non-target animals and property owners.

The proposal to amend the regulations put in place that restrict body-gripping traps (snares and Conibear kill traps) in the San Joaquin kit Fox (SJKF) zones could violate NEPA, CEQA CESA, and FESA requirements governing the protection of listed species.

The SJKF is listed by both the state and federal Endangered Species Acts, and any action that

may result in harassment, harm, injury, or death of a SJKF requires "take" authorization from both CDFW (an Incidental Take Permit) and the U.S. Fish and Wildlife Service (Biological Opinion). The SJKF populations remain at risk with limited reproductive capacity and we find no credible argument to subject this species at risk to additional potential "take". CDFW and the USFWS have appropriately given great scrutiny to authorizing project related actions that may result in "take". As with our comments noted above for modifications to Section 460, we find that no credible argument has been made to warrant any change or revisions in Section 465.5.

The stated rational for amending this regulation is that the current trap restrictions within the SJKF range is "problematic for depredation control." However, the very traps that some private pest control firms would like to use including snares and kill traps are inherently non-selective. So not are only are SJKF and other imperiled (and non-imperiled) species put at risk but even non-offending targeted species may be removed because of the non-selective nature of such traps.

2- Title 14, Ch. 6: Nongame Mammals Section 472. General Provisions

We concur that it is problematic that this regulation is "inconsistent with all other provisions of law where take is limited or authorized only under specified circumstances. Allows unlimited take by hunters."

We believe that this issue of unlimited take of certain species (for which there is no clear rational) must be fully vetted. We also believe that recreational/sport hunting and trapping of predators (differentiating from depredation removal) must be fully examined by Department and Commission staff with regard to ethics and modern science and best management practices (see Attachment 2).

Thank you for your consideration.

Respectfully submitted,

Camilla H. Fox
Founder & Executive Director

Rick Hopkins, PhD
Science Advisory Board, Project Coyote

LIVE OAK ASSOCIATES, INC.
an Ecological Consulting Firm

Predator Management in the 21st Century: Framework for Modernizing Predator Management in California

Rick A. Hopkins, Ph.D.

Proposed for April 9, 2015 F&G Commission Hearing

Our relationship with predators, particularly large predators, is driven by a fascination and curiosity that is primal. We fear not those risks that are common and every day occurrences (such as heart disease and automobile accidents), but obsess on events such as attacks by large predators on humans, to the point of advocating remarkable efforts to preemptively eliminate a risk that is barely measurable. While we define human/predator interactions as dramatic, they are nonetheless extremely rare. Some stakeholders also express considerable angst on other types of conflicts such as effects on ungulates (e.g., game species) or depredation of livestock. These conflicts are the major driver for advocating management strategies for predators that focuses almost entirely on reducing conflicts with humans by reducing populations through sport-take or prophylactic control methods – the kill strategy. Nationwide, while conservation is often mentioned or inferred within a statewide program to traditionally manage some predators such as cougars or black bears (others are treated as varmints with no consideration of limit of kill or seasons), explicit strategies to achieve long-term conservation goals for the species are simply not discussed. There appears to be an overly simplistic presumption that as long as sport-take (or other control) efforts are sustainable, then conservation has been achieved. I argue that these "traditional kill strategies" not only do little to reduce conflict, but more importantly do little to conserve the species.

During the last century we have moved from a society that has advocated the eradication of predators to one that has greater tolerance for native carnivores with some segments of society wishing to live in harmony with them. The problem is that we are not completely clear on the concept. For example, as Teddy Roosevelt noted over a century ago, the cougar has long been the subject of "…loose writing or of such wild fables…" and unfortunately, myths about this species and other predators abound. As part of this exercise, I will shift the discussion from untested word or narrative models (We kill predators – there must be less – conflicts must have declined concomitantly) and will review the scientific literature, exploding notions that there is any support in the literature that killing predators accomplishes any long-term goals in reducing conflicts between humans and predators (i.e., attacks on humans, change in prey populations and change in depredations).

The conservation of wide-ranging taxa depends critically on planning efforts that consider both habitat and connectivity needs of the target species – not on the number of individuals killed for recreation or control. Therefore, in an effort to shift the management paradigm toward a

San Jose: 6840 Via Del Oro, Suite 220 • San Jose, CA 95119 • Phone: (408) 224-8300 • Fax: (408) 224-1411
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Truckee: 11050 Pioneer Trail, Suite 203 • Truckee, CA 96161 • Phone: (530) 214-8947
www.loainc.com

contemporary set of tools for the management and conservation of predators, I will explore where we have been, learn from the failures of the past, and discuss a framework for modernizing predator management in California.

To that end, I will discuss four myths (or wild fables) that have permeated the public discussion of the cougar throughout its range as a case study that can illustrate the past, present and future of predator management. These are: 1) cougars were near extinction (or declined to very low numbers) throughout much of the western U.S. in the 1960's and 1970's; 2) sport-hunting has been an effective tool for managing the cougar; 3) cougars have been or are increasing over large portions of their range over the last 20 to 30 years; and 4) cougars are loosing their fear of humans posing greater risk to us then in previous decades. In the end, we believe that cougars are abundant in the west today, not because of insightful management over the last 30 years, but due more to fact we failed in our mission to eradicate them in the early to mid-1900s.

We will also expand this discussion to point out there is never a management need to engage in sport-take or control of predators – it is largely a matter or recreation (sport-take) or tradition (e.g., control efforts). Wildlife professionals (Leopold in 1932, Giles 1969, etc.) have long advocated that wildlife management integrates science (informs) and values (direction) in reaching an ultimate management or conservation program. There is absolutely, no such thing as science only management, as science can only address questions related to evidence and ramifications of actions, and is ill equipped to address questions such as should an activity be allowed or not (e.g., recreational sport-take of predators) – the latter is driven by the values integral to the stakeholders. This is the framework by which we hope to advocate for modern predator management in the State of California.

LIVE OAK ASSOCIATES, INC.
an Ecological Consulting Firm

February 12, 2015

Michael Sutton
President of the Commission
California Fish and Game Commission

Subject: Banning the trapping of bobcat and Predator Management Reform in California.

Dear Mr. Sutton:

I write as an expert on the ecology and biology of large mammals (particularly large predators) and as co-founder and Principal of Live Oak Associates, Inc., (LOA), an ecological consulting firm based in California. During the last 35 years, I have conducted a number of studies on cougars and have participated in numerous public policy debates as a carnivore expert in several western states. I am experienced and versed in management options and conservation strategies for a variety of carnivores, including coyotes, bobcat, cougar, black bear and the federal and state listed San Joaquin kit fox. Most recently I have been using statistically robust spatial tools as a framework for predicting the effects that large perturbations or modifications of landscapes (e.g., several thousand to tens of thousands of acres) have on the suitable habitats and regional landscape connectivity for a suite of carnivore species.

I really think any discussion regarding predator control programs or killing of predators for sport or commercial venture needs to be framed within the ecological context of "need". The famous and brilliant population ecologist Graeme Caughley once noted that the term overabundance is not an ecological term, but really a human expression embedded within a values framework. A sheep rancher will likely have a very different perceptive (values) regarding the abundance of coyotes in and around his/her ranch then a resource ecologist would have that is in charge of maintaining ecosystem function within a large preserve or National Park. The evidence (or science of population dynamics) is not what is really in question, but instead the values of the individual that is considering the presence, distribution and abundance of the predator. Collecting more empirical evidence on the population dynamics of the coyote is not likely to satisfy rancher. The mere presence of coyote (regardless of its abundance) and the potential or real loss of sheep is all that matters in the rancher's world.

Thus, in this case, it really boils down to a very simple question, is there a management need to trap or kill bobcats for recreational or commercial ventures in California? While sport hunting or killing of predators is often touted as a management tool, it rarely is; in essence we manage for the sport hunt, not by it. CDFW has what I believe an enlightened view on this matter, as they have noted in the past for example, that sport hunting of black bears is for recreational purposes only and the sport hunt does not in fact function in any measureable way to reduce human-bear conflicts.

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We kill medium and large carnivores through sport take and control efforts (e.g., wildlife services) *not* because hunting has been shown to be an important management tool, but because it is tradition. To argue that hunting is needed for population management is an overly simplistic argument about natural systems - one that is in conflict with both predation theory and evidence.

Wildlife managers typically manage single species of wild animals to establish sustainable yield and a condition of stasis (that is, stability) -- a goal that is neither achievable nor desirable. This concept -- treating wild animals as a harvestable crop – is inconsistent with modern understanding of population conservation and ecosystem integrity concepts. This is why over the last decade, conservation biologists have tended to shun the North American Conservation Model (the sport hunting paradigm) for predators, in favor of implementing broad conservation measures that preserve and manage functionally intact, interconnected ecosystems (Nelson et al. 2011). Conservation strategies can have as explicit goals the preservation of predators within a functioning ecosystem while simultaneously reducing conflicts with humans. Many conflicts, particularly conflicts with black bears have more to do with human behavior then changes in bear populations (e.g., poor storing of trash, feeding of wildlife, feeding pets outside, bee hives operators not using electric fences to protect hives, etc.). Predator populations are usually limited by the availability of food resources and the spatial extent and connectedness of the landscape (Roemer et al. 2008); that is, their growth rates are determined by the availability of land and food. Given suitable land, as the extent and distribution of food resources decline so do their growth rates.

The notion that predator populations will grow unabated without human intervention (mortality through sport hunting or culling) is simply unfounded and lacks evidentiary support. In 1972 a blue-ribbon panel of experts produced a report on the state of predator control in North America (Cain et al. 1972). This report assailed the industry of predator control, and pointed out the faulty reasoning behind most (if not all) predator control operations, the lack of science supporting the industry and the failure to actually solve or reduce predator conflicts with humans. They concluded:

> Our recommendations would change the present federal-state cooperative program drastically by concentrating on animals which cause damage, specifically by using non-chemical methods of control which would curtail the attrition against non-target species of ecological and social value. This remarkable program continues unabated in the face of criticism, largely on a basis of unvalidated assumptions (Cain et al. 1972).

This finding notwithstanding, the traditional predator control approaches championed by the those that mistakenly believe predators “must be controlled” and advocated by many wildlife agencies, including MIFW, still fail to heed this sage advice offered – actually, demanded – by these expert scientists. The traditional approach that relies on management of predators by prophylactic control measures or sport hunting is inconsistent with predation theory or the scientific literature.

Many game agencies and wildlife services engage in management schemes that were assailed by the Cain Report (and more recent analyses) as too costly and ineffective. Furthermore, the attitudes expressed by these agencies fail to recognize that predation is an important and critical ecological process, without which, many systems become unstable. Berger (2006) reported that the massive and expensive control programs (about $1.6 billion in real dollars

from 1939 to 1998) aimed at reducing predator populations in and around domestic sheep herds have had little effect on the declining trends in the sheep industry. In fact, Berger found that the decline of the sheep industry was more closely associated with unfavorable market conditions rather than predator losses.

Intact predator populations serve an important role in maintaining full ecosystem function. For example, researchers in Southern California and elsewhere have found that coyotes serve an important function of maintaining the natural bird diversity (Crooks and Soule 1999). Their research demonstrated that coyotes were effective in reducing predation on native populations of birds by small carnivores thereby resulting in a healthier ecosystem (as defined by higher natural biodiversity). In turn, research in Yellowstone on the reintroduction of the wolf has found that restoring wolves has increased the growth rates of pronghorn populations, since wolves suppress their major predator, the coyote (Berger et al. 2001, Berger et al. 2008).

Taylor (1984) provides clarity in how wildlife management agencies tend to oversimplify the ramifications of predation theory. He argues that the wildlife profession largely relies on relatively short-term predator control studies and that while short-term predator removal may change the stability of the prey population, the average equilibrium density remains relatively unchanged. As of 1985, he was unmoved that the literature provided any evidence that predator removal studies demonstrated any long-term benefit.

A similar conclusion was reached a number of years later by the National Research Council (NRC 1997) for the on-going Alaska predator control and sport hunting effort where they reported "…there is no factual basis for the assumption that a period of intensive control for a few years can result in long-term changes in ungulate population densities."

One of the consistent conclusions of the scientific literature over the last forty years is that efforts to lower carnivore populations to increase ungulate populations or reduce conflicts is not supported by the evidence (Taylor 1984, NRC 1999, Cougar Management Guidelines Working Group 2005). Hurley et al. (2011) provides another recent example as they unequivocally and succinctly conclude:

> In conclusion, benefits of predator removal appear to be marginal and short term in southeastern Idaho and likely will not appreciably change long-term dynamics of mule deer populations in the intermountain west.

Their findings were based on an experimental control study that removed a significant number of coyote and cougar between 1997-2003 from large areas in Southeastern Idaho.

A good example of how sport hunting is an ineffective tool to reduce conflict with predators is found with black bears. Garshelis and Noyce (2008) argue that diversity in food resources is an important contributor to stability in bear populations. They caution that poor food years can increase sightings and conflict with bears, giving people the *perception* that bear numbers have increased, when in fact growth rates may have declined. In addition, some nuisance bears (e.g., breaking into cars or homes) are not as vulnerable to hunting as non-nuisance bears – thereby minimizing the effectiveness of hunting in reducing conflicts.

Conflicts with bears are more likely influenced by poor food years and the availability of human foods in or near human habitation. Thus, it is again an unsupported assertion that sport hunting will likely reduce conflicts with bears or as MIFW argues that the need to increase the

sport kill of bears is critical to maintain conflicts as low levels – an assertion in search of evidence.

California: a living laboratory

Francis Bacon, the father of modern science noted over 300 years ago, "…that the quilt of the senses is either two sorts, it destitutes us or deceives us." In other words, our ability to understand natural systems is a constant struggle as we are confronted with biases and perceptions that color our ability to make robust inferences regarding the natural world.

A great example that highlights the failure of perception and bias as the foundation of analysis can be found in California with the cougar. Reliance on evidence dispels the notion that sport hunting is a critical management tool for predators as I will so aptly demonstrate using the cougar in California. Cougars have not been hunted in California since 1971 and California supports the largest amount of high quality cougar habitat in the North America and the greatest number of humans. About 110 to 120 cougars are killed annually in California mostly due to depredation on livestock or pets – a fraction of the kill total for most other smaller Western States (sport take in several of these states exceed 400 to 500 annually). If the assertions that sport hunting were an important "tool" one would assume that California would have substantially greater human-cougar conflict when compared with other western states that support aggressive sport hunt programs. Yet when normalized for the size of the cougar and human population in each state and western Canadian provinces, California does not rank 1st, but actually ranks 11th. In other words, the risk of an attack by a cougar is greater in ten other Canadian provinces and western states with aggressive sport hunting programs, and fewer humans and cougars.

Additionally, California supports about five million cattle and nearly a million sheep (more than all of western states except Texas), and yet the absolute number of depredation incidences places it about in the middle. If we consider depredation rate, California would rank near the bottom, as it does with attacks on humans. This completely contradicts the argument that sport hunting or predator control is a valuable and necessary management tool. This extensive analysis of attack statistics across North America has caused me to conclude that the intensity of sport-hunting cougars is not at all correlated with a concomitant change in the risk to humans or livestock. Nor has the lack of sport hunting resulting in a constantly increasing cougar population. In fact, by all measures the population of cougars has changed relatively little over the last 20 or so years. If anything, the population continues to loose habitat and its populations are becoming increasingly fragmented, as has been so aptly demonstrated in Southern California and the San Francisco Bay Area.

An interesting piece of research from Northeastern Washington has found that increased killing of cougars, while it has resulted in a short-term decline in the cougar population, also resulted in increasing conflicts with humans, as younger male cougars, which become more prevalent in hunted populations, are more prone to prey on livestock than older male and female cougars (Lambert et al. 2006, Robinson et al. 2008).

Conclusion on the importance and need of killing predators to "manage" them

While sport-hunting or trapping of predators is often touted as a management tool, it simply has not shown to be. In essence we manage for the sport hunt, not by it. Black bear or cougar hunting programs across North America, indiscriminate killing or aggressive control programs

for coyotes and other predators do not provide effective means to reduce conflicts between these predators and human interest.

It appears to me, that many state and federal game managers expend considerable energy ignoring the best available science that clearly demonstrates efforts to “manage” predators by broad lethal efforts fails. We have failed to heed the sound evidence- based recommendations of the scientific literature, as was part of the Cain Report and have not shifted our focus away from costly and ineffective programs aimed at killing predators to meet some ill defined objective. Traditionally across North America, policymakers find themselves unwilling to move from severely failed management schemes to more cost-effective and ecologically relevant ones. I believe California is better poised to integrate ecologically sound management of predators and move away from programs like trapping of bobcats that is not supported by the residents of California, nor by the majority of conservation scientists.

Thank you for the opportunity of addressing the Fish and Game Commission.

Sincerely,

Rick A. Hopkins, Ph.D.,
Principal and Senior Conservation Biologist

LITERATURE CITED

Berger, J., P. B. Stacey, L. Bellis, M.P. Johnson. 2001. A mammalian predator-prey imbalance: Grizzly bear and wolf extinction affect avian Neotropical migrants. Ecological Applications 11:947-960.

Berger, K. M., E., M. Gese, J. Berger. 2008. Indirect effects and traditional trophic cascades: A test involving wolves, coyotes, and pronghorn. Ecology 89:818-828.

Berger, K. M. 2006. Carnivore-livestock conflicts: Effects of subsidized predator control and economic correlates on the sheep industry. Conservation Biology, 20(3):751-761.

Cain, S. C., J. A. Kadlec, D. L. Allen, R. A. Cooley, M. G. Hornocker, A. S. Leopold, and F. H. Wagner. 1972. Predator Control – 1971 Report. Council on Environmental Quality and the Department of the Interior, Advisory Committee on Predator Control, Washington D.C.

Cougar Management Guidelines Working Group. 2005. Cougar Management Guidelines. WildFutures, Bainbridge Island, Washington.

Crooks, K.R. and M. E. Soule. 1999. Mesopredator release and avifaunal extinctions in a fragmented system. Nature 400:563-566.

Garshelis, D. L. and K.V. Noyce. 2008. Seeing the world through the nose of a bear – diversity of foods fosters behavioral and demographic stability. Eds, T. E. Fulbright and D. G. Hewitt, pages 139 to 163 in Wildlife Science: Linking Ecological Theory and Management Applications. CRC Press. NY

Grigione, M.M., P. Beier, R.A. Hopkins, D. Neal, W.D. Padley, C.M. Schonewald and M. L. Johnson. 2002. Ecological and allometric determinants of home-range size for mountain lions (Puma concolor). Animal Conservation 5:317-324.

Hopkins, R. A., M. J. Kutilek, and G. L. Shreve. 1986. The density and home range characteristics of mountain lions in the Diablo Range of California. Pages 223-235 In S. D. Miller and D. Everett eds, Proc. International Cat symposium, Kingsville, Texas, October 1982.

Hopkins, R.A. 1990. Ecology of the Puma in the Diablo Range. Ph.D. Dissertation University of California at Berkeley, California.

Hurley, M. A., J. W. Unsworth, P. Zager, M. Hebblewhite, E. O. Garton, D. M. Montgomery, J. R. Skalski, C. L. Maycock. 2011. Demographic response to mule deer to experimental reduction of coyotes and mountain lions in southeastern Idaho. Wildlife Monographs 178:1-33.

Lambert, C. M. S., R. B. Wielgus, H. S. Robinson, D. D. Katnik, H. S. Cruickshank, R. Clarke, and J. Almack. 2006. Cougar population dynamics and viability in the Pacific Northwest. Journal of Wildlife Management 70(1):246-254.

Nelson, Michael P., John A. Vucetich, Paul C. Paquet, and Joseph K. Bump. 2011. An inadequate construct? *The Wildlife Professional* 5, no. 2: 58-60.

NRC 1997: Wolves, Bears, and Their Prey in Alaska: Biological and Social Changes in Wildlife Management. Committee on Management of Wolf and Bear Populations in Alaska, Board on Biology, National Research Council, National Academy Press, Washington, D.C.

Robinson, H. S, R. B. Wielgus, H. S. Cooley, and S. W. Cooley. 2008. Sink populations in carnivore management: Cougar demography and immigration in hunted population. Ecological Applications, 18(4):1028-1037.

Roemer, G. W., M. E. Gompper, and B. Van Valkenburgh. 2008. The ecological role of the mammalian mesocarnivore. BioScience: 59:165-173.

Taylor, R. J. 1984. Predation. Population and Community Biology. Chapman and Hall, NY

PROJECT COYOTE

FOSTERING COEXISTENCE

February 12, 2015

California Fish and Game Commission
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Re: Support for a ban on bobcat trapping in California and prohibitions on trapping and hunting of mammalian carnivores for commercial or recreational purposes

Dear Commissioners,

On behalf of Project Coyote's Science Advisory Board we express our support for a ban on bobcat trapping in California and prohibitions on trapping and hunting of mammalian carnivores (predators) for commercial or recreational purposes.[1]

The most general reason for such prohibition is that wildlife managers and sportsmen alike believe, as a community, that killing an animal without an adequate reason is unjustified and unsportsmanlike.[2] Predators are not trapped or hunted for their meat. They are often trapped and hunted merely for recreation or for their pelts, which are then kept as a trophy or sold on the international fur market. This market merely serves those with a desire to purchase luxury items.

Sociological surveys show that most Americans believe hunting for meat represents an adequate reason to hunt.[3] However, those same studies indicate that only small minorities of Americans believe hunting animals for the purpose of supplementing one's income or to gain a trophy are adequate reasons to hunt.[4] Likewise, research indicates that most

[1] This would include, but is not limited to, fur trapping, bounties, sport and trophy hunting, and killing contests, derbies, tournaments, or drives.
[2] This principle is formally and explicitly acknowledged by the North American Model of Wildlife Conservation.
[3] Duda, M. D., and M. Jones. 2014. The North American Model of Wildlife Conservation: Affirming the role, strength, and relevance of hunting in the 21st century. [URL: http://www.responsivemanagement.com /download/reports/ NAMWC_Public_Opinion_Hunting.pdf]
[4] ibid.

Americans consider the use of foothold traps to be inhumane[5], and "a majority of the [U.S.] population disapproves of trapping to make money…and trapping for recreation or sport." [6] Beyond being widespread, those beliefs are well justified. That is, gaining a trophy and serving a luxury industry are trivial reasons to kill a living creature.[7] These perspectives are reason enough to prohibit killing predators for commercial or recreational purposes.

Furthermore, wildlife professionals understand that wildlife populations are public trust assets.[8] In a judicious democracy all citizens have a stake in the treatment of public trusts. That means, when most citizens have good reason to treat a public trust, such as a predator population, in a particular manner, then the trust should be managed in that way.

What most citizens believe to be adequate and inadequate reasons for killing wildlife is important because participation in hunting has been on the decline for decades, and that decline is worrying to members of the hunting community. Reversing that trend and maintaining the support of the non-hunting community almost certainly requires the hunting community to be sensitive to what most Americans consider to be adequate reasons to kill a living creature.[9]

Some advocates might argue that trapping and hunting predators should be allowed because it is a traditional form of recreation. The shortcoming with this rationale is that "tradition" cannot ever by itself be an adequate justification for any activity. Many traditional activities, once condoned, are now widely acknowledged to be unjustified.[10]

Some proponents might argue that trapping and hunting predators is necessary because without trapping or hunting these species would become overabundant and subsequently reduce the abundance of prey species – prey species that some believe should be managed for maximum abundance for the purpose of maximizing hunter success. A great deal of science indicates that killing predators is not a reliable means of increasing ungulate abundance. The circumstances most likely to result in increased ungulate abundance are also the circumstances most likely to impair important ecosystem benefits and services that predators provide. Even when predators are killed to the point of impairing the ecosystem services, there is still no assurance that ungulate abundance will increase. The

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[5] According to Reiter et al. (1999), 80% of the U.S. public found foothold traps to be inhumane capture devices. Reiter D., Brunson M., Schmidt R.H. 1999 Public attitudes toward wildlife damage management and policy. *Wildlife Society Bulletin* 27, 746-758. This finding was recently replicated by Bruskotter and colleagues (unpublished data).

[6] According Duda and Young (1998) 59% of Americans disapproved of trapping generally. Duda M.D., Young K. (1998) American attitudes toward scientific wildlife management and human use of fish and wildlife: Implications for effective public relations and communications strategies. pp. 589-603. *Transactions of the North American Wildlife and Natural Resources Conference.*

[7] While earning an adequate income is vitally important, fewer than 100 Californians trap bobcat as a means of supplementing their incomes. Trapping predators is unimportant to the economic health of California.

[8] This principle is also formally and explicitly acknowledged by the North American Model of Wildlife Conservation.

[9] This reasoning highlights the imprudence of fear mongers who believe that prohibiting unjustified forms of hunting and trapping is a slippery slope to the prohibition of all forms of hunting.

[10] This includes many forms of sexism and racism.

reason being is that ungulate abundance is frequently limited by factors other than predators – factors such as habitat and climate.

Proponents might also argue that killing predators is an important means for decreasing the loss of livestock to depredation. A great deal of science has been developed on how to effectively manage depredations. Lessons from that science include: In a population of predators, typically only a few individuals are responsible for depredating livestock.[11] For this reason, indiscriminate killing of predators is an ineffective means of reducing depredations because it does not target the offending predator or the time or place where depredation has occurred.[12] Moreover, indiscriminate killing can lead to the disruption of predators' social and foraging ecology in ways that plausibly, and perhaps likely, increase the risk of depredation. Reducing the loss of livestock is a common goal for all stakeholders. The concern is that recreational and commercial killing of predators does not contribute to this goal and may work against it because this kind of killing tends to be indiscriminate with respect to depredating predators.

Some proponents of predator trapping and hunting might highlight that opponents of predator killing are free to refrain from doing so; but being opposed does not justify prohibiting others from doing so. These proponents might further argue for being allowed to hunt and trap predators because – in their view – a sufficiently robust reason to oppose predator killing has not been offered. This laissez faire perspective misconstrues the circumstance. To kill a living creature without an adequate reason violates a fundamental principle of wildlife management and sportsmanship. By that principle particular instances of killing should be prohibited until good reason is offered for why doing so would be justified. To our knowledge, no such reason has been forthcoming. If some purported reason were presented, we would be very interested to evaluate such a reason.

Beyond these points and counterpoints, lies a need to better recognize and celebrate predators' valuable contribution to the health and vitality of our ecosystems. For example, predators serve human interests through rodent control, disease prevention, positive and indirect effects on plant communities, soil fertility, and physical processes (e.g., erosion and stream geomorphology). Trapping and hunting predators is antithetical to those valuable contributions.

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[11] For example, see F. F. Knowlton, E. M. Gese, M. M. Jaeger, Coyote depredation control: An interface between biology and management. *Journal of Range Management* 52, 398-412. (1999).

[12] For examples, see M. M. Conner, M. M. Jaeger, T. J. Weller, D. R. McCullough, Effect of coyote removal on sheep depredation in northern California. *J. Wildl. Manage.* 62, 690-699 (1998); B. N. Sacks, M. M. J. K. M. Blejwas, Relative vulnerability of coyotes to removal methods on a northern California ranch. *J. Wildl. Manage.* **63**, 939-949. (1999); B. N. Sacks, M. M. Jaeger, J. C. C. Neale, D. R. McCullough, Territoriality and breeding status of coyotes relative to sheep predation. *J. Wildl. Manage.* 63, 593-605. (1999).

Thank you for considering these concerns on this important issue. If the Commission were interested to know about any of the claims or rationale in this letter, we would be honored to share that insight with the Commission.

Respectfully submitted,

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PROJECT COYOTE

FOSTERING COEXISTENCE

To: Wildlife Resources Committee Predator Task Force
Re: Initial comments and proposed amendments to the California Fish and Game Code sections and Regulations regarding the State's responsibilities pertaining to predator management, conservation, and stewardship
Date: November 11, 2013

On behalf of our California supporters, Project Coyote submits the following initial comments and proposed amendments to the California Fish and Game Code sections and Regulations regarding the State's responsibilities pertaining to predator management, conservation, and stewardship.

As discussed in detail below, the rationale for our proposed amendments is fourfold:

(1) to ensure that the California Department of Fish and Wildlife (hereinafter "the Department") and the California Fish and Game Commission (hereinafter "the Commission") abide by their common law and statutory duties to protect and preserve the State's wildlife resources pursuant to the public trust doctrine;

(2) to ensure that Department regulations are consistent with its existing predator policy which applies to *all* species of wildlife and only authorizes the application of depredation methods towards individual animals which have caused injury or damage to private property, and consistent with sections of the California Fish and Game Code which authorize the same;

(3) to incorporate ethical standards and economic considerations that reflect the valuable role predators play in maintaining ecosystem functioning, resilience, and health as well as public values/appreciation for wildlife/predators;

(4) to modernize predator conservation and stewardship throughout the state to reflect current science, conservation biology, and ecological principles utilizing an adaptive management approach.

I. The Department and the Commission have both common law and statutory duties to protect and preserve all of the State's wildlife resources pursuant to the public trust doctrine.

All wildlife in the State of California that is not held by private ownership or legally acquired is the property of the people. Pursuant to the public trust doctrine, the State has a common law duty to act as the Trustee to preserve and protect wildlife resources for present and future

generations of Californians. Indeed, the State's duty along these lines has been codified in the California Fish and Game Code §711.7, subdivision (a), which appoints the Department as a trustee over State wildlife resources. Moreover, Fish and Game Code §1801 provides that all wildlife resources under the jurisdiction and influence of the State should be conserved for the benefit of all citizens of California, as well as to maintain their intrinsic and ecological value. The Commission has been granted regulatory and permitting authority to institute changes in the Fish and Game Code and issue permits pursuant to the Code necessary to protect wildlife (CA Fish and Game Code §§ 200 et seq.) **We request that both the Commission and Department abide by their respective duties to protect and conserve all California wildlife species for the benefit of California residents.**

Public surveys indicate that the majority of Californians support protective measures for wildlife – including predators – regardless of how the predator species classified. These protectionist values are evident through California voters' support of public ballot measures to protect predators and restrict take methods deemed cruel and/or indiscriminate Prop. 4 passed in 1998 and Prop. 117 passed in 1990 are examples of citizen desire to preserve and respect wildlife. As shown below, the Department's stated position on predators expressly applies to "all" species of wildlife. In proposing amendments to the Department's predator regulation and code sections, Project Coyote requests that the Commission and Department abide by their duties under the public trust doctrine and conform their existing regulations to the Department's stated predator policy – which applies to all wildlife species, regardless of how the predator species are classified (e.g., nongame, furbearing or game species) – as well as existing Code sections.

II. The Department's stated predator policy expressly applies to *all* wildlife species, and permits that depredation control methods may be directed only towards those individual animals that have been found to have caused damage to private property or to have presented an immediate threat thereto.

The Department's existing predator policy states:

> *All* wildlife *shall* be maintained in harmony with existing habitat whenever possible. In the event that *some* birds or mammals may cause injury or damage to private property, depredation control methods directed towards the *offending animals* may be implemented.

Under the Department's existing predator policy, the Department has a mandatory duty to maintain *all* species of predators in harmony with existing habitat whenever possible – regardless of how the predator is classified, whether it be a game, nongame or furbearing species. Moreover, depredation efforts may only be applied towards those individual animals that have been found to have caused damage to private property or presented an imminent threat thereto. Project Coyote takes issue with the Department's current stance – as expressed in the current form of its regulations and code that treat predators that are classified as "nongame" or "furbearing" differently than those that are classified as game.

While we applaud many of the recent amendments to the depredation regulations, as codified in §401, Title 14, which went into effect November 1st and require issuance of a permit to take elk,

bear, beaver, bobcat, wild pigs, deer, wild turkeys and gray squirrels that are damaging or destroying or immediately threatening to damage or destroy land or property, we have serious concerns regarding the lack of similar measures for other predators based solely on their classification as "nongame" or "furbearing." As addressed in greater detail in the following section, the current classification of predators as "game," "nongame," and "furbearing" has no scientific basis and is outdated under concepts of modern conservation biology and ecological principles. Our proposed amendments address the lack of consistency currently apparent in the Department regulations for predator species, we believe in a reasonable manner, and will help to bring the Department's regulations in compliance with its obligations under both the public trust doctrine and its stated predator policy. In addition, our proposed amendments will also help to eliminate inconsistencies in the regulations for the existing classifications of predator species. For example, under the current form of the regulations and code, California Fish and Game Regulation § 472(a) authorizes unlimited takes of nongame mammals, while § 4152 of the Code only authorizes the taking of nongame mammals found to be injuring growing crops or other private property. Clearly, the regulation for nongame mammals should be brought in line with the current form of the Code.

III. The Commission and Department should incorporate ethical standards and economic considerations in the California Fish and Game regulations and code that reflect the valuable role predators play in maintaining ecosystem functioning, resilience, and health as well as the public's appreciation of predators

Over the last fifty years, humankind's understanding of wildlife and ecosystems has expanded and societal attitudes about our relationship with the natural world have shifted.
Our scientific understanding of animals – their ecology, physiology, behavior, cognition, sentience, and psychology – is broadening, and we are recognizing that animals have intrinsic value apart from their perceived economic value to humans (Messmer et al. 2001). This evolution in societal beliefs challenges old notions in how we relate to non-human animals. Americans today value the welfare of all beings and believe that the human species has a moral obligation to be compassionate and humane toward the other species and animals which have a right to live their lives on Earth, undisturbed by people, in their natural environments, without abuse or cruelty or the unraveling of their social relationships (Treves et al. 2013). Old fairy tales and fables that demonize certain animals such as wolves and coyotes are being deconstructed. With the ominous consequences of our choices and activities increasingly apparent, humankind is finally coming to understand that our economic and political systems simply cannot operate to keep human societies and civilization disconnected from the Earth's natural systems and continue to survive.

With this as a backdrop, we believe the Department and the Commission have an opportunity – and an obligation – to modernize predator stewardship and to bring the state's regulations, policies and codes in line with current science – both biological and social – while incorporating ethical protocols, standards, and criteria in how predators are managed statewide. We strongly encourage the Department and the Commission to undertake scientific review and survey of the people towards predators, current predator management and conservation, and economic value and perception, especially in a state with rapidly changing perception and recreational trends

where fewer than 1% of Californians hunt and a growing number are engaged in a wide range of non-consumptive wildlife uses. Again, there is an extant scientific literature and basis to quantify these issues (USDOI et al. 2011; http://www.census.gov/prod/2013pubs/fhw11-ca.pdf).

IV. The Commission and Department should modernize its Predator Conservation and Stewardship Regulations, Policies and Code to Reflect Current Science, Conservation Biology, and Ecological Principles in an Adaptive Management Framework.

The Department and the Commission acknowledge that the State's regulations, policies and codes pertaining to predator management are outdated, fail to incorporate the best available science, are often inconsistent, and create confusion for wildlife managers, enforcement personnel and the general public. We commend the Commission for tasking the newly formed Wildlife Resources Committee (WRC) with a comprehensive review of the State's policies and practices regarding predator management – or more appropriately predator conservation and stewardship. We believe that the Commission has an opportunity to set a trend and to demonstrate that California is a leader in how it manages its predators, and that its policies and practices are based in science, ethics, and economics.

We believe that the attached Carnivore Conservation Act presents a model template for carnivore conservation nationwide and one that can be adapted to the specific conditions in California. We encourage the WRC and the Department to consider the provisions in this Act for California, as the Act represents the best available science regarding the role of predators in maintaining ecosystem functioning and health and shifting public values that reflect an appreciation for predators both for their ecological benefits and intrinsic worth.

In addition, we recommend that the Department's current adaptive management program be augmented to include information on current populations and known anthropogenic and non-anthropogenic impacts on their population and the habitats that sustain them. We further recommend that the Commission sanction an independent, scientific review of the State's predator management policies that includes any and all recommendations made by the WRC.

With the aim of modernizing California's predator conservation and stewardship program, Project Coyote recommends the following changes to the State's predator regulations, policies, and code. Not only will our proposed changes help to bring the State in line with current science and societal beliefs, but they will help to ensure compliance with the Department's obligations under the public trust doctrine and consistency with its stated predator policy. Because of the complexity of the State's predator regulations, policies, and code we also strongly suggest that the Department sanction its own internal review to ensure that inconsistencies are addressed that WRC predator policy task force members may have missed.

1. **The Department's duty to limit take of predators & implement consistent protocols and regulations with regard to mitigating predator conflicts and damage**

Allowing the unlimited take of species such as bobcats, coyotes, and gray fox is counter to current science and ecological thinking. It fails to incorporate any assessment of the ecological

value these animals provide to the ecosystems they inhabit (see Bergstrom et al. 2013 for a partial overview of an extant scientific literature on this subject). Thus, modern science tells us that altering predator prey populations through indiscriminate killing can have cascading and long-term negative impacts to the ecology of a given bioregion (see Crooks and Soule, 2009 for a state example of the extant scientific literature on this subject). We also now know that large carnivores are critical to ecosystem health and resilience (Weaver et al. 2002). Given this knowledge, we believe it is incumbent upon the Department to remove unlimited take provisions in its regulations for all native carnivores in California (see attached proposed Massachusetts Carnivore Conservation Act, hereinafter "Carnivore Conservation Act"). We strongly encourage the Department to rethink its current classifications of predator species that appear to have no scientific basis for separate classifications (e.g. game mammal, nongame, furbearing, etc.) and consider a new classification of "native carnivore" for all predator species that would provide certain provisions and protections for all such species and would only allow takes under narrowly defined terms and conditions. Classifying predators in this manner would ensure that the Department and Commission are meeting their duties to manage all species of wildlife pursuant to its existing predator policy as well as the public trust doctrine.

We also contend that it is the Department's responsibility to strictly regulate the taking of predators when very little (if any) baseline population data exists for theses species in California. In the absence of such critical population data the State should be implementing the Precautionary Principle and limiting the takes of predator species, particularly when they are known to be affected by anthropogenic impacts (e.g., trapping/hunting, habitat restoration, changing land-use activities) and non-anthropogenic impacts (climate change and disturbance events such as drought, fires, and floods).

Again, consistent with its Trustee obligations under the public trust doctrine and its stated predator policy, the Department must limit the take of predator species, regardless of whether the predators are classified as game species, nongame species, or furbearing mammals. As referenced above, the Department's stated predator policy expressly applies to *all* wildlife species, and authorizes that depredation control methods may be directed only towards those *individual* animals that have been found to have caused damage to private property or to have presented an immediate threat thereto.

Currently, California Fish and Game Code § 4152 allows the taking of nongame mammals and black-tailed jackrabbits, muskrats, subspecies of red fox that are not the native Sierra Nevada red fox and red fox squirrels that are "found to be injuring growing crops or other property." While this section of the regulations is consistent with the Department's stated predator policy, reportedly, it is not regularly enforced. Moreover, it is inconsistent with § 472(a) of the California Fish and Game regulations which allows "the following nongame birds and mammals to be taken *at any time of year and in any number*… coyotes..."

Just as the State has recently modernized its protocols with regard to how conflicts with mountain lions are handled, we believe the same detailed protocols, policies and regulations should be applied to other California predator species. As with the new mountain lion protocol, the use of lethal control should be employed against predator species only after nonlethal methods have been fully exhausted and only in response to localized, verified injurious wildlife

problems in which an animal has caused or immediately threatened to cause injury or damage to private property. In general, we strongly recommend that any and all lethal control of any predatory species be justified *apriori* on an ecological, economic, and ethical basis and must use the best science, techniques, and survey methods available. Then, this assessment needs to be fully compared to the increasing development of successful non-lethal methods and programs including those successful in the State (Fox 2008, Fimrite 2012). If justified, any taking methods employed should be target-specific to remove only the offending animal(s). Assuming the Department abides by such criteria and ethical standards, current taking methods and practices directed towards predator species that are arguably inhumane and indiscriminate and/or ecologically unsound would be prohibited. These include but are not limited to: predator/wildlife killing contests, snares, and hounding (for take).

In order for the Department to uphold its responsibilities to protect all wildlife species under the public trust doctrine and its existing predator policy, as well as to maintain consistency with the existing Code section for the taking of nongame mammals, Project Coyote proposes amendments to §§ 472 and 401 of the Fish and Game Regulations and §4152 of the California Fish and Game Code (please see attached).

1. Prohibiting wildlife killing contests in California

In California predators including coyotes and gray fox have been subject to unjustified mass and indiscriminate killings—whether or not private property damage had occurred or even been threatened. These organized killing contests are sometimes organized and conducted under the inducement of prizes or monetary rewards and violate the concept of "fair chase." Project Coyote believes that by allowing such killing contests to continue, the Department and the Commission are abrogating their duties to California citizens to protect wildlife under both the public trust doctrine and the Department's stated predator policy—which is expressly applicable to *all* species.

Predator species are generally not taken for consumption. Allowing organized, mass indiscriminate killing of predators is not only cruel to the species involved, but disruptive to California's native ecosystems by unnaturally altering the balance of predator and prey species. This can result in an overabundance of prey and pest species, which, in turn can damage crops and other types of private property. For example, we know conclusively from studies in Yellowstone and elsewhere (see Estes et al. 2011, Ripple and Beschta 2012, and Ordiz et al. 2013) that large carnivores are vital to maintaining healthy ecosystems and species diversity. Their presence helps to maintain native plant communities by keeping large herbivore populations in check, contributing to the health of forests, streams, fisheries and other wildlife. Their absence leads to ecosystem simplification and a loss of biodiversity. As previously cited above, the effects of lethal control on apex carnivores has been shown to affect numerous species including reduction or increase of smaller carnivores—reverse or standard meso-predator release. Moreover, indiscriminate killing of predators is not only ineffective but is often counterproductive and at odds with the principles of conservation biology, ecosystem based management theory, and population ecology (see attached scientific opinion letter by Crabtree, 2013 which is based on numerous studies, many of which are reviewed in Crabtree and Sheldon,

1999). There is extant scientific literature on these issues and we strongly urge the Commission to support independent scientific evaluation of predator killing and removal.

The coyote-killing contest that took place in Modoc County last February generated tremendous public outcry and national media attention. Project Coyote submitted a letter on behalf of 25 organizations representing more than one million Californians asking that this contest hunt be stopped based on ecological and ethical concerns. In addition, more than 20,000 letters, emails and petition signatures were submitted to the Commission and the Department protesting the contest. The Commission and the Department have yet to respond to the public on this issue.

Project Coyote submits that consistent with its Trustee obligations under the public trust doctrine, the Department's stated predator policy, and § 4152 of the Code, which only authorizes the taking of nongame mammals found to be injuring growing crops or other private property, the Commission and Department must make it unlawful to offer any prize, inducement, or monetary reward for the taking of any gamebirds, mammals—including all species of predators—fish, reptiles or amphibians in an individual contest, tournament or derby pursuant to § 2003 of the California Fish and Game Code**.** Exceptions may be made for game fish and frog jumping contests pursuant to subsections (b) and (c) of the code. To institute a ban on wildlife killing contests, Project Coyote recommends amending § 2003 of the Code by deleting subsection (d) in its entirety, which currently authorizes wildlife taking contests valued at $500.00 or less. We believe subsection (d) provides a loophole under which mass, indiscriminate wildlife killing contests for predators and other species are conducted. This loophole should be eliminated.

3. Wildlife Trapping

Through the passage of Proposition 4 (passed in 1998) and AB 789 (signed into law this year) restrictions were made to wildlife trapping and killing practices as reflected in California Fish and Game Code § 3003.1, § 3003.2 and § 12005.5 in 1998 (also known as "Proposition 4") and Code§ 4004, earlier this year. The Commission and Department should update sections of the Fish and Game Code relating to trapping and all sections of its rules and regulations adopted under those Codes to reflect these legislative changes and ensure consistency.

California Fish and Game Code § 3003.1 provides a gaping loophole through which snares may be used to take fur-bearing and non-game mammals to protect private property. Public surveys indicate that Californians do not support wildlife-killing methods deemed inhumane and indiscriminate. Moreover, increased media coverage of animals caught and suffering in snares and local efforts to prohibit the use of snares- including a proposal to ban their use in Los Angeles - the use of snares has led to heightened public concerns about their use in California (see attached article - and video link).

Both the code and regulations are presently riddled with inconsistencies regarding trapping, which must be eliminated in order to provide consistent guidance to both enforcement personnel and to the public. For example, Fish and Game Code§ 4004, which fails to provide a complete ban on the use of steel-jawed traps must be made consistent with Code§ 3003.1-- which clearly provides: "[i]t is unlawful for any person, including an employee of the federal, state, county, or

municipal government, to use or authorize the use of ***any*** steel-jawed leghold trap, padded or otherwise to capture any game mammal, fur-bearing mammal, nongame mammal, protected mammal, or any dog or cat." In addition, § 465.5 of the regulations relating to the use of traps-- which was not provided by the Department in its compilation of current policies, code sections and regulations regarding predator management and depredation-- continues to allow certain body-gripping traps and snares to trap furbearing and nongame mammals in situations unrelated to commerce or recreation.

Project Coyote's Executive Director Camilla Fox and Science Advisory Board member Dr. Paul Paquet served on a national advisory committee to assist the Sierra Club in developing a national policy on the use of traps. The Sierra Club's national board adopted this policy in 2012:

> **Policy on Trapping of Wildlife**
>
> Use of body-gripping devices* – including leghold traps, snares, and Conibear® traps – are indiscriminate to age, sex and species and typically result in injury, pain, suffering, and/or death of target and non-target animals.
>
> The Sierra Club considers body-gripping, restraining and killing traps and snares to be ecologically indiscriminate and unnecessarily inhumane and therefore opposes their use. The Sierra Club promotes and supports humane, practical and effective methods of mitigating human-wildlife conflicts and actively discourages the use of inhumane and indiscriminate methods.
>
> Sierra Club recognizes the rights of indigenous peoples under federal laws and treaties granting rights of self-determination and rights to pursue subsistence taking of wildlife.
>
> *Body gripping device – includes, but is not limited to, any snare (neck, body, or leg), kill-type trap (such as the Conibear®), leghold trap (including steel-jaw, padded, offs et), and any other device designed to grip a body or body part. This definition includes any device that may result in injury or death because of the mechanism of entrapment. Live cage and box t raps, and common rat and mousetraps shall not be considered body-gripping devices.
>
> Board of Directors, May 19, 2012.[1]

Project Coyote believes that this policy reflects national and international trends toward banning wildlife traps deemed cruel, non-selective, and ecologically unsound. We encourage the Department and the Commission to consider adopting this policy and banning snares by amending § 465.5 of the regulations and § 3003.1 of the Code. In so doing, California would be joining numerous other states that have outlawed snares including Illinois, Colorado, Washington, Connecticut, New York, New Hampshire, Oklahoma, Rhode Island, Vermont, North Carolina and South Carolina.

[1] See: http://www.sierraclub.org/policy/conservation/Trapping-Wildlife.pdf

4. Use of hounds for taking wildlife

The use of dogs to hunt mammals, also known as "hounding" often involves the use of high-tech radio collars and GPS devices that allow the hunter to monitor the dogs' activity from a distance. A pack of technologically outfitted dogs is released to chase a stressed wild animal for long distance, across all types of terrain, even sometimes including private property — with no direct oversight from the hunter. The dogs pursue the animal to the point of exhaustion then the dogs either attack and maul the animal—which may cause a lingering, traumatic and painful death, even resulting in injury to the dogs —or, the animal climbs a tree to escape the chase. Because the hunter is unable to keep up with the dogs and monitor their activity, the use of dogs can result in injury and death of non-target animals, including other wildlife species, pets, and farm animals. It can also result in damage to private property. Hound hunting violates the rules of "fair chase".

Current law allows the use of hounds for both pursuing and taking a variety of predators and other mammals classified as furbearers and nongame. Under § 1-89.1 of the California Fish and Game Code, the term "take" means to "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill" a species of wildlife. Public opinion polls do not support the use of dogs to "capture" or "kill" wildlife species. Last year the California legislature passed SB 1221, prohibiting the use of hounds for pursing and taking bears and bobcats and provided limited exemptions now reflected in Section 401. Such a prohibition should be applied equally to all species.

Project Coyote understands that the use of dogs may be justified in limited circumstances for scientific research purposes or to track and tree predators causing injury or damage to private property under a depredation permit issued by the Department. However, allowing the taking/killing of predators/mammals with hounds is ecologically unsound, ethically unjustifiable and counter to public sentiment. Moreover, allowing hounding for some species and not others creates myriad enforcement challenges. Project Coyote urges a ban on the taking of mammals with dogs to ensure consistency in the law and ease of enforcement in the field.

Initial Concluding Remarks

In closing, Project Coyote has been working to increase the acceptance and tolerance of native carnivores throughout California and is working directly with communities to implement effective strategies that promote coexistence and mitigate conflicts between people, wildlife and domestic animals. A prime example of these coexistence strategies is the Marin County Livestock and Wildlife Protection Program described in the attached summary. It has been our experience that when Californians come to understand 1) the important role native carnivores play in maintaining healthy ecosystems, 2) their intrinsic value, and 3) the inefficiency of lethal control, that they will support predator stewardship and conservation including non-lethal control measures. At the opposite end of this understanding lies unlimited and indiscriminate takings as exemplified by predator killing contests that appear to have no justifiable basis in ecology, ethics, or economics.

Enclosed, please find our initial proposed amendments to the Department's regulations and Code. We stand poised to work with the State to bring California to the forefront of predator stewardship and conservation, as supported by the majority of public opinion polls.

We urge you – as stewards of California's wildlife – to abide by your duty to preserve and protect all wildlife species for the citizens of the State.

Thank you for your consideration.

Respectfully submitted,

Camilla H. Fox
Executive Director

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Science Advisory Board, Project Coyote

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Literature Cited

Bergstrom, B.J., Arias, L.C., Davidson, A.D., Ferguson, A.W., Randa, L.A., and Sheffield, S.R. 2013. License to kill: reforming federal wildlife control to restore biodiversity and ecosystem function. Conservation Letters. DOI: 10.1111/conl.12045.

Crabtree, R.L. and Sheldon, J.W. 1999. Coyotes and Canid Coexistence in Yellowstone National Park. Chapter 6 in Ecosystems: The Yellowstone Experience, T. Clark, P. Curlee, P. Kareiva, and S. Minta, eds. Yale University Press, New Haven, CT.

Crooks, K. , and M. Soule. 1999. Mesopredator release and avifaunal extinctions in a fragmented system. Nature 400:563-566.

Estes JA, Terborgh J, Brashares JS, Power ME, Berger J, Bond WJ, Carpenter SR, Essington TE, Holt RD, Jackson JBC, Marquis RJ, Oksanen L, Oksanen T, Paine RT, Pikitch EK, Ripple WJ, Sandin SA, Scheffer M, Schoener TW, Shurin JB, Sinclair ARE, Soule ME, Virtanen R, Wardle DA. , 2011. Trophic Downgrading of Planet Earth Science 333: 301-306.

Fox, C. H. 2008. Analysis of the Marin County strategic plan for protection of livestock and wildlife, an alternative to traditional predator control. M.A. thesis, Prescott College, AZ. 120 pp. Larkspur, CA. and:

Fimrite, P. 2012. Ranchers shift from traps to dogs to fight coyotes. *San Francisco Chronicle* (P. 1, April 27, 2012). San Francisco, CA. Available from: http://www.sfgate.com/science/article/Ranchers-shift-from-traps-to-dogs-to-fight-coyotes-3514405.php

Messmer, T.A., Reiter, D., and West, B.C., 2001, Enhancing Wildlife Sciences' Linkage to Public Policy: Lessons from the Predator-Control Pendulum, *Wildlife Society Bulletin*, v. 29, p. 1255 (advocating that wildlife managers should "institutionalize new approaches to better address information lag time between scientific discovery and policy formation").

Ordiz, R.B., Bischof, R., and Swenson, J.E. 2013. Saving large carnivores, but losing the apex predator? Biological Conservation 168:128-133.

Ripple, W.J. and Beschta, R.L. 2012. Trophic cascades in Yellowstone: The first 15 years after wolf reintroduction. Biological Conservation 145: 205-213. doi:10.1016/j.biocon.2011.11.005.

Treves, A., Naughton-Treves, L., Shelley, V. Longitudinal Analysis of Attitudes Towards Wolves. 2013. Conservation Biology DOI 10.1111/cobi.12009

U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. http://www.census.gov/prod/2013pubs/fhw11-ca.pdf

Weaver, J.L., Paquet, P.C., and Ruggerio, L.F. 2002. Resilience and Conservation of Large Carnivores in the Rocky Mountains. Conservation Biology 10:964-976. DOI: 10.1046/j.1523-1739.1996.10040964.x

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PROJECT COYOTE

FOSTERING COEXISTENCE

Dear Interested Person or Party:

The following is a scientific opinion letter requested by Camilla Fox, Executive Director of Project Coyote. This letter outlines a response to the general question "What effect does reduction of coyotes (older than 6 months) have on the remaining population?" This question is central to the repeated claim that reduction (mortality) of adult coyotes from human control practices lessens predation on domestic sheep or game animals such as mule deer or antelope. Before I cover the three basic biological responses by coyote populations to reduction (described below), it is important to understand the type of "predator reduction" or "coyote control" in question. Most reduction programs, often referred to as control practices, are indiscriminate in nature, meaning the individuals removed (coyotes are killed not relocated) are probably not the offending individuals. Research (mostly funded and conducted by USDA Wildlife Services) has shown that offending individuals are most often breeding adults provisioning their pups. Breeding adult coyotes are very difficult to target and can be rapidly replaced (another pack member takes over their role). Even if some offending individuals are removed, there is great likelihood that the responses described below will take place anyway. Although removal of offending individuals may temporarily alleviate predation rates on the protected species, the alleviation is usually short-term and has long-term side-effects that can result in increased predation rates and increasingly ineffective control activities.

It cannot be over-emphasized how powerfully coyote populations compensate for population reductions. Such density dependent responses to exploitation (human-caused mortality) are common in mammals and present in all territorial populations at or near habitat saturation. Both evolutionary biology and the results of research (e.g., recently completed 20 year study in Yellowstone National Park before and after gray wolf reintroduction) indicate that the basis of their *demographic and behavioral* resiliency is embedded in their evolutionary history. Coyotes evolved, and learned to coexist, in the presence of gray wolves—a dominant competitor and natural enemy that overlapped the historic range of coyotes in North America. Prior to widespread human persecution starting in the mid-nineteenth century, wolves have provided a constant selection factor inflicting mortality, competition, and numerous other sub-lethal effects.

Collectively, these intense selective pressures by wolves resulted in a species that exists in a relatively constant state of colonization with many specialized adaptations. These demographic and behavioral adaptations are numerous and diverse and allow coyote populations to easily overcome the relatively mild effects of human control practices which are short-term and intermittent compared to sustained presence of wolves, from every month to many thousands of years.

Demographic compensation

The following demographic responses are based on published research, results of preliminary analysis of coyote study populations subjected to various levels of reduction or exploitation, and the work I have conducted with coyote populations in three study areas over the past 28 years in Washington (an unexploited population, not subject to human control or mortality), California (exploited), and Wyoming (unexploited then wolf mortality after reintroduction).

There is little, if any, scientific basis to justify control (reduction) programs that indiscriminately target adult coyotes. Wildlife Services often points out the lack of academic research demonstrating effectiveness. However, as with any federal action, the burden of proof is upon them to demonstrate both the biological and economical effectiveness of their proposed control activities. In fact, the mechanisms described below suggest that widespread control (even selective control) increases immigration, reproduction, and survival of remaining coyotes. It has been reported that sustained reduction of coyote numbers can only be accomplished if over 70% of the individuals are removed (exploited) on a sustained basis. Review of field research and modeling exercises (including my own) indicates that even with intensive control efforts, this level is rarely, if ever, achieved. A thorough review and synthesis of coyote ecology and demography can be found in a recent book chapter (see Crabtree and Sheldon 1999).

(1) Actual reduction in the density (and number of coyotes) does occur and is primarily a function of lower pack size for one year (betas, yearlings, and 6 month old pups are killed more often than reproducing adults or alphas). However, this reduction is compensated for in a wide variety of ways. First off, immediate immigration occurs in the reduction area by lone animals or from spatial shifts by surrounding social groups. At exploitation rates below 70%, the reproducing alpha males and females are replaced (seldom in the same year but always in the succeeding year). This is the expected response by most territorial species with surplus (non-breeding) adults. Their primary objective is to find a temporal opening, defend and exploit the food resources in that social group, pair-bond and breed.

(2) Human control resulting in density reduction results in a smaller social group size which increases the food per coyote ratio within the territory. The food or prey surplus is biologically transformed into somewhat larger litter sizes and almost always much higher litter survival rates (which are low in unexploited populations). Review of literature indicates that the increase in litter size at birth is not as great as was previously reported by Knowlton (1972). In addition to increased food availability for fast-growing pups, the surplus food improves the nutritional condition of breeding and associate adults, which translates in higher pup birth weights and higher pup survival. Alpha male coyotes and associate adults in the pack help feed the pups.

(3) Density reduction allows the pups that normally die during the summer months in populations with low to no mortality, to survive. Exploitation causing higher pup survival is fundamentally a function of the general mammalian reproductive strategy that delays the majority of reproductive energetic investment beyond the gestation period, the post-partum and neonate state (e.g., young pups). The caloric demand of offspring reaches an apex in May, June, and July when coyote pups grow very fast. Thus, the normal litter of six pups has a good chance of (a) surviving the typically high summer mortality period and, (b) being recruited into the pack

the following winter as adults thereby returning the previously exploited population to normal densities. By contrast, in the two unexploited populations I investigated, the average litter size at birth was 5 or 6, but due to high summer mortality, only an average of 1.5 to 2.5 pups survive. In populations subjected to less than 70% removal annually, there appears to be an ample number of breeding pairs to occupy all available territory openings and litter sizes of 6 to 8 enjoy high survival rates (most pups born survive to adulthood). This results in a doubling or tripling of the number of hungry pups that need to be fed. "Large packages" of prey, (such as sheep, as opposed to the more natural and common prey species of voles, mice, or rabbits) make for more efficient sources of nutrition because hunting adults have to invest less energy per unit of food obtained. Research funded by Wildlife Services clearly indicates that the primary motivation to kill domestic sheep is to provide food for fast-growing pups.

(4) Reductions in coyotes capable of breeding (at 10 months of age) result in smaller pack size which leaves fewer adults to feed pups. This may further add incentive for the remaining adults to kill larger prey as well as putting pressure on the adults to select for the most vulnerable prey and venture close to areas of human activity. Because predators like coyotes also learn what is appropriate food when they are pups, and are reluctant to try 'new' food sources unless under stress (such as having to feed a large litter of pups), reduction programs, in effect, may be forcing coyotes to try new behaviors (eating domestic livestock) which they would otherwise avoid. Research has clearly shown that higher numbers of adult pack members provide more den-guarding time and more food brought to pups. Without pressure to "maximize" efficiency in hunting for food for pups, packs may be able to subsist on larger numbers of smaller prey (e.g., rabbits and small rodents) rather than going for livestock or other, larger prey like antelope and mule deer fawns. Although, coyotes are exposed to significant risk of injury when hunting and killing larger prey, larger litter sizes might 'tip the balance' in favor of selecting larger prey and livestock.

(5) Reductions (non-selective, indiscriminate killing of adults) cause an increase in the percentage of females breeding. Coyote populations are distinctly structured in non-overlapping but contiguous territorial packs. About 95% of the time, only one female (the dominant or alpha) in a pack breeds. Other females, physiologically capable of breeding, are "behaviorally sterile". Exploitation rates of 70% or higher are needed to decrease the number of females breeding in a given area. Either a subordinate female pack member, or an outside, lone female can be quickly recruited to become an alpha or breeding female. My research has shown that light to moderate levels of reduction can cause a slight increase in the number of territories, and hence the number of females breeding.

(6) Reduction or removal of coyotes causes the coyote population structure to be maintained in a colonizing state. For example, the average age of a breeding adult in an unexploited population is 4 years old. By age 6, reproduction begins to decline whereby older, alpha pairs maintain territories but fail to reproduce. This may eliminate the need to kill sheep or fawns in the early summer in order to feed pups. Exploiting or consistently reducing coyote populations keeps the age structure skewed to the younger more productive adults (average age of an alpha is 1 or 2 years). Therefore, the natural limitations seen in older-aged, unexploited populations are absent and the territorial, younger populations produce more pups.

(7) Reductions in adult density of coyotes also cause young adults (otherwise prone to dispersing) to stay and secure breeding positions in the exploited area. This phenomenon is well-

documented by research conducted by Wildlife Services and other researchers. Research also indicates that this is the age class most frequently involved in conflicts.

Alternate prey

An aspect of coyote predation on livestock that is often overlooked is the availability, or dearth of alternate prey. Wildlife Services' research has demonstrated that coyotes will avoid novel prey, such as domestic livestock. In addition, it is risky for coyotes to predate upon domestic livestock because of human control actions associated with this behavior. Related research indicates that predators switch to alternative prey when a preferred prey item is absent or in low numbers. Voles and other rodents like jackrabbits are a preferred major staple of coyotes in the West. These prey species require cover and ample supplies of forage (grass and forbs). On many western rangelands grasses, forbs, and protective cover have been greatly reduced by domestic livestock grazing, leaving predators with fewer preferred prey to utilize. Present or historic grazing impacts should be assessed as a likely means of predicting overall predation rates on other prey species, especially prey like domestic sheep, which are already vulnerable to predators due to their lack of anti-predator behaviors.

Accelerated selection pressures and learned behaviors

A relatively unexplored, but promising avenue of research is the long-term genetic and behavioral changes in coyote populations subjected to decades of exploitation. It seems obvious that the type of selection pressures and selection rates have been greatly changed for coyote populations, after a century of exploitation at 20% to 70% per year. More nocturnal, more wary, more productive, more resilient individuals have probably been intensively selected for. This in turn may cause coyote populations to resist control practices that previously were effective. In addition, the possibility of social facilitation and learning may be altered or reduced. Coyotes, like many mammals, learn to habitually use certain prey or habitats from other individuals in the population, especially from older adults in their social group (if they have one). Coyotes, already a highly social and adaptable species, are held in a younger colonizing state when they are exploited, and learned or traditional behaviors may be lost. Individuals are therefore more susceptible to learning novel prey sources or trying out novel habitat types, and are frequently associated with conflicts such as livestock predation.

There are many questions to be answered such as, "How will coyote populations respond once predator reduction or control programs are terminated?" or "Are there other management alternatives, both lethal and non-lethal, that may be effective in reducing predation on domestic livestock"? "How do economics figure into management options"? This letter and scientific opinion only addresses the narrow, but important topic of the impacts of human-caused reduction or 'control' on coyote demographic parameters. We see little, if any, evidence to justify control practices on an ecological basis. This letter also addresses a long-held belief that human control of coyote populations are 'necessary', similar to 'mowing a lawn' to keep it from growing out of control. This belief has no scientific basis whatsoever. Even research conducted by Wildlife Services reports a variety of factors that keeps the lawn from growing. Their research repeatedly concludes that the primary means of population limitation is territoriality itself, which imposes an upper limit on density (or lawn height). Paradoxically the prevalent use of lethal control by Wildlife Services opens up a 'Pandora's box' of behavioral and demographic responses that negate any long-term effectiveness of control. The predominant responses of coyote populations to lethal control efforts are to: (1) increase the number of pups produced (recruitment), (2)

increase immigration into the conflict area, and (3) increase behaviors that further exacerbate the conflict. Collectively, this results in higher predation rates on domestic livestock and wild ungulates.

Coyotes are still products of their evolutionary past. Biological, economical, and ecological evaluation of control practices should be a requirement undertaken before any public or private effort to reduce losses due to coyotes or any other predator. In conclusion, it is my opinion based on decades of field research that the common practice of reducing adult coyote populations on western rangelands is most likely ineffective and likely causes an increase the number of lambs, fawns, and calves killed by coyotes.

A Summary of the Effects of Exploitation on Predator Populations

The 20 responses listed below are divided into four general categories: (1) demographic compensation, (2) behavioral response, (3) changes in culture/society, and (4) ecosystem impacts. How many of these occur—and their individual magnitudes—will vary by species, the severity and type of control action taken, habitat, season, prey availability, and presence of competing carnivores in the target area. Interactions between the 20 responses listed below can be unpredictable; however, scientific findings and biological common sense both indicate that they 'amplify' in a manner that renders indiscriminate killing ineffective and results in a multitude of detrimental effects on individuals, species populations, and the entire predator-prey ecosystem.

Demographic Compensation: (this is a particularly strong response for coyote populations because the primary reason they kill ungulate neonates, both domestic and wild, is to feed fast-growing pups)

- Breeding adults produce more pups when there is direct reduction in territorial pack size. There is a weak to negligible effect on litter size at birth; however, the compensatory response of litter survival is remarkable. For example, prior to wolf restoration, adult coyote mortality averaged only 9%, pack size was 6, and litter survival was 28%. After wolf restoration, adult coyote mortality increased to 30% to 50%, pack size fell to 3, and coyote pup survival abruptly rose to 78%—a nearly three-fold increase. Analysis from 20+ field studies indicated a similar response to human exploitation.
- Immigration of breeding adults into the exploited area to fill vacant territories and find available mates. This response can be immediate. I have documented successful coyote litters in territories where the pregnant female was killed one month earlier (ascension by

a pregnant beta female—Wildlife Service's own research documents this phenomenon—nearly all non-alpha females are pregnant on an annual basis).

- A higher percentage of females breed and produce pups. Two litters per territory can also occur with abundant/available prey.
- The average age of reproductive females is lowered, eliminating older, less productive alpha females. First-time breeders (young alphas) have higher pup survival than older breeding pairs.
- Increased natal philopatry—yearlings and young betas tend to forego dispersal and continue to reside in the exploited area.
- Regardless of the level of exploitation, the number of breeding pairs in a target area is consistent from year to year unless 70% or more of the coyote population is removed annually. This level of control is extremely difficult and costly to achieve let alone document.

Behavioral Responses:

- Lower pack size results in selection of larger prey items (e.g., ungulate neonates) over more numerous small prey items (e.g., rodents). This is particularly detrimental to livestock when alternate prey abundance is low which is often due to overgrazing practices.
- Adjust vocal communications—less vocal around humans.
- Activity cycles—more nocturnal and less diurnal.
- Denning behavior (guarding and location)—less susceptible to enemies.
- Avoidance of novel stimuli including control techniques. Perceived avoidance of sustained control activities.

Changes in the Culture/Society:

- Increases in information sharing within and between new territorial pack members; this leads to increased exposure to novel prey (livestock).
- Because there is a strong shift to fewer subordinates—betas are immediately recruited to alpha breeding status—livestock-killing alpha adults are predominant in the population structure.
- Killing the alpha male results in immediate replacement or the remaining pack breaks apart and disperses to form breeding pairs elsewhere.
- Indiscriminate control methods have accelerated and amplified selection pressures to perpetuate a 'dispersal genotype' adapted to rapidly colonize and successfully reproduce. Remember that during the predator eradication era (approximately 1860's to 1960's), large carnivore populations declined substantially (with regional extirpation) while coyotes tripled their abundance and distribution across North America.
- Their cultural evolution likely interacts with their biological evolution to further accelerate and amplify selection pressures.

Ecological Impacts:

- Mesopredator release: Decrease in apex predator populations reduces the competition and/or intraspecific killing rates with other predators or mesopredators (e.g., foxes, raccoons, skunks, feral cats, etc.). This causes an increase in their abundance (i.e., release), which in turn, can have detrimental effects on other species (e.g., ground-nesters, songbirds, amphibians, and rodents) and other unintended 'ripple' effects or trophic cascades.
- Loss of ecosystem services: alleviation of control pressures on prey populations (e.g., rodents, large herbivores) can lead to vegetation changes.
- Loss of ecosystem services: Disruption and increase of disease spread.
- Loss of ecosystem services: Loss of subsidies to scavengers (e.g., wolves provides food for many other species).

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PROJECT COYOTE

FOSTERING COEXISTENCE

To Whom It May Concern,

On behalf of Project Coyote's Science Advisory Board and the undersigned scientists we express our support for the prohibition of wildlife killing contests (WKC), derbies and tournaments, including prohibition of contests targeting coyotes, which are promoted throughout the United States.

The most general reason to prohibit WKCs is that hunters and wildlife managers believe, as a community, that killing animals without an adequate reason is unjustified and unsportsmanlike. Killing an animal for a prize or trophy constitutes killing without an adequate reason. Insomuch as WKC are primarily motivated by killing for a prize or trophy, they are wrong.

Some advocates of WKCs argue that they are important for achieving management objectives for other species, especially game species. There is no credible evidence that indiscriminate killing of coyotes or other predators effectively serves any genuine interest in managing other species. If leaders in the hunting and wildlife management community believe that WKCs, in general, serve important objectives, then the principles of wildlife management mandate that (1) these objectives be articulated and vetted by the best-available science, and (2) some reasonable, science-based case be made to justify a WKC as an appropriate means for achieving these objectives. In the absence of such an evaluation, WKCs should be prohibited.

Advocates of WKCs might argue that they – when directed at predators, especially coyotes – are an important means for realizing one or both of these objectives: (1) decrease the loss of livestock to depredation, and (2) increase the abundance of prey species in the interest of maximizing hunting success by humans.

With respect to objective (1), a great deal of science has been developed on how to effectively manage depredations, including both lethal and non-lethal methods. Lessons from that science include:

(i) Indiscriminate killing is ineffective and it is plausible, perhaps likely, that when associated with a WKC it would lead to increased risk of depredations. A primary reason for this concern is that only some, often only a few, individual predators participate in depredation. Indiscriminate and "pre-emptive" killing of predators

associated with WKCs can lead to the disruption of predators' social structure and foraging ecology in ways that increase the likelihood of depredations. In hunted (exploited) coyote populations, for example, the number of surviving pups that must be fed by the alpha parents and the number of transient individuals may increase. These factors may predispose more coyotes to depredate livestock.

(ii) The indiscriminate killing associated with a WKC does not target: (a) the offending predator, (b) the site where depredation has occurred, and (c) the time when depredation has occurred. This renders WKCs ineffective as a means of depredation control.

While managing to reduce the loss of livestock is a common goal for all stakeholders, WKCs do not contribute to this goal and may work against it.

With respect to objective (2), a large body of science indicates that killing predators, especially under circumstances associated with WKCs, is not a reliable means of increasing ungulate abundance. The circumstances most likely to result in increased ungulate abundance are also the circumstances most likely to impair important ecosystem benefits and services that predators provide. Even when predators are killed to the point of impairing the ecosystem services, there is still no assurance that ungulate abundance will increase. The reason being is that ungulate abundance is frequently limited by factors other than predators – factors such as habitat and climate.

Beyond objectives (1) and (2), which focus on affecting game populations and livestock depredations, lies a need to better recognize and celebrate the predators' valuable contribution to the health and vitality of our ecosystems. For example, predators serve human interests through beneficial effects such as rodent control and disease prevention and promoting diverse plant communities and soil fertility. Thus, reduction of the distribution and numbers of apex predators can have detrimental ecological effects.

Some advocates of WKCs might also believe that killing coyotes is vitally important for preventing coyote populations from growing out of control. This concern is unjustified. Science demonstrates that unexploited coyote populations self-regulate their numbers by means of dominant individuals defending non-overlapping territories and suppressing subordinate pack members from breeding.

The Boone and Crockett Club was founded by Theodore Roosevelt in 1887 "over the concerns that we might someday lose our hunting privileges and the wildlife populations for future generations"[1], is still considered one of the most respected sportsmen's institutions in North America. The Club "does not support programs, contests or competitions that directly place a

[1] From B&C's website: http://www.boone-crockett.org/join/associates_faq.asp?area=join
[2] See: http://www.boone-crockett.org/bgRecords/position_statements.asp?area=bgRecords

bounty on game animals by awarding cash or expensive prizes for the taking of wildlife"[2] because WKCs contravene the club's "fair-chase" motto.

Thank you for considering our concerns on this important wildlife conservation issue.

Respectfully submitted,

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Appendix A. Additional Literature Cited

Here we provide additional scientific explanation (with citations) for two ideas expressed in this letter.

(1) **Some advocates of wildlife killing contests (WKCs) believe they are necessary or beneficial for effective management of livestock depredation.** We indicated that WKCs are unlikely to have this effect. The reason why is that most individual predators do not participate in livestock depredations (Gipson 1975; Knowlton et al. 1999; Sacks et al. 1999a, 1999b; Linnell et al. 1999; Stahl and Vandel 2001; Blejwas et al. 2002; Treves et al. 2002; Treves and Naughton-Treves 2005). Consequently, effective management of depredation requires (1) targeting the offending individual(s), and (2) intervening close to the site where the depredations occurred as well as responding in a timely manner (Gipson 1975; Sacks et al. 1999a, 1999b; Smith et al. 2000; Bangs and Shivik 2001). WKCs do not represent the kind of targeted effort required for effective management of livestock depredations.

Moreover, indiscriminate killing of predators is likely to exacerbate risks to livestock. The reason is that killing social carnivores like coyotes (and wolves) can lead to the disruption of predators' social and foraging ecology in ways that increase the number of transient individuals

(Bjorge and Gunson 1985; Haber 1996; Treves and Naughton-Treves 2005; Brainerd et al. 2008). These transient individuals that have not been acculturated (aversively conditioned) to living in areas with livestock may be more likely to kill livestock. Studies by USDA's Wildlife Services clearly indicate that many, if not most, depredations are inflicted by the breeders (i.e., alphas) in coyote social groups (Knowlton et al. 1999; Sacks et al. 1999b). Even if the offending individuals are removed, they can be replaced by other members of the social group or from populations outside the area where the WKC is occurring. In some cases, this can also increase reproductive performance in coyotes (Crabtree and Sheldon 1999; Knowlton et al. 1999). Scientific evidence is increasingly suggesting that harvesting predators can exacerbate losses to livestock (Collins et al. 2002; Treves et al. 2010, Peebles et al. 2013, Wielgus and Peebles 2014).

(2) **Some advocates of wildlife killing contests believe they are necessary or beneficial for increasing the abundance of ungulate populations. We had indicated in our letter that WKCs are unlikely to have that effect.** The reason why is two fold:

(i) Killing predators cannot result in increased ungulate abundance in cases where the ungulate population is not limited by predators, but is instead limited by other factors, such as climatic conditions or food availability (Sæther 1997; Forchhammer et al. 1998; Coulson et al. 2000; Parker et al 2009). Without careful study, the claim that killing predators will improve wild ungulate populations is simply an unsupported assumption. Moreover, scientists are not good at understanding the conditions that cause a population to be limited by predators as opposed to other factors (Vucetich et al. 2005; Wilmers et al. 2006). For example, an experimental study in Idaho (Hurley et al. 2011) found that annual removal of coyotes was not an effective method to increase mule deer populations because coyote removal increased neonate fawn survival only under particular combinations of prey densities and weather conditions.

(ii) Even in cases where predators do limit prey abundance, human-caused mortality (HCM) could only lead to an increase in prey abundance if the rate of HCM was sufficient to result in a significant reduction in predator abundance. Human-caused mortality is not a reliable means of reducing coyote abundance unless the rate of HCM exceeds 70% (Connolly and Lonhurst 1975). It is difficult to imagine that any set of WKCs would be intense enough or frequent enough to result in that rate of HCM.

Finally, the interest of some advocates of WKCs (i.e., increased ungulate abundance) is antithetical to good natural resource management practices in cases where increased ungulate abundances present a risk of overbrowsing (e.g., Côté et al. 2004).

Thank you for allowing us to further explain ourselves. If additional explanation on this or any other topic would be of value, please let us know. We would be eager to provide any such explanations.

Citations

Bangs, E., & Shivik, J. A. (2001). Managing wolf conflict with livestock in the northwestern United States. USDA National Wildlife Research Center-Staff Publications, 550.

Blejwas K.M., Sacks B.N., Jaeger M.M., McCullough D.R. (2002). The effectiveness of selective removal of breeding coyotes in reducing sheep predation. J Wildl Manage 66, 451-462.

Brainerd, S. M., Andrén, H., Bangs, E. E., Bradley, E. H., Fontaine, J. A., Hall, W. & Wydeven, A. P. (2008). The effects of breeder loss on wolves. The Journal of Wildlife Management, 72(1), 89-98.

Bjorge, R. R., and J. R. Gunson. (1985). Evaluation of wolf control to reduce cattle predation in Alberta. Journal of Range Management 38:483-486.

Collins, G.H., R. B. Wielgus, And G. M. Koehler. (2002). Effects of sex and age on American black bear conifer damage and control. Ursus 13:231–236.

Connolly, G. E., and W. M. Longhurst. (1975). The effects of control on coyote populations: A simulation model. Division Agricultural Science, University of California, Davis, Bulletin 1872.

Côté, S. D., Rooney, T. P., Tremblay, J. P., Dussault, C., & Waller, D. M. (2004). Ecological impacts of deer overabundance. Annual Review of Ecology, Evolution, and Systematics, 113-147.

Coulson, T., Milner–Gulland, E. J., & Clutton–Brock, T. (2000). The relative roles of density and climatic variation on population dynamics and fecundity rates in three contrasting ungulate species. Proceedings of the Royal Society of London. Series B: Biological Sciences, 267(1454), 1771-1779.

Crabtree, R. L., and J. W. Sheldon. (1999). Coyotes and canid coexistence. In Carnivores in ecosystems: The Yellowstone experience, ed. T. W. Clark et al., 127–163. New Haven: Yale University Press.

Forchhammer, M. C., Stenseth, N. C., Post, E., & Landvatn, R. (1998). Population dynamics of Norwegian red deer: density–dependence and climatic variation. Proceedings of the Royal Society of London. Series B: Biological Sciences, 265(1393), 341-350.

Gipson P.S. (1975). Efficiency of trapping in capturing offending coyotes. Wildlife Management 39, 45-47.

Knowlton F.F., E. M. Gese, Jaeger M.M. (1999). Coyote depredation control: An interface between biology and management. Journal of Range Management **5**2, 398-412.

Haber, G. C. (1996). Biological, conservation, and ethical implications of exploiting and controlling wolves. Conservation Biology 10:1068-1081.

Linnell J.D.C., Odden J., Smith M.E., Aanes R., Swenson J.E. (1999). Large carnivores that kill livestock: do problem individuals really exist? Wildl Soc Bull 27, 698-705.

Parker, K. L., Barboza, P. S., & Gillingham, M. P. (2009). Nutrition integrates environmental responses of ungulates. Functional Ecology, 23(1), 57-69.

Peebles, K. A., R. B. Wielgus, B. T. Maletzke, And M. E. Swanson. (2013). Effects of remedial sport hunting on cougar complaints and livestock depredations. PloS ONE. DOI: 10.1371/journal.pone.0079713.

Ritchie EG, Elmhagen B, Glen AS, Letnic M, Ludwig G, McDonald RA. (2012). Ecosystem restoration with teeth: what role for predators? In: Trends Ecol. Evol. 27(5):265-271.

Sacks B.N., Blejwas K.M., Jaeger M.M. (1999a). Relative vulnerability of coyotes to removal methods on a northern California ranch. J Wildl Manage 63, 939-949;

Sacks, B. N., M. M. Jaeger, J. C. C. Neale, and D. R. McCullough. (1999). Territoriality and breeding status of coyotes relative to sheep predation. Journal of Wildlife Management 63:593-605.

Sæther, B. E. (1997). Environmental stochasticity and population dynamics of large herbivores: a search for mechanisms. Trends in Ecology & Evolution, 12(4), 143-149.

Smith, M. E., Linnell, J. D., Odden, J., & Swenson, J. E. (2000). Review of methods to reduce livestock depredation II. Aversive conditioning, deterrents and repellents. Acta Agriculturae Scandinavica, Section A-Animal Science, 50(4), 304-315

Stahl P., Vandel J.M. (2001). Factors influencing lynx depredation on sheep in France: Problem individuals and habitat. Carnivore Damage Prevention News 4, 6-8.

Treves A., Naughton-Treves L. (2005). Evaluating lethal control in the management of human-wildlife conflict. pp. 86-106 in R. Woodroffe, S. Thirgood, A. Rabinowitz editors. People and Wildlife, Conflict or Coexistence. Cambridge University Press, Cambridge, UK.

Treves, A., R. L. Jurewicz, L. Naughton-Treves, R. A. Rose, R. C. Willging, and A. P. Wydeven. (2002). Wolf depredation on domestic animals: control and compensation in Wisconsin, 1976-2000. Wildlife Society Bulletin 30:231-241.

Treves, A., K. J. Kapp, And D. Macfarland. (2010). American black bear nuisance complaints and hunter take. Ursus 21:30–42. doi: 10.2192/09gr012.1

Vucetich, J. A., Smith, D. W., & Stahler, D. R. (2005). Influence of harvest, climate and wolf predation on Yellowstone elk, 1961-2004. Oikos, 111(2), 259-270.

Wielgus, R. B. And K. A. Peebles. (2014). Effects of Wolf Mortality on Livestock Depredations. PLoS ONE 9(12): e113505. doi:10.1371/journal.pone.0113505.

Wilmers, C. C., Post, E., Peterson, R. O., & Vucetich, J. A. (2006). Predator disease outbreak modulates top-down, bottom-up and climatic effects on herbivore population dynamics. Ecology Letters, 9(4), 383-389.

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Mother Jones

By Bridget Huber, FairWarning.org

Tue Mar. 10, 2015 6:00 AM EDT

From Mother Jones (http://www.motherjones.com/environment/2015/03/killing-coyotes-bobcats-and-foxes-fun-and-profit)

These Gory New Hunting Competitions Have Taken the Country by Storm

Photo: Margaret Lloyd

Contestants can earn tens of thousands of dollars for killing coyotes, bobcats, and foxes.

This story was published by FairWarning, a Los Angeles-based news organization focused on public health, safety and environmental issues.

Standing in a West Texas sporting goods store parking lot on a recent Sunday morning, Margaret Lloyd felt like she'd wandered onto the set of a gory movie. The lot was packed with trucks full of dead coyotes, foxes and the occasional bobcat; one pickup had a cage welded to its bed, and it was crammed with carcasses. "It was one wave of fur, tails on top of ears and ears on top of tails," she said. "It was just horrifying."

Around back, participants in the West Texas Big Bobcat Contest were weighing their kill in a competition to see who had shot the biggest bobcat and the most coyotes, gray foxes and bobcats in a 23-hour period. Some $76,000 in prize money was at stake—more than $31,000 went to the team that bagged a 32 pound bobcat. Other jackpot winners were a four-man team that killed 63 foxes, a team that killed 8 bobcats, and another that killed 32 coyotes.

Lloyd, a retired lawyer who lives in Galveston and stopped to take pictures of the bobcat contest while driving from New Mexico back to Texas, grew up in the South among hunters and says she's not opposed to killing animals for food or to protect a herd.

"This is not hunting," she said. "This is a blood sport, plain and simple."

Contests like these—often called coyote calling contests, varmint hunts or predator hunts—have become popular events, especially in the Midwest and West. The website CoyoteContest.com lists 21 states with upcoming or recent killing contests, including Arizona, Idaho, Illinois, Indiana, Iowa, Michigan, Minnesota, New York, South Dakota and Utah.

The Big Bobcat competition in San Angelo, Texas started in 2008 with just 19 teams, but drew 380 teams to the contest last month. "They're growing exponentially," said Geoff

Nemnich, a champion coyote hunter who is cashing in on the phenomenon. His website, Coyote Craze, exhorts visitors to "Feed Your Addiction" and offers videos of coyotes being dispatched by high-powered weapons, along with t-shirts that read "Coyotes Fear Me," and depict dead coyotes hanging by their feet. "Almost every weekend you can find [a contest] somewhere within driving distance," he said.

But as these contests proliferate, efforts to stop them are, too. In December, California Fish and Game Commission outlawed contests that award prizes for killing wildlife (the ban takes effect in April). Legislation to bar such contests passed the New Mexico state senate but died in the house. In Nevada, a petition to prohibit predator-killing contests is pending before the state Board of Wildlife Commissioners. And protesters blasting the events as indiscriminate slaughter have been demonstrating outside of contests and related events, like the Predator Masters convention in Arizona in January.

Wildlife defenders cite research that suggests killing adult coyotes may actually increase the population, since it allows more pups to survive. Predators like coyotes also fill an important role in the ecosystem by helping keep the population of rodents in check.

Jeremy Harrison, a fifth-generation rancher, organized the Big Bobcat contest in Texas. He said coyote contests do a public service by reducing the number of livestock predators and protecting the public from rabies. "This is not bashing baby seals in the head," he said.

To those who are offended, he has simple advice: Butt out. "It's none of their business. It has nothing to do with them," he said. "It's one of the best things about this beautiful state of Texas. We have 100 percent support from Texas and from the local people. If they don't like it, they can just stay away from it."

Opponents of these events call people like Harrison "thrill killers." And there is a jarring sort of gleefulness that surrounds the slaughter—one Arizona group holds a Santa Slay hunt in December each year. Nemnich posts excerpts from his videos, which are sold at Cabela's and similar stores, on YouTube. Set to stirring martial music, one sizzle reel shows coyote after coyote being called and then gunned down.

Nemnich, who said his videos portray hunting "in the best light possible", encourages others not to post "distasteful" images because it will provoke animal rights groups or turn people who are neutral against hunting. "You don't go and post a video of a coyote with his guts blown out on Facebook," he said. "It just fuels the fire."

Nemnich, who boasts on his website that two of his sons bagged their first coyotes at the age of five, said he gets a steady stream of hate mail. One message said his kids should be "gut shot" like the coyotes in the video. ("And I'm the barbarian?" he said.) He thinks the critics of coyote killing contests have a bigger agenda — to ban hunting altogether. "We're killing animals for money and prizes. That's the easiest way for them to get their foot in the door," he said.

Photo: Margaret Lloyd

Both Nemnich and Harrison pointed out that the federal government kills thousands of coyotes each year. They said the US Department of Agriculture's Wildlife Services division uses much less "sportsmanlike" means, such as poisons and leg-hold traps.

Contests are completely legal, Nemnich said. "Some may consider it ethically wrong, but hunting has been around forever, it's who we are out in this part of the country."

Myron Levin and Stuart Silverstein contributed to this story.

© Daniel Dietrich Photography.

Ranching with Predators

Become a test site for innovative non-lethal predator control devices.

Project Coyote and the Snow Leopard Conservancy have joined forces to test predator deterrent methods for livestock protection including disruptive stimuli-based deterrents such as Foxlights (www.foxlights.com).

These products have shown promise across the globe in protecting livestock and crops from species ranging from Snow Leopards in Nepal to Elephants in India.

Project Coyote and Snow Leopard Conservancy team help install Foxlights on sheep ranch in Tomales, CA © Caroline Kraus.

We have begun testing these and other new and innovative non-lethal devices in Northern California to protect livestock from coyotes, mountain lions and other predators.

There is no cost to the rancher (although we can sell them at cost to interested ranchers following our agreed to test period). We provide all equipment and help place the lights in areas where they will be most effective. These lights are easy to install on T-Posts or even trees, depending on their location. They are also easy to move (to minimize habituation) and to take down. They do not disturb livestock or pets, but the lights may be intrusive if placed too close to homes. We may also install camera traps to monitor any predators that may visit or be in area.

Ideal test sites:

- Are currently experiencing livestock losses from predators;
- Have corrals or smaller pastures to contain livestock at night;
- Have little ambient light in areas where lights will be installed.

Testing runs through lambing or calving season, or generally two or three months depending on the test site. Ranchers are only required to keep basic notes recording any predator activity noticed during the testing period. We only need to enter property during set up, and again at the end of testing to retrieve equipment (lights may need to be moved during testing period to minimize the chances of habituation).

For more information about our testing, or to speak to someone about becoming a test site please contact:

Keli Hendricks – Ranching with Predators Coordinator, Project Coyote
707 479-7806
darbyhendricks@yahoo.com

THE HUFFINGTON POST

By Lydia O'Connor

Posted: 12/05/2014 5:26 pm EST
Updated: 12/05/2014 5:59 pm EST

From The Huffington Post
(http://tinyurl.com/mo6urpw)

© Perry McKenna Photography

California First State To Ban Wildlife-Killing Contests, Activists Say

You'll no longer be allowed to kill coyotes, foxes, bobcats and other animals to win a prize in California. The state just became the first to outlaw such hunting competitions, according to conservationists.

The California Fish and Game Commission voted Wednesday to ban predator killing contests for prizes. The events are popular among ranching communities but opposed by conservationists who say the practice is cruel and counterproductive.

"Awarding prizes for wildlife killing contests is both unethical and inconsistent with our current understanding natural systems," commission President Michael Sutton said in a press release. "Such contests are an anachronism and have no place in modern wildlife management."

The ban comes after conservationist group Project Coyote approached the commission with concerns for the safety of California's lone wolf, known as Journey or OR-7, who was moving throughout Modoc County, home of a major predator killing contest called Coyote Drive, earlier this year.

Camilla Fox, Project Coyote founder and executive director, told The Huffington Post the historic ban specifically targets "people who actually enjoy killing for fun and prize," not ranchers who are concerned for the safety of their livestock.

"Because of the random nature of killing contests, you're very often removing non-offending animals who are protecting the area," Fox explained. "Indiscriminate lethal control can destabilize a family group structure and can lead to increased pup survival."

The San Francisco Chronicle points to studies that have found coyotes breed more often when pack leaders are killed, since those alphas are responsible for mating. When they are killed, underlings take on their role, and the packs grow exponentially.

Fox also calls the contests a safety concern for humans, pointing to a February incident in California's El Dorado County in which a game warden who was patrolling a predator killing contest at night was mistakenly shot.

Steve Gagnon, owner of the Adin Supply Outfitters, which has sponsored the Coyote Drive in Modoc County, told HuffPost he had no reaction to the ban, as he had decided to stop sponsoring the event.

"There was a lot of heat that my employees were getting, and they were having to field some pretty ugly phone calls," Gagnon said. "We've had some death threats."

It is unclear when Gagnon decided to stop sponsoring the annual Coyote Drive contest, as local news surrounding the most recent contest in February named him as an event sponsor and reported on an altercation he had with a 73-year-old opponent to the contests. He could not be reached for comment to clarify.

The effective date of regulation is still pending.

From:	Mastrup, Sonke@FGC
To:	FGC
Subject:	Fwd: Background info.
Date:	Thursday, July 16, 2015 10:19:10 AM
Attachments:	Coyote.Peter_OpEd_SFChronicle.pdf ATT00001.htm SFChronicle_Wildly_Misjudged_City_Coyote"s_Plight.pdf ATT00002.htm KCET_ReWild_Losing_Big_Carnivores.pdf ATT00003.htm

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Materials provided to Eric.

Sent from my iPhone

Begin forwarded message:

From: "Eric Sklar" [redacted]
To: "Mastrup, Sonke@FGC" <[redacted]
Subject: FW: Background info.

Additional materials sent me by Camilla Fox. She also handed me some materials which I will scan and send.

From: Camilla Fox, Project Coyote [redacted]
Sent: Monday, July 13, 2015 9:43 PM
To: Eric Sklar
Subject: Re: Background info.

Great ~ see you then! Sharing a few more articles as background…

—
CAMILLA H. FOX | FOUNDER & EXECUTIVE DIRECTOR
PROJECT COYOTE | www.ProjectCoyote.org
HQ OFFICE: P.O. Box 5007 Larkspur, CA 94977 | 415.945.3232
FACEBOOK: ProjectCoyote | TWITTER: @ProjectCoyote

From: Eric Sklar [redacted]
Date: Monday, July 13, 2015 at 7:42 PM
To: Camilla Fox [redacted]
Subject: Re: Background info.

Yep, that works!

Eric Sklar

Sent from my iPhone

On Jul 13, 2015, at 6:49 PM, Camilla Fox, Project Coyote [redacted] wrote:

> Hi Eric- if okay by you we'd prefer to stick with the noon meeting in Napa as Rick and Keli have shifted their schedules to make this work. Please let me know if this still works for you.
>
> Thank you!
>
> Camilla
>
> —
> **CAMILLA H. FOX | FOUNDER & EXECUTIVE DIRECTOR**
> **PROJECT COYOTE | www.ProjectCoyote.org**
> HQ OFFICE: P.O. Box 5007 Larkspur, CA 94977 | 415.945.3232
> FACEBOOK: ProjectCoyote | TWITTER: @ProjectCoyote
>
> ---
>
> **From:** Eric Sklar [redacted]
> **Date:** Monday, July 13, 2015 at 4:30 PM
> **To:** Camilla Fox [redacted]
> **Subject:** RE: Background info.
>
> Hi Camilla,
>
> Thanks for all the info. I just had a cancellation for my morning meeting. I can meet earlier or later if you like in Saint Helena.
>
> Let me know.
>
> Eric
>
> ---
>
> **From:** Camilla Fox, Project Coyote [redacted]
> **Sent:** Monday, July 13, 2015 1:31 PM
> **To:** Eric Sklar
> **Subject:** Background info.
>
> Dear Eric,
>
> In advance of our meeting on Wednesday, I want to share some background information about Project Coyote and our areas of interest with regard to the Fish and Game Commission and the Wildlife Resources Committee (WRC).

Based in Marin County, Project Coyote (a national non-profit organization) is a coalition of educators, scientists, predator-friendly ranchers and citizen leaders promoting coexistence between people and wildlife through education, science and advocacy.

Project Coyote has played a lead role in promoting reform of California's predator management policies, regulations and statutes. We successfully pressed that predator management reform be prioritized by the WRC (with Commissioner Baylis' support and leadership) and are hopeful that this will continue to be a priority for both the WRC and the Commission.

One of the first areas that we addressed through this process was predator killing contests. With the support and leadership of Commissioners Sutton, Rogers and Baylis, the Commission closed the loopholes on this practice making it illegal to provide prizes and inducements for the killing of most terrestrial mammals. (Please see attached background.)

We believe the next step in this process is for the WRC and Commission to develop a predator stewardship and conservation plan that would address issues related to 1) the appropriateness of unlimited killing of predators (including coyotes, foxes and bobcats), 2) how the state can better address conflicts with predators in both urban and agricultural areas, and 3) how the state can collaborate with NGOs like Project Coyote to better educate the public, ranchers and others about coexistence.

With regard to implementation of the Bobcat Protection Act, currently we are supporting Option 2. For reasons outlined in the attached materials, Project Coyote and allied organizations support a statewide ban on bobcat trapping.

As we will explain in greater detail when we meet on Wednesday, we approach wildlife management from the standard of "best available science" (a standard recognized by state and federal wildlife agencies in creating wildlife management regulations and policies). We also believe that ethics plays a key role in wildlife management in addition to science. These points also are outlined in the attached materials.

You can also view several of our related video clips of the Commission meetings that addressed our priority areas of concern w/ regard to predator management reform:

https://www.youtube.com/watch?v=_0v3vo2WGvA

https://www.youtube.com/watch?v=_Loo2l-vy_U

https://www.youtube.com/watch?v=l0dLrdCX6KU

https://www.youtube.com/watch?v=kxeLnObcfXI

Thank you and Rick, Keli and I are very much looking forward to meeting you on Wednesday.

Camilla

—

CAMILLA H. FOX | FOUNDER & EXECUTIVE DIRECTOR
PROJECT COYOTE | www.ProjectCoyote.org
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San Francisco Chronicle

By Peter Coyote

Published: June 8, 2015

From San Francisco Chronicle Open Forum (http://www.sfchronicle.com/opinion/openforum/article/Misguided-federal-policy-ignores-facts-about-6314611.php?t=0a62a6d5b2&cmpid=email-premium#photo-7233010)

Peter Coyote is an Advisory Board member of Project Coyote.

Misguided federal policy ignores facts about coyotes

I received a letter from a former government trapper in which he attacked an educational film I narrated for Project Coyote, the nonprofit organization featured in the May 31 San Francisco Chronicle article "Wildlife groups take aim at lethal control of predators." Suggesting that I was being duped and could be held liable for damages if people were hurt because they trusted the film's assertions, my correspondent challenged Project Coyote's promotion of nonlethal approaches to living with coyotes and other predators as naive and dangerous.

As an ordained Zen Buddhist priest, a lifelong environmentalist and board member of Project Coyote, I felt it was my duty to respond to this person, which I did privately. However, the larger issues raised in his letter were emblematic of thinking that promotes human life above all other forms, disregards scientific data, and never considers whether the fact that wild creatures are being crowded into smaller habitats by human population growth might be related to negative encounters with people.

The trapper impugns coyotes because "they kill for a living," failing to recognize how his work as a federal hunter was an identical occupation.

While I do not judge the man, I do judge the federal policy, which hires men like him who have killed over a million coyotes in the West alone since 2000, according to the Sacramento Bee. These efforts by the federal Wildlife Services, an agency of the U.S. Department of Agriculture, have only served to expand the native range of coyotes to every state in the union. My correspondent showed no awareness of these facts well known to biologists: that coyotes raise their breeding rates as their population diminishes; and that once a resident pack is exterminated, their territory opens up to migrating coyotes — the ones most dedicated to poaching livestock.

In short, the more coyotes are killed, the faster they breed.

Our Marin County pilot project, Project Coyote, demonstrated with empirical evidence (and to the satisfaction of local ranchers) a cheaper more effective way to control predation, saving Marin County hundreds of thousands of dollars, while keeping deadly poisons out of the environment and food chain.

Federal trappers kill in the shadows and most taxpayers have no idea of the scale of the losses inflicted on wildlife in their name. Why do Americans, while proud of our rugged independence, seem to fear wildness and want to eradicate it? Why do we allow our government to ravage populations that do not serve us? Why are we so anxious to "tame" everything?

Millions of different creatures manage to maintain a perfect balance among themselves. Man alone has decided that his interests trump all others, so it seems fair to ask this of those who think that way: "Where would man be in a world overrun with mice and rats, without honey bees and wild creatures?"

I'd rather live with the adjustments required by wild animals over the greed and selfishness of men. Perhaps that's just me.

Peter Coyote is an actor, award-winning author and an ordained Buddhist priest.

San Francisco Chronicle

Wildly Misjudged: City Coyote's Plight

By Jill Tucker

Published:
Sunday, March 23, 2014

Page A1

From SFGate (http://www.sfgate.com/science/article/S-F-s-urban-coyotes-wildly-misjudged-their-5339426.php#page-2)

Jill Tucker is a San Francisco Chronicle staff writer.
E-mail: jtucker@sfchronicle.com

Project Coyote's Camilla Fox totes a coyote puppet used as a teaching aid while on a stroll at Lake Merced. Photo: Carlos Avila Gonzalez, The Chronicle

Camilla Fox is fighting an uphill battle against fairy tales and Saturday morning cartoons.

Children's stories often feature wild canines in unflattering roles - the wolf that eats Grandma and the dim-witted and Acme-loving coyote that can't seem to hit the beep-beeping roadrunner with an anvil.

As one of the top coyote protectors in the country, Fox - yes, that's her real name - gets frustrated by the bad rap the relatively diminutive predators get, even in dog-obsessed San Francisco.

To combat the bias, fear and bad human behavior leveled against coyotes, Fox spent Wednesday and Thursday helping train more than 200 city recreation and park managers and staff members, helping them better understand coyote behavior and how humans can coexist with them in an urban environment.

"Coyotes are the most persecuted native carnivores in the U.S.," said Fox, executive director of the Larkspur-based Project Coyote. "Most of the time, coyotes want to have nothing to do with us."

Until a decade ago, there were few, if any, coyotes in San Francisco. While native to the area, they largely had been eliminated by trapping and poisoning in the 1950s and 1960s, Fox said.

Then, at least a couple of them trotted across the Golden Gate Bridge and took up residence in city open spaces.

There are at least 20 in city parks and more in the Presidio, although no one is formally tracking them. Coyotes are crepuscular, or typically active at dawn and dusk, although daytime appearances are not considered unusual.

Still, any sighting can startle and intimidate joggers, parents pushing strollers, golfers or dog walkers - who frequently report the encounters or complain to Animal Care and Control or to park workers.

But coyotes, contrary to belief, are not likely to seek out the city's Chihuahuas.

"There are certainly people in this city that have more of a fear of these animals," said Lisa Wayne, the open-space manager for the San Francisco Recreation and Park Department. "There have been no confirmed reports of coyotes preying on domestic cats or dogs in the city."

Frankly, they don't need to.

Favored menu items

They'd rather hang out on a golf course where manicured lawns attract not only rodents but also Canada geese, with their eggs and goslings - all preferred coyote cuisine.

"So much of what we have to deal with is people misinterpreting animal behaviors," Fox said. "We can coexist."

Increasingly, humans and coyotes are living alongside each other in urban areas. In the six-county Chicago region, there are an estimated 2,000 coyotes, Fox told city staff members in her presentation.

San Francisco needs them, she said.

"Coyotes are a native species," she added. "As a native species, they play a key ecological role."

City gardener and pest specialist Matt Pruitt, who went through the four-hour coyote training, agreed.

Coyotes each can eat up to 1,800 rodents per year. Too many rodents, including gophers and rats, are not conducive to good gardens or golf courses.

Without coyotes - a critical carnivore in the local ecology - raccoons, skunks, foxes and feral cats go unchecked.

"They kind of help balance out the whole biodiversity," said Pruitt, who considers weeds and fungus the real pests in his line of work.

He did note that many gardeners often work in the dark, when seeing coyotes and hearing them howl can be a bit intimidating. During the training, Fox played the 20 coyote vocalizations, which contributed to their status as the state's song dog.

"The more you learn, the more you learn to not be afraid of them," Pruitt said, adding that it's somewhat awe-inspiring to see one in the city. "You have to stop and kind of look at them for a few minutes. They're amazing to see."

With spring here, it's the beginning of coyote pupping season, which means the adults can be protective of their dens and territory.

It also means humans - and their dogs - need to give the coyotes an especially wide berth, Fox said. More than 200 city park workers are now armed with the information required to help enforce that.

Frequent park visitor Joe Fuentes, 80, is happy to comply.

As he strolled around Lake Merced on a sunny spring day, he noted that he's a city native, just like the coyotes.

Sudden return

They had been gone for decades, he said. Then one day, maybe five years back, they were back at the lake.

"They don't bother anybody," he said. "They keep everything in balance. I like seeing them."

Fox knows, however, that not everyone feels the same way. Coyotes sound scary, and even though they only weigh 15 to 30 pounds, they look scary, too. In fact, they kind of look like wolves. Nationally, 500,000 coyotes are killed each year by public agencies or individuals.

"Little Red Riding Hood," she said, sighing. "We're still up against that messaging."

Get to know the coyotes

- Coyotes are members of the dog family and are curious, adaptable and quick learners. They often mate for life and are devoted parents.
- Coyotes are not a significant threat to safety. (Lightning, cows and deer pose a greater risk, statistically speaking.)
- Healthy coyotes can come out in the daytime. Do not assume they are sick or have rabies.
- Coyotes are not a significant predator of pets and deer. While they might occasionally take a free-roaming domestic animal or deer, their diet is more likely to consist of rodents, rabbits, insects, fruit and carrion.
- They do not use Acme products or disproportionately dislike roadrunners.

Sources: Project Coyote and Chronicle staff report

Coyote tips

- Do not feed coyotes.
- Walk pets on leash - especially during spring and early summer pupping season.
- Supervise small pets and children and keep cats inside.
- Secure garbage, compost and pet food.
- "Haze" coyotes near homes or community spaces; act big, mean and loud. Don't run if approached. Make noise and walk toward the coyotes until they retreat.
- Protect livestock with guard animals and secure fencing.

Source: Project Coyote

ProjectCoyote.org

PROJECT COYOTE
P.O. BOX 5007, LARKSPUR, CA, 94977

PROMOTING COEXISTENCE
BETWEEN PEOPLE & WILDLIFE THROUGH
EDUCATION, SCIENCE & ADVOCACY

KCET ReWild

Losing Big Carnivores May Be as Big a Threat as Climate Change

By Chris Clarke

Published: January 10, 2014 12:31 PM

From KCET: ReWild (http://www.kcet.org/news/redefine/rewild/mammals/losing-big-carnivores-may-be-as-big-a-threat-as-climate-change.html)

Chris Clarke is a natural history writer and environmental journalist currently at work on a book about the Joshua tree. He lives in Joshua Tree.

Big predators keep ecosystems stable, and removing them can be catastrophic. | Photo: USFWS/Flickr/Creative Commons License

An epochal study published Friday in the journal Science paints a truly frightening picture of a world without large carnivores, and a couple of Californian predators play a leading role.

The study, "Status and Ecological Effects of the World's Largest Carnivores," examined more than 100 recent surveys of the roles that the world's largest predators play in shaping the ecosystems that they live in. They found that removing predators from an ecosystem can cause that ecosystem to unravel, with effects ranging from increase in pest animals to rivers changing course.

The paper is a compelling confirmation of something wildlife biologists have long suspected, and the implications for California, where predators large and small have been systematically removed for more than 150 years, are troubling.

The study surveyed seven of the world's 31 largest predators. Two examples in particular are of immediate interest to fans of Californian wildlife: sea otters, which maintain the health of the state's kelp forests by eating the sea urchins that eat the kelp, and mountain lions, which help maintain the state's forests by eating mule deer and Columbian black-tailed deer, which devastate broadleaved trees and shrubs if left uncontrolled.

Appealingly, the researchers also found that protecting mountain lions help boost populations of butterflies, presumably by limiting browsing pressure on larval food plants. A healthy mountain lion population also helps maintain habitat for frogs, salamanders, lizards, and snakes.

The other carnivores examined in detail by the survey were lions, leopards, the Eurasian lynx, dingoes, and gray wolves. (Only the last was historically native to California.)

All of the carnivores studied are in trouble, with threats ranging from climate change to trophy hunting to loss of habitat. And all those threats have a common basis: competition from humans.

(As if to underscore the urgency of the topic, an unrelated paper published Wednesday in PLOSOne reveals that West African lions are critically endangered.)

Each of the threatened carnivores turns out to play a startlingly important role in maintaining ecosystem health. Take the previously-mentioned "rivers changing course" issue: when predators are removed from an ecosystem their prey multiply, causing increased damage to streamside vegetation and trampling riverbanks. Riverside vegetation controls erosion: without it, seasonal floods become more damaging and rivers can actually jump their banks.

And as in the case of the sea otter and sea urchins, losing a predator can mean that an entire ecosystem, which may support hundreds of unique species, can fall apart.

As the plight of the world's carnivores deepens, such consequences may become more severe. "Globally, the ranges of carnivores are collapsing and many of these species are at risk of either local or complete extinction," said William J. Ripple, Oregon State University professor and lead author of the paper. "It is ironic that large carnivores are disappearing just as we are learning about their important ecological and economic effects."

Until the 20th Century California was home to quite a few large carnivores, including what may have been the world's largest subspecies of grizzly bear. The state was home to both northern and Mexican gray wolves, wolverines, and much larger populations of the mountain lions and bobcats that wildlife advocates now struggle to protect.

Those two cat species have recently won increased protection in the legislature, with new regulations on puma encounters and limits to bobcat trapping both winning much-lauded signatures from the Governor in 2013. But the state's most common large predator, the coyote, enjoys almost no protection in the state of California. In fact, the state's Fish and Game Code classifies the coyote in the same category as invasive pest species such as the starling and European sparrow, which can be shot any time of year in any place where a firearm can be legally discharged, as long as the shooter has a hunting license.

That policy proceeds despite abundant scientific data showing that hunting coyotes actually serves to increase their population, by disrupting family units in which only the parents breed.

Though some people maintain that human hunters can replace large carnivores' ecological services, Ripple and his colleagues dispute that, pointing out that human hunting, with its seasons and its reliance on road access, cannot duplicate the 24/7, whole-landscape hunting patterns of wild predators:

In the end, it is not surprising that various human activities in Australia, North America, and Eurasia have been unsuccessful in substituting for large carnivores to control populations of native and nonnative herbivores and mesopredators. The huge importance of carnivores is exemplified by the fact that humans typically cannot replicate the effects of carnivores on ecosystems.

The authors call for a world-wide effort to protect large carnivores based on Europe's Large Carnivore Initiative, a project of the International Union for the Conservation of Nature (IUCN). The paper ends with a call to action that's fairly remarkable for a scientific paper in one of the world's top two peer-reviewed papers:

[L]arge-carnivore conservation might also be seen as a moral obligation – the recognition of the intrinsic value of all species. A 40-year history of the field of environmental ethics has both rigorous and systematic rationales for valuing species and nature itself. Large carnivore conservation, therefore, might benefit greatly from a more formal relationship with practitioners of environmental ethics. It will probably take a change in both human attitudes and actions to avoid imminent large-carnivore extinctions. A future for these carnivore species and their continued effects on planet Earth's ecosystems may depend upon it.

From: Michael Carion
To: FGC
Subject: Thank you!
Date: Wednesday, August 05, 2015 3:26:27 PM

I wanted to personally thank President Baylis and the FGC for the support on the Pine Ranch revocation!

I highly appreciate the support!

Mike Carion

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Fisheries Branch
830 "S" Street
Sacramento, CA 95811
(916) 327-8840
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

RECEIVED
CALIFORNIA
FISH AND GAME
COMMISSION
2015 JUL -6 AM 11:27
MCS

July 3, 2015

Honorable Mr. Thomas O'Rourke, Chairman
Yurok Tribe
190 Klamath Boulevard
P.O. Box 1027
Klamath, CA 95548

RE: BLUE CREEK ANGLING CLOSURE AND POSSIBLE FISHERIES STUDIES

Dear Chairman O'Rourke:

As you know, on April 17, 2015 the California Fish and Game Commission (Commission) implemented conservation closures in the vicinity of Blue Creek, tributary to the Klamath River. We have also been notified that the Yurok Tribe has implemented an in-season adjustment to the Yurok Tribal Fishing Rights Ordinance that prohibits fishing in the vicinity of Blue Creek through November 30. Due to the decision by the Commission a great deal of concern has been voiced amongst local interest groups, including local government, professional fishing guides, and tribal and non-tribal anglers. This concern stems from the potential negative economic ripple effects to the local economies and a perception by many that there is a lack of supporting data for the closure decision.

In May, 2015, Yurok tribal fisheries staff contacted the California Department of Fish and Wildlife (Department) and inquired whether we had a continued interest in conducting a study to better understand the potential impacts of catch and release mortality of anadromous salmonids near the mouth of Blue Creek. In June, 2015, the Commission requested the Department work with the Yurok Tribe and other local interests to see if any study could be conducted to answer a suite of questions that have resulted from the conservation closure. The Department is interested in understanding the potential impacts to salmon at Blue Creek, and would like to meet with you, Tribal Council representatives and fisheries staff to discuss possible studies in the vicinity of Blue Creek.

Although the Department has a full suite of duties and obligations, and is particularly engaged in drought related responses, we are committed to working with the Yurok Tribe on this issue. We are most interested in collaborating on a study with as high a degree of scientific objectivity as possible. I hope this does not get misinterpreted as unwillingness to support or fund the study. I can assure you that is not the case. Any perceived hesitancy on our part is the result of scientific questions regarding how the study may be conducted. We are most interested in discussing the feasibility of a study with the Yurok Tribe, and we will address the funding questions when we reach consensus on appropriate study questions and design. We sincerely hope you and

your Tribe will be interested in pursuing this collaborative approach to better inform the science, and ultimately the condition of this significant Tribal and public trust resource.

Department staff are eager to engage in this matter if you are still interested. Please do not hesitate to contact me at the phone number above or email me at Stafford.lehr@wildlife.ca.gov.

Sincerely,

Stafford Lehr, Chief

Cc:
Mr. Sonke Mastrup, Executive Director
California Fish and Game Commission

Mr. Neil Manji, Regional Manager
Mr. Tony LaBanca, Environmental Program Manager
California Department of Fish and Wildlife
Northern Region

Mr. Roger Bloom, Environmental Program Manager
California Department of Fish and Wildlife
Fisheries Branch

Mr. Steven Ingram, Tribal Liaison
Senior Staff Counsel
California Department of Fish and Wildlife
Office of General Counsel

California Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE

CALIFORNIA HALIBUT BOTTOM TRAWL VESSEL PERMIT TRANSFER APPLICATION

CDFW
Received
JUL 13 2015
BY
LRB

GENERAL PROVISIONS

Pursuant to Fish and Game Code (FGC), Section 8494(d)(3), the permit holder of a California Halibut Bottom Trawl Vessel Permit (CHBTVP), or his or her conservator or estate representative, may transfer the permit simultaneously with the vessel to a new permit holder if the following conditions are met to the satisfaction of the Fish and Game Commission (Commission):

(A) The permitholder has died, is permanently disabled, or the permitholder is at least 65 years of age and has decided to permanently retire from commercial fishing of all types; and

(B) California halibut landings contributed significantly to the record and economic income derived from the vessel, to which the CHBTVP is attached, as determined by regulations adopted by the Commission. The Commission may request information that it determines is reasonably necessary from the permitholder or his heirs or estate prior to and for the purposes of authorizing the transfer of the permit.

Permit holder must complete the application and submit the required documentation. Section 8494(d)(3) FGC. See reverse for instructions and documents required for transfer.

CURENT PERMIT HOLDER

FIRST NAME	M.I.	LAST NAME	BUSINESS NAME (If any) / JOINT OWNERS
Francesco		Licata	

MAILING ADDRESS: [redacted]

DAY TELEPHONE *(Voluntary)*: [redacted]

E-MAIL ADDRESS:

CHBTVP is attached to F & G BOAT #	BOAT NAME	CF/DOC#
FG48343	Joyce	670785

List all commercial fishing permits that you currently possess:	COMMERCIAL FISHING ID#
BT0050	L 18722

List all commercial fishing vessels registered with Department of Fish and Wildlife that you are full or part owner of:

F & G BOAT #	BOAT NAME	CF/DOC #
FG48343	Joyce	670796
F & G BOAT #	BOAT NAME	CF/DOC #

PROPOSED NEW PERMIT HOLDER

FIRST NAME	M.I.	LAST NAME	BUSINESS NAME (If any) / JOINT OWNERS
Thomas	T	Nguyen	

MAILING ADDRESS: [redacted]

COMMERCIAL FISHING ID#: L 91803

DAY TELEPHONE *(Voluntary)*: [redacted]

E-MAIL ADDRESS: [redacted]

CHECK THE APPROPRIATE BOX FOR THE TRANSFER YOU ARE APPLYING FOR.

☒ I AM 65 YEARS OF AGE OR OLDER, AGREE TO PERMANENTLY RETIRE FROM COMMERCIAL FISHING OF ALL TYPES, AND AM APPLYING TO TRANSFER TO A NEW PERMIT HOLDER.

CERTIFICATION OF PERMIT HOLDER: I hereby certify that I am the holder of a valid California Halibut Bottom Trawl Vessel Permit and that the information provided by me in connection with this application is true and accurate to the best of my knowledge. If the Commission approves this transfer, I agree to permanently retire from all commercial fishing as a necessary condition for transfer of the CHBTVP (as specified in subsection 8494(d)(3) of the FGC). I understand that I shall not participate/assist in any commercial fishing activity and that any remaining commercial fishing entitlement will not be renewed. I further understand that, in the event of making any such false statement, I will be subject to prosecution pursuant to Section 746, Title 14, of the California Code of Regulations (CCR).

APPLICANT'S SIGNATURE	DATE
x Francesco Licata	6-19-15

☐ I AM PERMANENTLY DISABLED AND APPLYING TO TRANSFER TO A NEW PERMIT HOLDER.

CERTIFICATION OF PERMIT HOLDER: I hereby certify that I am the holder of a valid California Halibut Bottom Trawl Vessel Permit and that the information provided by me in connection with this application is true and accurate to the best of my knowledge. I am permanently disabled from continuing to fish commercially, as described in the statement from my physician accompanying this application. I further understand that, in the event of making any such false statement, I will be subject to prosecution pursuant to Section 746, Title 14, of the California Code of Regulations (CCR).

APPLICANT'S SIGNATURE	DATE
x	

☐ DEATH OF PERMIT HOLDER.

I hereby certify that I am the Executor/Executrix/Authorized Representative of _____, deceased, who was the holder of a valid California Halibut Bottom Trawl Vessel Permit immediately preceding his/her death, and that the information provided by me in connection with this application is true and accurate to the best of my knowledge. I further understand that, in the event of making any such false statement, I will be subject to prosecution pursuant to Section 746, Title 14, of the California Code of Regulations (CCR).

APPLICANT'S SIGNATURE	DATE
x	

OMB APPROVED
1625-0027

UNITED STATES OF AMERICA

DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD

NATIONAL VESSEL DOCUMENTATION CENTER

CERTIFICATE OF DOCUMENTATION

VESSEL NAME	OFFICIAL NUMBER	IMO OR OTHER NUMBER	YEAR COMPLETED
JOYCE	670785	NONE	1993

HAILING PORT	HULL MATERIAL	MECHANICAL PROPULSION
SAN FRANCISCO CA	STEEL	YES

GROSS TONNAGE	NET TONNAGE	LENGTH	BREADTH	DEPTH
26 GRT	19 NRT	47.0	13.0	5.7

PLACE BUILT

SANTA BARBARA CA

OWNERS	OPERATIONAL ENDORSEMENTS
FRANCESCO LICATA	FISHERY

CDFW
Received
JUL 13 2015
BY
LRB

MANAGING OWNER

FRANCESCO LICATA
[redacted]

RESTRICTIONS
NONE

ENTITLEMENTS
NONE

REMARKS
NONE

ISSUE DATE
JANUARY 08, 2015

THIS CERTIFICATE EXPIRES

JANUARY 31, 2016

DIRECTOR, NATIONAL VESSEL DOCUMENTATION CENTER

FOR PAUL FROM MRS LICATA

CDFW Received JUL 13 2016 BY LRB

15 **VLE**

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE
CALIFORNIA HALIBUT TRAWL VESSEL PERMIT

Valid only when in possesion of a Commercial Boat Registration for the same license year.

D-0013170358-8

California Halibut Bottom Trawl
Permit Number: BT0050
Fish & Game Boat Number: FG48343
Vessel Name: JOYCE
GO ID: 1001635691
Coast Guard: 670785
Home Port: SAN FRANCISCO
VESSEL OWNER:
GO ID: 1001489845
STATE ID: N554** CA**
FRANCESCO LICATA
[redacted]

Doc No: D-0013170358-8 Outlet No: 310001-001
Trans: 00000000927377 2/27/2015 10:12:34 AM
270519655

Item	Fee*
CA Halibut Trawl Vessel Permit	$62.08
	Total: $62.08

*Includes any applicable application fees, agent handling fees and license buyer surcharge.

I certify under penalty of perjury under the laws of the State of California that all information on this document is true and correct and that I meet the requirements for these licenses. I understand it is unlawful to make any false statement in this application or to use or possess a license obtained by fraud or deceit (Fish and Game Code §§1052(b) and 1064).

X

Signature NOT VALID UNLESS SIGNED

THIS DOCUMENT MUST BE CARRIED ON VESSEL WHEN FISHING

---- End of Document D-0013170358-8 ----

15 **C**

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE
COMMERCIAL FISHING LICENSE
Valid 04/01/2015 to 03/31/2016

D-0013170319-5

Commercial Fishing License ID: L18722
GO ID: 1001489845
STATE ID: N554** CA**
FRANCESCO LICATA
[redacted]

Resident: I have resided in California continuously for the past 6 months

Doc No: D-0013170319-5 Outlet No: 310001-001
Trans: 00000000927347 2/27/2015 10:09:08 AM
090691535

Item	Fee*
Comm Fishing License (Res)	$136.73
	Total: $136.73

*Includes any applicable application fees, agent handling fees and license buyer surcharge.

Help us tackle California's lost fishing gear!
Report loss or sightings of lost recreational and commercial fishing gear. Anonymous reports accepted. Call 1-888-491-GEAR or report online: www.lostfishinggear.org

I certify under penalty of perjury under the laws of the State of California that all information on this document is true and correct and that I meet the requirements for these licenses. I understand it is unlawful to make any false statement in this application or to use or possess a license obtained by fraud or deceit (Fish and Game Code §§1052(b) and 1064).

X

Signature NOT VALID UNLESS SIGNED

LICENSE AND PHOTO IDENTIFICATION MUST BE IN IMMEDIATE POSSESSION WHILE FISHING

---- End of Document D-0013170319-5 ----

15 **V**

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE
COMMERCIAL BOAT REGISTRATION
Valid 04/01/2015 to 03/31/2016

D-0013170357-7

Fish & Game Boat Number: FG48343
Vessel Name: JOYCE
GO ID: 1001635691
Coast Guard: 670785
Home Port: SAN FRANCISCO
HULL NUMBER: 1 YEAR BUILT: 1993
GROSS TONNAGE: 26 NET TONNAGE: 19
LENGTH: 47 BREADTH: 13
DEPTH: 6

VESSEL OWNER:
GO ID: 1001489845
STATE ID: N554** CA**
FRANCESCO LICATA
[redacted]

Resident: I have resided in California continuously for the past 6 months

Doc No: D-0013170357-7 Outlet No: 310001-001
Trans: 00000000927377 2/27/2015 10:12:34 AM
270519655

Item	Fee*
Comm Boat Registration (Res)	$356.00
	Total: $356.00

*Includes any applicable application fees, agent handling fees and license buyer surcharge.

Fish and Game Code Section 7881 requires owners to immediately notify the Department if vessel is lost, destroyed or sold.

Help us tackle California's lost fishing gear!
Report loss or sightings of lost recreational and commercial fishing gear. Anonymous reports accepted. Call 1-888-491-GEAR or report online: www.lostfishinggear.org

I certify under penalty of perjury under the laws of the State of California that all information on this document is true and correct and that I meet the requirements for these licenses. I understand it is unlawful to make any false statement in this application or to use or possess a license obtained by fraud or deceit (Fish and Game Code §§1052(b) and 1064).

X

Signature NOT VALID UNLESS SIGNED

REGISTRATION MUST BE POSTED IN A CONSPICUOUS PLACE ON VESSEL AT ALL TIMES

15 **C**

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE
COMMERCIAL FISHING LICENSE
Valid 04/01/2015 to 03/31/2016

D-0013243602-1

Commercial Fishing License ID: **L91803**

GO ID: 1003889313

STATE ID: C556** CA**

THOMAS THANH NGUYEN

[redacted]

Resident: I have resided in California continuously for the past 6 months

Doc No: D-0013243602-1
Trans: 000000009989557
070591425

Outlet No: 310009-001
3/10/2015 12:05:00 PM

Item	Fee*
Comm Fishing License (Res)	$136.73
Commercial Salmon Stamp	$87.55

Total: $224.28

*Includes any applicable application fees, agent handling fees and license buyer surcharge.

Help us tackle California's lost fishing gear!
Report loss or sightings of lost recreational and commercial fishing gear. Anonymous reports accepted. Call 1-888-491-GEAR or report online: www.lostfishinggear.org

I certify under penalty of perjury under the laws of the State of California that all information on this document is true and correct and that I meet the requirements for these licenses. I understand it is unlawful to make any false statement in this application or to use or possess a license obtained by fraud or deceit (Fish and Game Code §§1052(b) and 1054).

X

Signature NOT VALID UNLESS SIGNED

LICENSE AND PHOTO IDENTIFICATION MUST BE IN IMMEDIATE POSSESSION WHILE FISHING

—— End of Document D-0013243602-1 ——

CLASS: C - Veh w/OVWR 12000, No M/C
ENDORSEMENTS: NONE
RESTRICTIONS: 01-Must wear corrective lenses, allow drivers

CALIFORNIA DRIVER LICENSE

[redacted]

CLASS C
END NONE

EXP 07/09/2015
LICATA
FRANCESCO

[redacted]

05/30/2014

COURT
RECEIVED
JUL 1 - 2015
BY
FILE

State of California
Department of Fish and Wildlife

Memorandum

FISH AND GAME COMMISSION
2015 SEP 4 AM 7:31

Date: September 1, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Agenda item for the October 7 - 8, 2015, Fish and Game Commission Meeting: Consideration of an Application from Mr. Francesco Licata to Transfer the California Halibut Bottom Trawl Vessel Permit (CHBTVP), Permit Number BT0050, Upon the Sale of the F/V *Joyce* (FG48343)**

The Department of Fish and Wildlife (Department) requests that the Fish and Game Commission (Commission) consider Mr. Francesco Licata's application to transfer his CHBTVP from Mr. Licata to Mr. Thomas Thanh Nguyen for use on the F/V *Joyce* (FG48343). The Department has received the application and supporting documents for the Commission to consider.

Pursuant to Fish and Game Code (FGC), Section 8494(d)(3), CHBTVPs may be transferred if, prior to the implementation of a halibut trawl restricted access program, specific conditions are met. Currently, there is not a formal restricted access program for the California halibut fishery; therefore, the Department is requesting the Commission determine if Mr. Licata is eligible to transfer the CHBTVP to another owner upon the sale of the F/V *Joyce*.

Authority

Pursuant to Fish and Game Code (FGC), Section 8494(a), beginning April 1, 2006, the owner of a registered commercial fishing vessel using trawl gear to take, possess aboard a vessel, or land California halibut for commercial purposes must have a valid CHBTVP that has not been suspended or revoked. A CHBTVP shall be issued annually, beginning with the 2006 permit year. Beginning with the 2007-2008 permit year, in order to be eligible for a CHBTVP, an applicant shall have been issued a CHBTVP in the immediately preceding permit year.

Further, FGC, Section 8494(d)(3), specifies that CHBTVPs issued pursuant to this section may be transferred if prior to the implementation of a halibut trawl restricted access program, the Commission may consider requests from a vessel permitholder or his or her conservator or estate representative to transfer a permit with the vessel if both of the following conditions are met:

(A) The permitholder has died, is permanently disabled, or the permitholder is at least 65 years of age and has decided to retire from commercial fishing.

(B) California halibut landings contributed significantly to the record and economic income derived from the vessel, as determined by regulations adopted by the Commission. The Commission may request information that it determines is reasonably necessary from the permitholder or his or her heirs or estate for the purpose of verifying statements in the request prior to authorizing the transfer of the permit.

Documentation Submitted By Mr. Licata
Mr. Licata has indicated that he is a least 65 years of age and has decided to retire from commercial fishing, consistent with Section 8494(d)(3)(A). He has submitted the following documentation to the Department:

- A California Halibut Bottom Trawl Vessel Permit Transfer Application dated June 19, 2015, received on July 13, 2015, requesting to transfer the CHBTVP from Mr. Licata to Mr. Thomas Nguyen, for use on the F/V *Joyce*.
- Mr. Licata's California Driver License, which documents that he is at least 65 years of age.
- Copy of the 2015-2016 CHBTVP for the F/V *Joyce*.
- Copy of the 2015-2016 Resident Commercial Boat Registration for the F/V *Joyce*.
- Copy of the United States Coast Guard Certificate of Documentation (USCG) for the F/V *Joyce,* dated January 8, 2015, that shows Mr. Francesco Licata is the owner.
- Copy of Mr. Licata's 2015-2016 Commercial Fishing License.
- Copy of Mr. Nguyen's 2015-2016 Commercial Fishing License.

Department Findings
Department license records show that the F/V *Joyce* has held a valid CHBTVP from the 2006-2007 permit year to the current 2015-2016 permit year. In addition, Mr. Licata possesses a 2015-2016 Resident Commercial Fishing License and Resident Commercial Boat Registration for the F/V *Joyce*. Mr. Licata acquired the CHBTVP through a permit transfer. In December 2010, the Commission approved the transfer of the CHBTVP, Permit Number BT0050, for the F/V *Joyce* (FG48343), from Mr. Manuel R. Figueiredo to Mr. Licata.

Summary of Landing Information
Based on fish landing records on file with the Department for the F/V *Joyce,* Mr. Licata participated in the California halibut fishery during the 2010 to 2015 permit years. Mr. Licata was one of 29 CHBTVP holders that contributed to the record of California halibut landings.

The Department recommends that if the Commission approves Mr. Licata's application, that it stipulates that, as a necessary condition to transfer the CHBTVP, Mr. Licata agrees that he shall not possess a Commercial Fishing License or otherwise participate/assist in any commercial fishing activity.

Thank you for your consideration. If you have any questions, please contact Mr. Dan Yparraguirre, Deputy Director, at (916) 653-4673 or by email at Dan.Yparraguirre@Wildlife.ca.gov.

Attachments

ec: Department of Fish and Wildlife

Dan Yparraguirre, Deputy Director
Wildlife and Fisheries Division
Dan.yparraguirre@wildlife.ca.gov

David Bess, Deputy Director
Law Enforcement Division
David.bess@wildlife.ca.gov

James Fong, Chief
License and Revenue Branch
Administrative Division
James.fong@wildlife.ca.gov

Craig Shuman, Manager
Marine Region (Region 7)
Craig.shuman@wildlife.ca.gov

Vandella Campbell, Analyst
License and Revenue Branch
Administrative Division
Vandella.campbell@wildlife.ca.gov

SETTLEMENT AGREEMENT

This Settlement Agreement ("Agreement") is made between the Department of Fish and Wildlife ("DFW") and the owners of the F/V *Terry S* (Craig Yerkins, Dave McCornack, Troy McCornack, and Lyle Winfrey) (individually, a "Party," and collectively, "Parties").

I. Recitals

The Parties execute this Agreement with reference to and in contemplation of the following facts:

a. Craig Yerkins, Dave McCornack, Troy McCornack, and Lyle Winfrey ("Vessel Owners") own F/V *Terry S* (FG03513), a commercial fishing vessel with Dungeness crab vessel permit number CT0068-T7 ("DCVP").

b. DFW license records indicate that the DCVP was last valid during the 2013-14 permit year, making it eligible for renewal in 2014-2015, but not 2015-2016.

c. On April 2, 2015, Craig Yerkins, the Managing Owner of the *Terry S*, submitted to DFW a request to renew the DCVP. ("Renewal Request;" Exhibit A.) In the Renewal Request, Mr. Yerkins explained he did not submit the Renewal Request by the deadline because a family member was experiencing a terminal illness.

d. On April 9, 2015, DFW denied the Renewal Request pursuant to Fish and Game Code Section 7852.2 (Section 7852.2), subdivision (c). (Exhibit B.) Section 7852.2, subdivision (c) states "The department shall deny any application for renewal received after March 31 of the permit year following the year in which the applicant last held a valid permit for that fishery." For DFW to grant the Renewal Request, the Vessel Owners would have had to submit it along with applicable fees by March 31, 2015. The Vessel Owners missed the deadline by only two days.

e. Section 7852.2, subdivision (d), states "An applicant who is denied renewal of a late application may submit a written appeal for renewal to the commission within 60 days of the date of the department's denial. The commission, upon consideration of the appeal, may grant renewal. If the commission grants renewal, it shall assess the applicable late fee pursuant to subdivision (a)." On April 21, 2015, The Vessel Owners submitted to the California Fish and Game Commission ("Commission") a request for an appeal of DFW's denial of their Renewal Request. (Exhibit C.)

f. Section 7852.2, subdivisions (a) and (b) state:
   (a) In addition to the base fee for the license, stamp, permit, or other entitlement, the department shall assess a late fee for any renewal the application for which is received after the deadline, according to the following schedule:
      (1) One to 30 days after the deadline, a fee of one hundred twenty-five dollars ($125).
      (2) Thirty-one to 60 days after the deadline, a fee of two hundred fifty dollars ($250).
      (3) Sixty-one days or more after the deadline, a fee of five hundred dollars ($500).

(b) The department shall not waive the applicable late fee. The late fees specified in this section are applicable beginning in the 2008 license year, and shall be adjusted annually thereafter pursuant to Section 713."

g. Pursuant to Section 7852.2, subdivisions (a) and (b), The Vessel Owners would owe $3,741.50 in fees if the Commission reinstates the DCVP. (Exhibit D.)

h. The Parties understand that this Agreement is solely between DFW and the Vessel Owners and that the Commission is neither a signatory to it nor bound by it in any way. Furthermore, the Parties understand that pursuant to Section 7852.2, subdivision (d), the Commission, and not DFW, has the sole discretion to approve or deny the Renewal Request.

i. For the purpose of saving time and costs associated with an appeal hearing, the Parties agree to compromise and settle these issues. In light of recent discussions between DFW and Mr. Yerkins, the Parties have come to an agreement on terms upon which they can resolve this matter.

II. Terms

The Parties hereby agree to the following:

a. DFW agrees to not oppose the Renewal Request.

b. If the Commission reinstates the DCVP, the Vessel Owners agree to fully pay all fees owed pursuant Section 7852.2, subdivisions (a) and (b), within 60 days of the Commission's decision. DFW shall not issue the DCVP or buoy tags until all fees are paid.

c. The Parties agree that this Agreement, all documents attached to this Agreement, and documents previously submitted to the Commission related to the Renewal Request constitute the Vessel Owners' written appeal pursuant to Section 7852.2, subdivision (d), provided that the Commission considers the Renewal Request at an upcoming Commission meeting. Each Party may, at its discretion, address the Commission at a Commission meeting regarding the Renewal Request, so long as the address is consistent with the terms of this Agreement. In addition, DFW or the Vessel Owners may submit a memorandum or other documents to the Commission requesting that it take action on the Renewal Request, so long as these documents are consistent with the terms of this Agreement.

d. This Agreement is intended to be a full and complete settlement of all disputes between the Parties pertaining to the Renewal Request. Provided that the Commission considers the Renewal Request at an upcoming Commission meeting, the Vessel Owners agrees to waive any present and future administrative appeal related to this renewal of the DCVP, the April 9, 2015 denial of the Renewal Request, and all future claims and/or causes of action against DFW related to renewing the DCVP.

e. This Agreement may be pleaded as a full and complete defense and may be used as the basis for an injunction against any action, suit or proceeding which may be prosecute, instituted or attempted by any Party in breach thereof.

f. This Agreement is only applicable to the Vessel Owners' Renewal Request. This Agreement does not relate in any way to the Vessel Owners' general Commercial Fishing License or any other DFW-issued entitlement held by the Vessel Owners.

g. Each party shall bear its own costs and attorneys' fees, and any other expenses, related to the Renewal Request subject to resolution by this Agreement.

h. The obligations of this Agreement apply to and are binding on DFW or any successor agency or department and the Vessel Owners and his respective heirs, executors, administrators, and permitted assigns.

i. The Parties represent and warrant to each other that the execution of this Agreement and the performance of such Party's obligations hereunder have been duly authorized and that the Agreement is a valid and legal agreement binding on each Party and is enforceable in accordance with its terms.

j. If any provision of this Agreement is found to be illegal or unenforceable, then any such provision shall be deemed stricken and the remaining provisions hereof shall remain in full force and effect.

k. This Agreement constitutes the entire understanding between the Parties as to the Renewal Request and can only be amended or modified in writing, signed by duly authorized representatives of the Parties. This Agreement supersedes all prior representations and agreements, if any, between the Parties regarding the Renewal Request.

l. This Agreement, when signed by all of the signatories, shall become effective as of the last signature date.

m. This Agreement may be signed in counterparts, which together shall constitute one and the same Agreement. A facsimile or scanned signature shall be the same an original.

IN WITNESS THEREOF, the Parties have executed this Agreement as of the date of the last signature below:

for By: James Fong
Department of Fish and Wildlife
Date: 9/8/15

Craig Yerkins
Managing Owner, *Terry S*
9-8-15

Exhibit A

Attention Ruth Flores

RECEIVED
APR 02 2015
CDFW-NR
EUREKA LICENSE

To whom it may concern,

We are requesting a reinstatement of crab permits of terry S. Document # 502334 Fish and game # 03513. Due to long illness of family member ending in Death Fees were Not paid on time. All 4 owners are actively participating in Crabing on the one and all as Deck hands.

CDFW
Received
APR 6 2015
BY
LRB

Thank you,

Craig Yerkins - Craig Yerkins 4-2-15

Troy McCormack - Troy McCormack 4-2-15

Lyle Winfrey - Lyle A. Winfrey 4-2-15

David McCormack David McCormack
McCormack

RECEIVED
APR 02 2015
CDFW-NR
EUREKA LICENSE

Exhibit B

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
License and Revenue Branch
1740 N. Market Blvd
Sacramento, CA 95834
http://www.wildlife.ca.gov

EDMUND G. BROWN JR, Governor
CHARLTON H. BONHAM, Director

Certified Mail

April 9, 2015

Mr. Craig E. Yerkins

Subject: NOTICE OF DENIAL FOR A TRANSFERABLE DUNGENESS CRAB VESSEL PERMIT, PERMIT NUMBER CT0068-T7, FOR THE *F/V Terry S* (FG03513)

Dear Mr. Yerkins:

This is in response to your request to reinstate the Transferable Dungeness Crab Vessel Permit (TDCVP), Permit Number CT0068-T7, for the *F/V Terry S* (FG03513).

Authority-Dungeness Crab Vessel Permit
Under Fish and Game Code (FGC) Section 8280.2(c), states applications for renewal of all Dungeness crab vessel permits shall be received by the Department of Fish and Wildlife (Department), or, if mailed, postmarked, by April 30 of each year. In order for a vessel to retain eligibility, a permit shall be obtained each year subsequent to the initial permit year and the vessel shall be registered pursuant to Section 7881.

Authority-Late Renewal Applications
Effective April 1, 2008 pursuant to FGC Section 7852.2, a graduated late fee was established for any renewal application that is received after the deadline.

In addition, FGC Section 7852.2(b), states the Department shall not waive the applicable late fee. Pursuant to FGC Section 7852.2(c), the Department shall deny any application for renewal received after the March 31 if the permit year following the year in which the applicant last held a valid permit for that fishery.

Reason for Appeal to the Department
In the letter received April 2, 2015, you are requesting reinstatement of the TDCVP for the *F/V Terry S*. You state that due to long illness of a family member ending in death, fees were not paid on time.

Documentation Submitted
None

Department Findings
Department license records show that the *F/V Terry S* held a valid 2013-2014 TDCVP, which made you eligible to renew the permit for the 2014-2015 permit year.

Mr. Craig E. Yerkins
April 9, 2015
Page 2

Department Recommendation
Based on the previously stated information, your request to reinstate the TDCVP for the *F/V Terry S* is denied, because the *F/V Terry S* last held a valid TDCVP in the 2013-2014 permit year. The Department received your request to renew the TDCVP for the *F/V Terry S* on April 2, 2015. FGC Section 7852.2(c), states the Department shall deny any application for renewal received after March 31 of the permit year following the year in which the applicant last held a valid permit for that fishery.

Deadline to File an Appeal to the Fish and Game Commission
If you wish to appeal the Department's decision, you must submit a written request to the Fish and Game Commission (Commission) at 1416 Ninth Street Sacramento, California 95814. Pursuant to FGC Section 7852.2(d), your appeal must be received within 60 days of this letter. The Commission, upon consideration of the appeal, may grant renewal. If the Commission grants renewal, it shall assess the applicable late fee.

The Commission will review the information you submit and will notify you in writing if your appeal will be scheduled before the Office of Administrative Hearings. If the Commission should recommend approval, full payment of $3,741.50 would be due 60 days after receipt of the Commission's approval letter. A fee schedule is enclosed.

If you have any questions or require further assistance, please contact Ms. Ruth Flores, of my staff, at the letterhead address, by telephone at (916) 928-7470, or e-mail Ruth.Flores@wildlife.ca.gov.

Sincerely,

James Fong, Chief
License and Revenue Branch

cc: Mr. Sonke Mastrup
Fish and Game Commission
Sacramento, California

Mr. David C. McCormack
Mr. Troy D. McCormack

Mr. Lyle A. Winfrey

Ms. Ruth Flores
Department of Fish and Game
Sacramento, California

Exhibit C

RECEIVED
CALIFORNIA
FISH AND GAME
COMMISSION
2015 APR 21 PM 1:55

To: California Fish & Game Administrative Hearings

Regarding: Reinstatement of F/V Terry S tier seven crab permit

Current owners:

Dave McCornack:

Dave has been crabbing for Don Standley as a deckhand for 25 years, 6 years on the F/V Terry S 7 years on the F/V Ferro-Maid, and 13 years on the F/V One and All. Dave's efforts helped the F/V One and All earn a tier one permit and currently fishes on that boat.

Lyle Winfrey:

Lyle has also crabbed for 25 years, on the same boats, for the same captain. He is currently a deckhand on the F/V One and All and helped it earn a tier one permit.

Troy McCornack:

Troy is Dave's only son and has crabbed on the F/V One and All For 6 years. He used go on Terry S sport salmon fishing trips when he was a child.

Craig Yerkins:

Craig has crabbed on the F/V One and All for 10 years and also helped it qualify for a tier one permit. Craig is the managing owner of the F/V Terry S.

F/V Terry S history:

The F/V Terry S is a 42 ft, wood boat, built in 1926. It has been moored in Eureka California since 1991. It crabbed from 1991-1996 and has been inactive in the crab fishery from 1996 to present day. It fished rock cod from 1991 thru 2002. From 2003 to present day, though licensed, the Terry S has been inactive in all fisheries. From 2002 until around 2007, it was used as a platform to sell crab retail to the public. In 2013, the Terry S was sold to us by Don Standley, our captain of many years, for a hundred dollars each ($400). The low price reflecting his desire to reward all of us for many years of service.

The Terry S was a project boat as 13 years of winter rains and neglect had caused dry rot in her starboard bow bulwarks. In the summer of 2014, we started repairs. We had opened a can of worms, the rot had spread to many planks and under the fiber glassed bow deck. We have replaced most of the planks but are far from being finished. To date the Terry S is not ready to fish.

Craig Yerkins
Troy McCornack
Lyle A. Winfrey
David McCornack

April 2nd 2015:

Through the years, we all have become like a family. Every season, usually in march, we all go into the local Eureka Fish & Game office and renew our licenses. Don usually pays for everything then deducts the cost from our checks. It was routine that on April 2nd 2015 we met in boat basin parking lot and together went to F & G to renew our licenses for the 2015 season. We were horrified to find there was no record of paying the crab permit fees for 2014. We were sure that we had paid for 2014, so we went to the boat and got the receipt, proof showing that on January 24th 2014 we paid $1900.00. Back to Fish & Game we went, records confirmed that we had paid the $1900.00 renewal. The nightmare only got worse, the 2014 payment was for the 2013 season and the Terry S crab permit was no longer valid! We were a year late! We then discovered that Monday, March 31st, was a holiday and had we come in the day before we could have paid for the 2014 and 2015 seasons and still have a crab permit.

The Aftermath:

The gals at Fish & Game were helpful in starting us down the road of hopefully getting our crab permit back. They mailed our letter asking for permit reinstatement to Ruth Flores understanding she would have to deny it before the Fish and Game Commission could review our case.

Looking back, the latter part of March, we were working on the F/V One and All everyday, trying to find the cause of massive amounts of bubbles in our engine coolant. Had we not broke down, we would have probably gone in sooner to renew our licenses thus discovering this huge mistake. We surely would not spend the summer of 2014 doing repairs to the Terry S only to not pay the crab permit rendering the boat worthless. The Terry S is our future.

Why didn't we pay for 2014?

1. We thought we did.

2. We somehow lost track that we were behind a year in 2013. We had to go through our records to remember when we bought the boat.

3. Craig Yerkins, our managing owner, was overwhelmed by the passing of his 82 year old mother on April 5th 2014. She and required 24hr care. Craig, her only son, was in charge of her care before she passed and her estate after she was gone. He has been paying the rent on her mobile home for the last year and is not yet finished fixing it so it can be sold. He takes ultimate responsibility and feels sick every time he thinks about it.

4. We are all working full time as deckhands and are new to the process of being boat owners.

5. Dave McCormack has

6. Confusion, lack of communication, reliance on the captain to renew our licenses every prior season.

7. Getting our pot tags in May of 2014 reenforced the idea that 2014 had been paid.

In Closing:

We have included copies of Craigs moms death certificate, Coast Guard documents, Fish & Game receipts, and boat work receipts from the summer of 2014, to verify our claims. Please help us.

Thank You

Exhibit D

Mr. Craig E. Yerkins
Fees Required for Reinstatement for a
Dungeness Crab Vessel Permit
Permit Number CT0068-T7
F/V Terry S (FG03513)

Prior Year Fees		Permit Fees
2014-2015	Commercial Boat Registration	$ 351.50
	Dungeness Crab Vessel Permit	$ 283.25
	Late Fee (61 days to March 31, 2015)	$ 581.25
		1,216.00
Prior Year Fees Due		**$ 1,216.00**

Prior year permit fees must be paid before a 2015-2016 DCVP can issued.

Current Year Fees		
2015-2016	Commercial Boat Registration	$ 356.00
	Dungeness Crab Vessel Permit	$ 287.00
	Biennial Dungeness Crab Trap Limit Permit/Buoy Tags	$ 1,882.50
		$ 2,525.50
Total Current Fees Due		**$ 2,525.50**
Total Fees Due		**$ 3,741.50**

If the Fish and Game Commission should recommend approval, full payment of $3,741.50 would be due within 60 days after receipt of the Commission's approval letter.

SETTLEMENT AGREEMENT

This Settlement Agreement ("Agreement") is made between the Department of Fish and Wildlife ("DFW") and Robert Jackson (individually, a "Party," and collectively, "Parties").

I. Recitals

The Parties execute this Agreement with reference to and in contemplation of the following facts:

a. Mr. Jackson owns F/V *Brooke Michelle* (FG70433), a commercial fishing vessel with Dungeness crab vessel permit number CT0215-T7 ("DCVP").

b. DFW license records indicate that the DCVP was last valid during the 2013-14 permit year, making it eligible for renewal in 2014-2015, but not 2015-2016.

c. On April 23, 2015, Mr. Jackson submitted to DFW a request to renew the DCVP. ("Renewal Request;" Exhibit A.) In the Renewal Request, Mr. Jackson explained he did not submit the Renewal Request by the March 31, 2015 deadline because a family member was experiencing an illness and he needed to care for his children while his wife tended to the ill family member.

d. On May 7, 2015, DFW denied the Renewal Request pursuant to Fish and Game Code Section 7852.2 (Section 7852.2), subdivision (c). (Exhibit B.) Section 7852.2, subdivision (c) states "The department shall deny any application for renewal received after March 31 of the permit year following the year in which the applicant last held a valid permit for that fishery." For DFW to grant the Renewal Request, Mr. Jackson would have had to submit it along with applicable fees by March 31, 2015. Mr. Jackson missed the deadline by only 23 days.

e. Section 7852.2, subdivision (d), states "An applicant who is denied renewal of a late application may submit a written appeal for renewal to the commission within 60 days of the date of the department's denial. The commission, upon consideration of the appeal, may grant renewal. If the commission grants renewal, it shall assess the applicable late fee pursuant to subdivision (a)." On May 22, 2015, Mr. Jackson submitted to the California Fish and Game Commission ("Commission") a request for an appeal of DFW's denial of his Renewal Request. (Exhibit C.)

f. Section 7852.2, subdivisions (a) and (b) state:
   (a) In addition to the base fee for the license, stamp, permit, or other entitlement, the department shall assess a late fee for any renewal the application for which is received after the deadline, according to the following schedule:
      (1) One to 30 days after the deadline, a fee of one hundred twenty-five dollars ($125).
      (2) Thirty-one to 60 days after the deadline, a fee of two hundred fifty dollars ($250).
      (3) Sixty-one days or more after the deadline, a fee of five hundred dollars ($500).

(b) The department shall not waive the applicable late fee. The late fees specified in this section are applicable beginning in the 2008 license year, and shall be adjusted annually thereafter pursuant to Section 713."

g. Pursuant to Section 7852.2, subdivisions (a) and (b), Mr. Jackson would owe $4,013.16 in fees if the Commission reinstates the DCVP. (Exhibit D.)

h. The Parties understand that this Agreement is solely between DFW and Mr. Jackson and that the Commission is neither a signatory to it nor bound by it in any way. Furthermore, the Parties understand that pursuant to Section 7852.2, subdivision (d), the Commission, and not DFW, has the sole discretion to approve or deny the Renewal Request.

i. For the purpose of saving time and costs associated with an appeal hearing, the Parties agree to compromise and settle these issues. In light of recent discussions between DFW and Mr. Jackson, the Parties have come to an agreement on terms upon which they can resolve this matter.

II. Terms

The Parties hereby agree to the following:

a. DFW agrees to not oppose the Renewal Request.

b. If the Commission reinstates the DCVP, Mr. Jackson agree to fully pay all fees owed pursuant Section 7852.2, subdivisions (a) and (b), within 60 days of the Commission's decision. DFW shall not issue the DCVP or buoy tags until all fees are paid.

c. The Parties agree that this Agreement, all documents attached to this Agreement, and documents previously submitted to the Commission related to the Renewal Request constitute Mr. Jackson's written appeal pursuant to Section 7852.2, subdivision (d), provided that the Commission considers the Renewal Request at an upcoming Commission meeting. Each Party may, at its discretion, address the Commission at a Commission meeting regarding the Renewal Request, so long as the address is consistent with the terms of this Agreement. In addition, DFW or Mr. Jackson may submit a memorandum or other documents to the Commission requesting that it take action on the Renewal Request, so long as these documents are consistent with the terms of this Agreement.

d. This Agreement is intended to be a full and complete settlement of all disputes between the Parties pertaining to the Renewal Request. Provided that the Commission considers the Renewal Request at an upcoming Commission meeting, Mr. Jackson agrees to waive any present and future administrative appeal related to this renewal of the DCVP, the April 9, 2015 denial of the Renewal Request, and all future claims and/or causes of action against DFW related to renewing the DCVP.

e. This Agreement may be pleaded as a full and complete defense and may be used as the basis for an injunction against any action, suit or proceeding which may be prosecute, instituted or attempted by any Party in breach thereof.

f. This Agreement is only applicable to Mr. Jackson's Renewal Request. This Agreement does not relate in any way to Mr. Jacksons' general Commercial Fishing License or any other DFW-issued entitlement held by Mr. Jackson.

g. Each party shall bear its own costs and attorneys' fees, and any other expenses, related to the Renewal Request subject to resolution by this Agreement.

h. The obligations of this Agreement apply to and are binding on DFW or any successor agency or department and Mr. Jackson and his respective heirs, executors, administrators, and permitted assigns.

i. The Parties represent and warrant to each other that the execution of this Agreement and the performance of such Party's obligations hereunder have been duly authorized and that the Agreement is a valid and legal agreement binding on each Party and is enforceable in accordance with its terms.

j. If any provision of this Agreement is found to be illegal or unenforceable, then any such provision shall be deemed stricken and the remaining provisions hereof shall remain in full force and effect.

k. This Agreement constitutes the entire understanding between the Parties as to the Renewal Request and can only be amended or modified in writing, signed by duly authorized representatives of the Parties. This Agreement supersedes all prior representations and agreements, if any, between the Parties regarding the Renewal Request.

l. This Agreement, when signed by all of the signatories, shall become effective as of the last signature date.

m. This Agreement may be signed in counterparts, which together shall constitute one and the same Agreement. A facsimile or scanned signature shall be the same an original.

IN WITNESS THEREOF, the Parties have executed this Agreement as of the date of the last signature below:

for By: Maria Melchione
James Fong
Department of Fish and Wildlife

Date: 9/2/15

Robert L. Jackson
Robert Jackson

9-2-15

Exhibit A

Gmail

B B < >

crab permit reinstatement

1 message

B B < Tue, May 5, 2015 at 10:38 AM

To: Ruth.Flores@wildlife.ca.gov

Ruth,

Iam writing in reference to the letter sent to you on April 23, 2015 requesting reinstatement of my Dungeness Crab Permit.My personal license # is L10740 and I own and operate the vessel Brooke Michelle # 70433 which has the tier 7 Dungeness Crab Permit.

Thank You

Sincerely
Robert Jackson

Letter Sent to

Ruth Flores

April 23, 2015

Ruth Flores, Commercial Fishing Analyst

Dear Ruth,

I am writing in response concerning my California Dungeness Crab Permit.

First, I would like to take this opportunity to apologize for the inconvenience and also to thank you for taking time review my situation. I fished, 2012/2013 in California and started the 2013/2014 season in Northern California and Southern Oregon (Crescent City and Brookings.

Because the fishing was so poor the first couple days we did not even set all the gear in Oregon and stacked all the gear on the beach. I tried to arrange pot shipping to Newport, during Xmas to try to salvage some kind of a season. By the time we moved all the gear and ran the boat to Newport we were two weeks into the season and the best fishing was over.

During that time the 2014 renewal was placed with the boat documents and licenses in the file on the boat. We stayed in Newport, fishing was slow and finished the season in Astoria, not returning to California.

This season I chose to stay in Washington and start on the late season in January and not fish Oregon or California.

Because of family and health issues in the family I have had to leave the boat and be home to care for the children while my wife was away

from home, with her mother in the hospital and caring for her thereafter.

When I returned to the boat in Westport approximately April 7,2015 I discovered that I had missed the deadline of March 31,2015 to renew my California license by only a few days. I was in a complete panic because of the way my family situation was and resulted in me missing the deadline.

That is when I called Tommy Ancona, my friend to see what I should do and how to approach this situation.

I have been a commercial fisherman since I was a young boy, 48 years ago, and would never have intentionally not renewed my crab permit. Because of everything going on at home and the unusual circumstances it was just a plain oversight that will financially devastate my family.

During construction of the Brooke Michelle in Fort Bragg, California the pot limit was being introduced and I was assuming we would have a top tier permit with our landings on the coast. As you know we were not able to use our out of state landings and end up with a tier 7 permit. This also was financially devastating for me, especially when building a new boat in California to fish in California.

I have spent thousands and thousands of dollars on renewals and thousands on the appeal to try to get a lager tier which I was denied because of the outside landings. I would not have done that if I had not planned on renewing my license.

Once again if not for the unusual circumstances this would never have happened. I am just sick about this situation and would hope that you

and the department would consider the circumstances and PLEASE help me with this matter.

Thank you for your understanding and cooperation.

Sincerely,

Robert Jackson

Robert L. Jackson

Exhibit B

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
License and Revenue Branch
1740 N. Market Blvd
Sacramento, CA 95834
http://www.wildlife.ca.gov

EDMUND G. BROWN JR, Governor
CHARLTON H. BONHAM, Director

Cert. Mail
from Dept. of F&W

Certified Mail

May 7, 2015

Mr. Robert L. Jackson

Subject: **NOTICE OF DENIAL FOR A TRANSFERABLE DUNGENESS CRAB VESSEL PERMIT, PERMIT NUMBER CT0215-T7, FOR THE F/V *Brooke Michelle* (FG70433)**

Dear Mr. Jackson:

This is in response to your request to reinstate the Transferable Dungeness Crab Vessel Permit (TDCVP), Permit Number CT0215-T7, for the F/V *Brooke Michelle* (FG70433).

Authority-Dungeness Crab Vessel Permit
Under Fish and Game Code (FGC) Section 8280.2(e), states applications for renewal of all Dungeness crab vessel permits shall be received by the Department of Fish and Wildlife (Department), or, if mailed, postmarked, by April 30 of each year. In order for a vessel to retain eligibility, a permit shall be obtained each year subsequent to the initial permit year and the vessel shall be registered pursuant to Section 7881.

Authority-Late Renewal Applications
Effective April 1, 2008 pursuant to FGC Section 7852.2, a graduated late fee was established for any renewal application that is received after the deadline.

In addition, FGC Section 7852.2(b), states the Department shall not waive the applicable late fee. Pursuant to FGC Section 7852.2(c), the Department shall deny any application for renewal received after the March 31 if the permit year following the year in which the applicant last held a valid permit for that fishery.

Reason for Appeal to the Department
In your April 23, 2015 letter, e-mailed on April 24, 2015, you are requesting reinstatement of the TDCVP for the F/V *Brooke Michelle*. You state that the 2014 renewals were placed in a file on the boat. You explain that because of family and health issues in the family you had to leave the boat and return home. You further explain that when you returned to the boat in Westport, you discovered that you missed the deadline to renew the California license.

You also state that you have paid thousands of dollars on renewals and for the appeal for a larger tier assignment for crab trap tags, which was denied. You would not have done that if you had not planned to renew your license.

Documentation Submitted
None

Department Findings
Department license records show that the F/V *Brooke Michelle* held a valid 2013-2014 TDCVP, which made you eligible to renew the permit for the 2014-2015 permit year.

Department Determination
Based on the previously stated information, your request to reinstate the TDCVP for the F/V *Brooke Michelle* is denied, because the F/V *Brooke Michelle* last held a valid TDCVP in the 2013-2014 permit year. The Department received your request to renew the TDCVP for the F/V *Brooke Michelle* on April 24, 2015. FCG Section 7852.2(c), states the Department shall deny any application for renewal received after March 31 of the permit year following the year in which the applicant last held a valid permit for that fishery.

Deadline to File an Appeal to the Fish and Game Commission
If you wish to appeal the Department's decision, you must submit a written request to the Fish and Game Commission (Commission) at 1416 Ninth Street Sacramento, California 95814. Pursuant to FGC Section 7852.2(d), your appeal must be received within 60 days of this letter. The Commission, upon consideration of the appeal, may grant renewal. If the Commission grants renewal, it shall assess the applicable late fee.

The Commission will review the information you submit and will notify you in writing if your appeal will be scheduled before the Office of Administrative Hearings. If the Commission should recommend approval, full payment of $4,013.16 would be due 60 days after receipt of the Commission's approval letter. A fee schedule is enclosed.

If you have any questions or require further assistance, please contact Ms. Ruth Flores, of my staff, at the letterhead address, by telephone at (916) 928-7470, or e-mail Ruth.Flores@wildlife.ca.gov.

Sincerely,

for Marin Mitchitone
James Fong, Chief
License and Revenue Branch

cc: Mr. Sonke Mastrup
Fish and Game Commission
Sacramento, California

Ms. Ruth Flores
Department of Fish and Game
Sacramento, California

Exhibit C

Dear Fish and Game Commission: 5-22-2015

My name is Robert Jackson (L10740) who owns and operates the F/V Brooke Michelle (FG70433) which has Dungeness Crab Vessel Permit #CT0215-T7. I am writing to appeal the denial for reinstatement of this permit. On April 7, 2015, I returned to the F/V Brooke Michelle and immediately realized that I had missed the deadline by only a few days (March 31, 2015) to renew my crab permit, due to family health issues and unusual circumstances. At that time, I called Tommy Ancona and we contacted Ruth Flores, and she advised me of the steps I needed to take to move forward. I have enclosed the letter to Ruth Flores and the certified letter from the Department of Fish and Wildlife.

The reason I missed the deadline on March 31, 2015 was because I was called home away from my boat and fishing to care for our two young children while my wife Kim was in Seattle at the and thereafter to care for her sick mother. My renewal was on the F/V Brooke Michelle during that time.

At the end of February, my wife, Kim was notified by her parents that her mother June was

Due to the circumstances of Kim being away from home to care for her mother and being in and out of the hospital , I had to come home to care for our children and I mistakenly missed the deadline for the renewal while I was away from the boat. The renewal was on the boat with the other licenses, and on April 7, 2015 I realized that I had missed the deadline amidst all the family emergencies.

As of date, Kim has been travelling back and forth to mother and father. If you would like to verify any of this information, please contact Kim and she will be able to supply you with medical records). I have also included the contact information of the physicians at

Thank you.

Sincerely,

Robert L. Jackson

Robert L. Jackson

RECEIVED
CALIFORNIA
FISH AND GAME
COMMISSION
2015 JUN -1 PM 2:22

Exhibit D

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
License and Revenue Branch
1740 N. Market Blvd
Sacramento, CA 95834
http://www.wildlife.ca.gov

EDMUND G. BROWN JR, Governor
CHARLTON H. BONHAM, Director

Mr. Robert L. Jackson
Fees Required for Reinstatement for a
Dungeness Crab Vessel Permit
Permit Number CT0215-T7
F/V Brooke Michelle (FG70433)

Prior Year Fees	**Permit Fees**
2014-2015 Nonresident Commercial Fishing License	$ 134.93
Nonresident Commercial Boat Registration	$ 351.50
Nonresident Dungeness Crab Vessel Permit	$ 283.25
Late Fee (61 days to March 31, 2015)	$ 581.25
	1,350.93
Prior Year Fees Due	**$ 1,350.93**

Prior year permit fees must be paid before a 2015-2016 DCVP can issued.

Current Year Fees	
2015-2016 Nonresident Commercial Fishing License	$ 136.73
Nonresident Commercial Boat Registration	$ 356.00
Nonresident Dungeness Crab Vessel Permit	$ 287.00
Biennial Dungeness Crab Trap Limit Permit/Buoy Tags	$ 1,882.50
	$ 2,662.23
Total Current Fees Due	**$ 2,662.23**
Total Fees Due	**$ 4,013.16**

If the Fish and Game Commission should recommend approval, full payment of $4,013.16 would be due within 60 days after receipt of the Commission's approval letter.

SETTLEMENT AGREEMENT

This Settlement Agreement ("Agreement") is made between the Department of Fish and Wildlife ("DFW") and John Reid (individually, a "Party," and collectively, "Parties").

I. Recitals

The Parties execute this Agreement with reference to and in contemplation of the following facts:

a. Mr. Reid owns F/V *Huson* (FG06579), a commercial fishing vessel with Dungeness crab vessel permit number CT0108-T7 ("DCVP").

b. DFW license records indicate that the DCVP was last valid during the 2013-14 permit year, making it eligible for renewal in 2014-2015, but not 2015-2016.

c. On August 11, 2015, Mr. Reid submitted to DFW a request to renew the DCVP. ("Renewal Request;" Exhibit A.) In the Renewal Request, Mr. Reid explained he did not submit the Renewal Request by the March 31, 2014 or 2015 deadlines because he inadvertently overlooked paying for the DCVP while paying renewal fees for a salmon vessel permit, commercial boat registration, and commercial fishing license.

d. On August 12, 2015, DFW denied the Renewal Request pursuant to Fish and Game Code Section 7852.2 (Section 7852.2), subdivision (c). (Exhibit B.) Section 7852.2, subdivision (c) states "The department shall deny any application for renewal received after March 31 of the permit year following the year in which the applicant last held a valid permit for that fishery." For DFW to grant the Renewal Request, Mr. Reid would have had to submit it along with applicable fees by March 31, 2015.

e. Section 7852.2, subdivision (d), states "An applicant who is denied renewal of a late application may submit a written appeal for renewal to the commission within 60 days of the date of the department's denial. The commission, upon consideration of the appeal, may grant renewal. If the commission grants renewal, it shall assess the applicable late fee pursuant to subdivision (a)." On August 28, 2015, Mr. Reid submitted to the California Fish and Game Commission ("Commission") a request for an appeal of DFW's denial of his Renewal Request. (Exhibit C.)

f. Section 7852.2, subdivisions (a) and (b) state:
   (a) In addition to the base fee for the license, stamp, permit, or other entitlement, the department shall assess a late fee for any renewal the application for which is received after the deadline, according to the following schedule:
      (1) One to 30 days after the deadline, a fee of one hundred twenty-five dollars ($125).
      (2) Thirty-one to 60 days after the deadline, a fee of two hundred fifty dollars ($250).
      (3) Sixty-one days or more after the deadline, a fee of five hundred dollars ($500).

(b) The department shall not waive the applicable late fee. The late fees specified in this section are applicable beginning in the 2008 license year, and shall be adjusted annually thereafter pursuant to Section 713."

g. Pursuant to Section 7852.2, subdivisions (a) and (b), Mr. Reid would owe $3,623 in fees if the Commission reinstates the DCVP. (Exhibit D.)

h. The Parties understand that this Agreement is solely between DFW and Mr. Reid and that the Commission is neither a signatory to it nor bound by it in any way. Furthermore, the Parties understand that pursuant to Section 7852.2, subdivision (d), the Commission, and not DFW, has the sole discretion to approve or deny the Renewal Request.

i. For the purpose of saving time and costs associated with an appeal hearing, the Parties agree to compromise and settle these issues. In light of recent discussions between DFW and Mr. Reid, the Parties have come to an agreement on terms upon which they can resolve this matter.

II. Terms

The Parties hereby agree to the following:

a. DFW agrees to not oppose the Renewal Request.

b. If the Commission reinstates the DCVP, Mr. Reid agree to fully pay all fees owed pursuant Section 7852.2, subdivisions (a) and (b), within 60 days of the Commission's decision. DFW shall not issue the DCVP or buoy tags until all fees are paid.

c. The Parties agree that this Agreement, all documents attached to this Agreement, and documents previously submitted to the Commission related to the Renewal Request constitute Mr. Reid's written appeal pursuant to Section 7852.2, subdivision (d), provided that the Commission considers the Renewal Request at an upcoming Commission meeting. Each Party may, at its discretion, address the Commission at a Commission meeting regarding the Renewal Request, so long as the address is consistent with the terms of this Agreement. In addition, DFW or Mr. Reid may submit a memorandum or other documents to the Commission requesting that it take action on the Renewal Request, so long as these documents are consistent with the terms of this Agreement.

d. This Agreement is intended to be a full and complete settlement of all disputes between the Parties pertaining to the Renewal Request. Provided that the Commission considers the Renewal Request at an upcoming Commission meeting, Mr. Reid agrees to waive any present and future administrative appeal related to this renewal of the DCVP, the April 9, 2015 denial of the Renewal Request, and all future claims and/or causes of action against DFW related to renewing the DCVP.

e. This Agreement may be pleaded as a full and complete defense and may be used as the basis for an injunction against any action, suit or proceeding which may be prosecute, instituted or attempted by any Party in breach thereof.

f. This Agreement is only applicable to Mr. Reid's Renewal Request. This Agreement does not relate in any way to Mr. Reid's general Commercial Fishing License or any other DFW-issued entitlement held by Mr. Reid.

g. Each party shall bear its own costs and attorneys' fees, and any other expenses, related to the Renewal Request subject to resolution by this Agreement.

h. The obligations of this Agreement apply to and are binding on DFW or any successor agency or department and Mr. Reid and his respective heirs, executors, administrators, and permitted assigns.

i. The Parties represent and warrant to each other that the execution of this Agreement and the performance of such Party's obligations hereunder have been duly authorized and that the Agreement is a valid and legal agreement binding on each Party and is enforceable in accordance with its terms.

j. If any provision of this Agreement is found to be illegal or unenforceable, then any such provision shall be deemed stricken and the remaining provisions hereof shall remain in full force and effect.

k. This Agreement constitutes the entire understanding between the Parties as to the Renewal Request and can only be amended or modified in writing, signed by duly authorized representatives of the Parties. This Agreement supersedes all prior representations and agreements, if any, between the Parties regarding the Renewal Request.

l. This Agreement, when signed by all of the signatories, shall become effective as of the last signature date.

m. This Agreement may be signed in counterparts, which together shall constitute one and the same Agreement. A facsimile or scanned signature shall be the same an original.

IN WITNESS THEREOF, the Parties have executed this Agreement as of the date of the last signature below:

By: _____ John Reid
James Fong
Department of Fish and Wildlife

Date: 9/3/15 Sept. 2 2015

Exhibit A

August 11, 2015

CDFW
Received
AUG 12 2015
BY
LRB

To: Fish and Wildlife
1749 North Market Blvd.
Sacramento, CA 95834

I would like to request a reinstatement of the crab vessel permit #CT0108-T7 for the fishing vessel Huson, F & G # L07894.

The permit, buoy tags, and registration for the Huson were paid through 2013.

In the year 2014, permits for the salmon vessel, commercial boat registration, and commercial fishing licenses for my wife and myself were paid for and received. Somehow the renewal for the crab vessel permit was overlooked. (Could it be that I was inadvertently sent the worksheet omitting the crab permit? Otherwise I simply overlooked it.)

In the year 2015 the commercial fishing license renewal showed no option for crab vessel permit renewal. I failed to notice this and thus was not alerted to the fact that this was the opportunity to renew the crab vessel permit.

We have been purchasing licenses from the Department of Fish and Wildlife since 1970 and our records will show that we have been timely and consistent with all of our payments.

We hope overlooking this renewal payment will be forgiven and the crab license will be renewed. It has always been our intention to continue with maintaining the crab vessel permit.

Sincerely,

John Reid

John Reid

Exhibit B

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
License and Revenue Branch
1740 N. Market Blvd
Sacramento, CA 95834
http://www.wildlife.ca.gov

EDMUND G. BROWN JR, Governor
CHARLTON H. BONHAM, Director

Certified Mail

August 12, 2015

Mr. John Reid

Subject: **NOTICE OF DENIAL FOR A TRANSFERABLE DUNGENESS CRAB VESSEL PERMIT, PERMIT NUMBER CT0108-T7, FOR THE F/V *Huson* (FG06579)**

Dear Mr. Reid:

This is in response to your request to reinstate the Transferable Dungeness Crab Vessel Permit (TDCVP), Permit Number CT0108-T7, for the F/V *Huson* (FG06579).

Authority-Dungeness Crab Vessel Permit
Under Fish and Game Code (FGC) Section 8280.2(e), states applications for renewal of all Dungeness crab vessel permits shall be received by the Department of Fish and Wildlife (Department), or, if mailed, postmarked, by April 30 of each year. In order for a vessel to retain eligibility, a permit shall be obtained each year subsequent to the initial permit year and the vessel shall be registered pursuant to Section 7881.

Authority-Late Renewal Applications
Effective April 1, 2008 pursuant to FGC Section 7852.2, a graduated late fee was established for any renewal application that is received after the deadline.

In addition, FGC Section 7852.2(b), states the Department shall not waive the applicable late fee. Pursuant to FGC Section 7852.2(c), the Department shall deny any application for renewal received after the March 31 if the permit year following the year in which the applicant last held a valid permit for that fishery.

Reason for Appeal to the Department
In your letter dated August 11, 2015, received August 12, 2015, you are requesting reinstatement of the TDCVP for the F/V *Huson*. You state that in 2014, the Salmon Vessel Permit, Commercial Boat Registration and the Commercial Fishing License for you and your wife were paid for and received. Somehow the renewal for the TDCVP was overlooked. You further state that the 2015 Commercial Fishing License renewals showed no option to renew the TDCVP. You failed to notice this, and were not alerted to the fact that this was your opportunity to renew the TDCVP.

You also state that you have been purchasing licenses from the Department since 1970, your records will show that you have been timely and consistent with all of your payments. You hope overlooking the renewal payment will be forgiven and the TDCVP will be renewed. It has always been your intention to continue with maintaining the TDCVP

Documentation Submitted
None

Department Findings
Department license records show that the F/V *Huson* held a valid 2013-2014 TDCVP, which made you eligible to renew the permit for the 2014-2015 permit year.

Department Determination
Based on the previously stated information, your request to reinstate the TDCVP for the F/V *Huson* is denied, because the F/V *Huson* last held a valid TDCVP in the 2013-2014 permit year. The Department received your request to renew the TDCVP for the F/V *Huson* on August 12, 2015. FCG Section 7852.2(c), states the Department shall deny any application for renewal received after March 31 of the permit year following the year in which the applicant last held a valid permit for that fishery.

Deadline to File an Appeal to the Fish and Game Commission
If you wish to appeal the Department's decision, you must submit a written request to the Fish and Game Commission (Commission) at 1416 Ninth Street Sacramento, California 95814. Pursuant to FGC Section 7852.2(d), your appeal must be received within 60 days of this letter. The Commission, upon consideration of the appeal, may grant renewal. If the Commission grants renewal, it shall assess the applicable late fee.

The Commission will review the information you submit and will notify you in writing if your appeal will be scheduled before the Office of Administrative Hearings. If the Commission should recommend approval, full payment of $3,623.00 would be due 60 days after receipt of the Commission's approval letter. A fee schedule is enclosed.

If you have any questions or require further assistance, please contact Ms. Ruth Flores, of my staff, at the letterhead address, by telephone at (916) 928-7470, or e-mail Ruth.Flores@wildlife.ca.gov.

Sincerely,

James Fong, Chief
License and Revenue Branch

cc: Mr. Sonke Mastrup
Fish and Game Commission
Sacramento, California

Ms. Ruth Flores
Department of Fish and Game
Sacramento, California

Exhibit C

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
License and Revenue Branch
1740 N. Market Blvd
Sacramento, CA 95834
http://www.wildlife.ca.gov

EDMUND G. BROWN JR, Governor
CHARLTON H. BONHAM, Director

Mr. John Reid
Fees Required for Reinstatement for a
Dungeness Crab Vessel Permit
Permit Number CT0108-T7
F/V Huson (FG06579)

Prior Year Fees	Permit Fees
2014-2015 Dungeness Crab Vessel Permit	$ 283.25
Late Fee (61 days to March 31, 2015)	$ 581.25
	864.50
Prior Year Fees Due	**$ 864.50**

Prior year permit fees must be paid before a 2015-2016 DCVP can issued.

Current Year Fees	
2015-2016 Dungeness Crab Vessel Permit	$ 287.00
Biennial Dungeness Crab Trap Limit Permit/Buoy Tags	$ 1,882.50
Late Fee (61 days to March 31, 2016)	$ 589.00
Total Current Fees Due	$ 2,758.50
Total Fees Due	$ 3,623.00

If the Fish and Game Commission should recommend approval, full payment of $3,623.00 would be due within 60 days after receipt of the Commission's approval letter.

Exhibit D

Kiene, David@Wildlife

From: Miller-Henson, Melissa@FGC
Sent: Tuesday, September 01, 2015 1:14 PM
To: Kiene, David@Wildlife
Subject: FW: request for reinstatement of TDCVP for F/V Huson

Appeal msg from Mr. Reid.

From: FGC
Sent: Friday, August 28, 2015 10:57 AM
To: Miller-Henson, Melissa@FGC
Subject: FW: request for reinstatement of TDCVP for F/V Huson

This item has been placed in the Appeals folder at fgc@fgc.ca.gov .

From: Valerie Reid
Sent: Friday, August 28, 2015 10:39 AM
To: FGC
Subject: request for reinstatement of TDCVP for F/V Huson

August 28, 2015

To: Mr. Sonke Mastrup

Fish and Game Commission

Sacramento, Ca 94244

Re: Reinstatement of the Transferable Dungeness Crab Vessel Permit #CT0108-T7 for the F/V Huson, F&G #06579

I would like to appeal the denial for reinstatement of the TDCVP for the F/V Huson. The F/V Huson held valid licenses through the 2013-2014 TDCVP year. These licenses and permits included the Dungeness Crab Vessel Permit in the amount of $273 and Biennial Dungeness Crab Trap Tag fees in the amount of $1,888. This was paid in addition to the commercial salmon vessel permit, the commercial boat registration, the san Francisco herring permit, and the personal licenses for myself and my wife.

In the 2014-2015 year, the permits for the salmon vessel, herring fishery, commercial boat registration, and commercial fishing licenses for my wife and myself were paid for and received. Somehow the renewal fee of $283 for the crab vessel permit was overlooked. And this is where the problem began. Apparently there is both a commercial fishing license renewal form including the crab vessel renewal option and a form not including the crab vessel renewal. Could it be that I was inadvertently sent the worksheet omitting the crab permit?) Otherwise I simply missed it. Since I did not pay the fee of $283 for 2014-2015, I was sent a fee worksheet schedule for 2015-2016 that omitted the listing for the Dungeness Crab Vessel Permit and showed no option to renew the crab permit and therefore I missed paying the fee. I failed to notice this and thus was not alerted to the fact that this was the opportunity to renew the crab vessel permit.

I was not aware of the non-renewal of the crab vessel permit until August of 2015 at which time I asked to make whatever payment was due. This was not possible. The request was denied and I have been referred to the commission to request reinstatement.

I conscientiously met the requirements for qualifying for a Transferable Dungeness Crab Vessel Permit knowing that this might be the main fishing income generated with the F/V Huson and that it would have value upon my retirement. Failing to notice omitting the renewal is a grave mistake and I sincerely request reinstatement.

My wife and I have been purchasing licenses from the Department of Fish and Wildlife since 1970;

- personal license for John Reid, 1970 - present

- personal license for Valerie Reid 1971 - present

- commercial registration and commercial salmon vessel permits, 1970-1981 and 2005 - present

- herring permit #DH-418-SF, inception - 2013

- herring permit #H-086-SF, inception to present

Our records will show that we have been timely and consistent with all of our payments.

My intention has always been to pay for and maintain the crab, salmon, and herring licenses. Their value has always been important and my failure to pay the crab permit fees was an error I was unaware of until August of 2015. I thought that all permits had been paid and were current. I was wrong. They were all paid except for the crab permit. I was unaware of this and accept full responsibility. It makes no sense that I would pay for the other permits that have less value and not pay for the crab permit that has the most value to me.

I realize that the next item I am going to mention is out of my control. It has to do with the start of the 2015-2016 crab season in November. I need to prepare for the upcoming season, both in terms of money and time, and I am going to request that action regarding reinstating this permit be expedited so that I will not miss the start of the 2015-2016 crab season. I don't know if this is possible, but any help would be appreciated.

As I mentioned before my failure to pay the permit fees was an unintentional mistake. In my correspondence with Mrs. Ruth Flores and Mr. James Fong at the License and Revenue Branch their letter indicates that should you rule to reinstate the permit, the full payment of fees would be $3,623. I am prepared to pay this amount and whatever other penalties you might deem appropriate. I apologize for the extra work that this has caused for you and your staff. If I can be of any assistance please let me know.

Sincerely,

John Reid

RECORDING REQUESTED BY AND)
WHEN RECORDED MAIL TO:)
)
State of California)
Fish and Game State)
1416 Ninth Street, 13th Floor)
Sacramento, CA 95814)

Space Above Line for Recorder's Use Only

LEASE GRANTING THE EXCLUSIVE PRIVILEGE OF CONDUCTING AQUACULTURE AT STATE WATER BOTTOM NO. M-000-00

THIS LEASE GRANTING THE EXCLUSIVE PRIVILEGE OF CONDUCTING AQUACULTURE AT STATE WATER BOTTOM NO. M-000-00 ("Lease") is made and entered into as of [DATE], by and between [NAME], ("Tenant") and the California Fish and Game Commission ("State") with reference to the following facts:

RECITALS

Tenant wishes to lease a State Water Bottom for the purpose of propagating, cultivating, maintaining and harvesting aquatic plants and/or animals in marine waters of the state.

Fish and Game Code section 15400 authorizes the State to lease to any person the exclusive privilege to conduct aquaculture in any designated State Water Bottom if it determines that such lease is in the public interest.

[New lease]: On [DATE] the State awarded the lease for State Water Bottom No. M-000-00 to Tenant.

[Renewal]: On [DATE(s)] the State authorized renewal of the Lease for State Water Bottom No. M-000-00 to Tenant.

[Other]: On [DATE] [Note here any other significant events concerning the lease, e.g. amendment, assignment or designation of successor-in-interest.]

TERMS AND CONDITIONS

1. **LEASE.** The State hereby grants to Tenant the exclusive privilege to conduct aquaculture upon State Water Bottom No. M-000-00, subject to the terms and conditions of this Lease.

2. DESCRIPTION. This Lease covers that area comprising approximately 000.00 acres designated as State Water Bottom No. M-000-00 and shown on the Map and Description attached as **Exhibit A**, which is made a part of this Lease by this reference.

3. TERM. This Lease is for a period of 0.00 years commencing on [START DATE] and ending on [END DATE], unless renewed or sooner terminated in accordance with its terms.

4. ANNUAL RENT. The base rent for the Lease area is $000.00 per acre, calculated to recover Tenant's share of the State's operational costs of the aquaculture bottom leasing program attributable to shellfish cultivation. The base rent shall be annually adjusted in the following manner:

> The Department of Fish and Game shall determine the change in the "Implicit Price Deflator for State and Local government Purchases of Goods and Services," as published by the U.S. Department of Commerce, for the quarter ending March 31 of the current year compared to the quarter ending March 31 of the previous year. The relative amount of the change shall be multiplied by the amount of the annual rent.

No more frequently than at five-year intervals, the State, in its sole discretion, may recalculate the productivity classification by which the annual rent is calculated for Tenant to reflect changes in the State's operational costs of the aquaculture bottom leasing program attributable to shellfish cultivation. The 10-year average oyster production values fall into three productivity classifications:

- High productivity = >100,000 oysters/acre = $150.00 per acre/year
- Moderate productivity = >20,000-99,000 oysters/acre = $100.00 per acre/year
- Low productivity = >2,000-19,999 oysters/acre = $50.00 per acre/year

Whenever such formula is updated, the annual rent first charged Tenant thereafter shall become the new base rent, subject to the foregoing adjustments for inflation thereafter.

Notice of the annual adjusted rent for the upcoming calendar year shall be given to Tenant by December 1. Until the notice of the annual adjustment is provided, Tenant remains obligated to pay rent at the previous rate. Pursuant to Fish and Game Code section 15407, the annual rent shall be paid within 30 days of the commencement date in Section 3, and within 30 days of each anniversary. Tenant shall remit such rent to: Department of Fish and Game, Fiscal and Administrative Services Branch, 1416 Ninth Street, 12th Floor, Sacramento, California 95814 RE: State Water Bottom Lease No. M-000-00.

Payment shall be made to the State in lawful money of the United States, provided that, if any payment made by a check, draft or money order is returned to The State due to insufficient funds or otherwise, the State shall have the right, upon written notice to Tenant, to require Tenant to make all subsequent payments in cash, or by cashier's or certified check.

5. LATE PAYMENT. Annual payment of rent is due and payable on the commencement date of this Lease or any anniversary thereafter, and is timely if received by the State within thirty (30) days of such commencement date or anniversary. Any annual payment not received by the State within thirty (30) days of the Lease commencement date or anniversary thereof, regardless of whether the 30th day falls on a Saturday, Sunday or holiday, will be subject to a late penalty consisting

of an administrative charge on the late amount, calculated at the rate of five percent (5%) of the amount of the late payment. The parties agree that the late charge represents a fair and reasonable estimate of the costs the State will incur because of late payment. Acceptance of the late charge by the State shall not constitute a waiver of Tenant's default for the overdue amount, nor prevent the State from exercising other rights and remedies granted under this Lease. Tenant shall pay the late charge as additional rent within 30 days of the due date of the original payment.
Any annual payment not received by the State within ninety (90) days of the commencement date of the Lease or within ninety (90) days of any anniversary thereof shall constitute a breach of Lease, giving rise to the State's remedies as set forth herein.

Annual rent due to the State, if not received by the State within ninety (90) days following the due date, will bear interest from the due date until paid at the rate of ten percent (10%) per year or, if a higher rate is legally permissible, at the highest rate legally permitted. Interest shall not be payable on late charges incurred by Tenant nor on any amounts on which late charges are paid by Tenant to the extent this interest would cause the total interest to be in excess of that legally permitted. Payment of interest shall not excuse nor cure any default by Tenant.

Upon written request by Tenant to the State, demonstrating unusual or extenuating circumstances causing the late payment, the State, in its sole discretion, may waive the late charge.

6. INSURANCE. Tenant shall furnish to the State certificate(s) of insurance stating that Public Liability Insurance is presently in effect for the Tenant and will be in effect throughout the period of this Lease with a combined single liability limit of not less than One Million Dollars ($1,000,000.00) per occurrence, and shall insure against all liability of Tenant and its employees and agents arising out of or in connection with Tenant’s use and occupancy of the leased Lease area. The certificate(s) of insurance shall:

(a) Be furnished to the State by the insurance companies, and no such policy shall be cancelable or subject to reduction of coverage or other modification except after 30 days prior written notice to the State.

(b) Include the State of California, its officers, agents, employees and servants are included as additional insured but only insofar as the operations under the Lease are concerned.

(c) Provide that the State shall not be responsible for any premiums or assessments on any policy of insurance hereunder.

(d) Comply with those standards as determined by the State of California, Department of General Services, Office of Risk and Insurance Management.

Tenant agrees that the insurance required herein shall be in effect at all times during the term of this Lease, at the cost of Tenant. In the event said insurance, or any of it, expires or lapses at any time during the term of this Lease, the Tenant agrees to provide, no later than fifteen (15) days after said expiration or lapse, written evidence of required insurance coverage from the date of loss of the earlier insurance and continuing for not less than the remainder of the term of the Lease. Tenant's failure to

keep in effect at all times all insurance required by this Lease shall be grounds for termination of the Lease, in addition to any other remedies available to the State.

Where Tenant has any employees, a program of workers' compensation insurance, in an amount and form to meet all applicable requirements of the Labor Code of California, shall be in place throughout the term of this Lease. Such insurance shall include employer's liability coverage of One Million Dollars ($1,000,000.00) and shall specifically cover all persons providing services by or on behalf of Tenant and shall cover all risks to such persons under this Lease.

7. INDEMNITY AND WAIVER. (For purposes of this Section 7, the term, "State", shall include the Department of Fish and Game as well as the Fish and Game Commission.) Tenant hereby waives all claims and recourse against the State, including the right to contribution for loss or damage to persons or property arising from, or in any way connected with or incident to this Lease, except claims arising from, and only to the extent of the gross negligence or willful misconduct of the State, its officers, agents or employees. Tenant shall notify the Department of Fish and Game Aquaculture Coordinator immediately in case of any serious accident, injury, or casualty on, or potentially related to, the Lease area.

Tenant shall protect, indemnify, hold harmless, and defend the State, its officers, agents or employees, against any and all claims, demands, damages, costs, expenses or liability costs arising out of the use by Tenant, including its employees and agents, of the Lease area, except for liability arising out of, and to the extent of, the gross negligence or willful misconduct of the State, its officers, agents or employees for which the State is found liable by a court of competent jurisdiction.

Should the State be named as a defendant in any claim or legal action arising out of the use by Tenant, including its employees and agents, of the Lease area, upon tender of the claim or action by the State to Tenant, the Tenant shall assume the State's defense and represent the State in such legal action at Tenant's expense, subject to the provisions herein.

In lieu of tender to Tenant of the claim or action against the State, the State may elect to represent itself, in which event, the State shall bear its own litigation costs, expenses and attorney fees. Notwithstanding the foregoing, in the event the State is required to represent itself because of a conflict of interest by counsel representing Tenant, then Tenant, upon demand by the State, shall reimburse the State for the State's litigation costs, expenses and attorney fees. Costs shall include, without limitation, all attorney fees and costs, court costs, if any, costs of mediators or arbitrators, experts and consultants, and any other costs reasonably incurred in response to any claim.

In the event the State is found to be concurrently liable with Tenant by a court of competent jurisdiction for loss or damage to persons or property arising out of the use by Tenant, its employees and agents, of the Lease area, the State and Tenant shall cooperate and use their best efforts to seek and obtain an apportionment of liability from the court and neither party shall request a jury apportionment.

In the event the State is found to be liable for any other wrongful act, for which liability to another is determined by a court of competent jurisdiction for loss or damage to persons or property arising out of the use by Tenant, its employees and agents, of the

Lease area, the State shall bear its own litigation costs, expenses and attorney fees. If Tenant has paid for any such costs which are the responsibility of the the State under this provision, the State shall reimburse Tenant at Tenant's request. The State, in its sole discretion, may provide any reimbursement required in the form of a credit against any other money due the State under this Lease.

8. RENEWAL. Tenant may provide written notice to the Department of Fish and Game Aquaculture Coordinator that it is exercising its right to seek renewal of this lease at least 120 days and not more than 364 days (one year) prior to the expiration date in Section 3 pursuant to Fish and Game Code section 15406. So long as Tenant, during the period specified herein, is still actively engaged in aquaculture, as determined by the State, Tenant shall have a prior right to renew for a period of 0.00 years on terms to be agreed upon between the State, in consultation with the Department of Fish and Game Aquaculture Coordinator, and Tenant. If Tenant fails to give such notice of its right to seek renewal during the period specified herein, the Lease, including any remaining right to seek renewal, shall terminate upon expiration of the then-current term. Moreover, if Tenant is in default on the date of giving such notice, the notice shall be ineffective; if Tenant cures the default and provides a new notice thereafter all within the period specified herein for giving notice, that new notice shall be sufficient to exercise Tenant's prior right to renew. Provided, further, that if on the date a renewal term is to commence Tenant is in default, the renewal term shall not commence and this Lease shall expire at the end of the current term. However, if the State continues negotiating renewal terms after the prior term expires, then the holdover provisions of Section 9 may apply. In no event shall the term of this Lease, or the term of any renewal thereof, extend beyond 25 years each.

9. HOLDOVER. If the Term in Section 3 expires and the Lease has not been renewed pursuant to Section 8, and Tenant remains in possession of the Lease area with State's express or implied permission, Tenant shall become a tenant from month to month only, subject to all the provisions of this Lease except Sections 3, 4 and 5. During this holdover tenancy, a monthly rent representing one-twelfth of the current adjusted annual rent shall be payable on or before the first day of each month. It is expressly understood that a holdover tenancy does not create any right of renewal beyond that provided by Fish and Game Code section 15406 as set forth in Section 8, and that the only purpose of a holdover tenancy is to allow continuity of use of the property while the State continues to negotiate renewal terms or undertakes to issue a new lease to the highest responsible bidder pursuant to Fish and Game Code section 15406, or to allow the holdover tenant time to terminate and remove the aquaculture operation consistent with Fish and Game Code section 15409(a). If either party desires to terminate such holdover tenancy, it shall give the other party not less than thirty days advance written notice of the date of termination.

10. POSSESSORY INTEREST. Tenant understands and acknowledges that, pursuant to Revenue and Taxation Code section 107.6(a), any possessory interest created by this Lease may be subject to the payment of property taxes levied on that possessory interest.

Tenant agrees to pay, before delinquency, all lawful taxes, assessments, license fees and any other charges of any type whatsoever which at any time may be levied by the State, County, City or any tax or assessment-levying body upon any interest in or

created by this Lease, or any possessory right which Tenant may have in or to the Lease area covered hereby.

11. USE. Tenant shall use the Lease area only for the purpose stated in this Lease, and such use shall be continuous from commencement of the Lease term until its expiration or termination. Pursuant to Fish and Game Code section 15414, the State may require the Tenant to submit any periodic reports it deems necessary for the proper administration of State Water Bottom M-000-00.

The Lease area shall be continuously used by Tenant to conduct aquaculture operations, as aquaculture is defined in Fish and Game Code section 17. Tenant shall not use or permit the Lease area to be used in whole or in part during the term of this Lease for any purpose, other than as set forth herein, without the prior written consent of the State.

The possessory interest herein given to the Tenant does not exclude the general public from the Lease area, and Tenant may not unreasonably impede public access to state waters for purpose of fishing, navigation, commerce or recreation or other public trust values. However, Tenant may limit public access to the extent necessary to avoid damage to the Lease area and the aquatic life culture therein. This Lease is not intended to confer third party beneficiary status to anyone benefiting from the terms of this Lease. The possessory interest is further subject to all valid and existing contracts, leases, licenses, encumbrances, and claims of title which may affect the Lease area.

This Lease provides a tenancy of a temporary nature. The parties to this Lease agree that no Relocation Payment or Relocation Advisory Assistance will be sought or provided in any form as a consequence of this tenancy.

This Lease is of no force or effect until signed by both parties and all approvals are secured. Tenant may not commence performance until such approval has been obtained. Any commencement of performance prior to Lease approval shall be done at the Tenant's own risk. Nothing in this Lease may be waived, modified, amended or discharged except by a writing signed by the State and Tenant and approved by the State in a public meeting.

12. SHELLFISH PRODUCTION IMPROVEMENTS.

[Oyster Cultivation.

[(A) Bottom culture: leases must be improved at an average rate of at least two cases of seed-bearing shell (160 pounds of seed-bearing shell) or 30 bushels of shellfish one or more years of age per acre over the allotted acreage per year. Improvements by unattached, single seed (less than one year old) shall consist of planting an average rate of 10,000 single seed per acre per year over the allotted acreage. Term of improvement shall be four years for seed-bearing shell and three years for oysters one or more years of age.

[(B) Off-bottom culture: leases must be improved at an average rate of at least one case of seed-bearing shell (80 pounds of seed-bearing shell), or 15 bushels of oysters one or more years of age per acre over the allotted acreage per year. Improvement by unattached single seed (less than one year old) shall consist of planting an average

rate of 5,000 single seed per acre per year over the allotted acreage. Term of improvement shall be four years for seed-bearing shell and three years for oysters one or more years of age.

[(C) Production requirements: the annual harvest rate shall be an average of 2,000 oysters per acre (over one year of age) over the allotted acreage effective three years after the effective date of the lease. Harvest reports shall be recorded in the form of a receipt in quadruplicate furnished by the Department of Fish and Game. The triplicate copy shall be delivered to the Department of Fish and Game on or before the first and sixteenth day of each month.

[(2) Miscellaneous Aquatic Species.

[(A) A lease for the cultivation of species other than oysters will include minimum planting and harvesting requirements for the species to be cultivated to insure that water bottoms so encumbered will be used for the purpose intended.

[(B) Harvest amounts shall be recorded in the form of a receipt in quadruplicate furnished by the Department of Fish and Game. The triplicate copy shall be delivered to the Department of Fish and Game on or before the first and sixteenth day of each month.]

13. NO WARRANTY. This Lease is made without warranty of title, condition or fitness of State Water Bottom M-000-00 for the Tenant's intended purpose or use.

Tenant agrees to accept the Lease area in its presently existing condition, "As Is", and that the State shall not be obligated to make any alterations, additions or betterments thereto except as otherwise provided in the Lease.

14. COMPLIANCE. As a necessary condition for this Lease, Tenant must obtain and maintain all necessary registrations, permits and any other entitlements. Tenant shall comply with all applicable federal, state and local laws, including laws relating to public health and safety, zoning, resource conservation and environmental protection including, but not limited to, the Coastal Zone Act, the Porter-Cologne Water Quality Act, and the California Environmental Quality Act.

Tenant shall comply with all applicable resource management and preservation mandates in the conduct of all activities that impact cultural, natural, or scenic resources. These mandates include, but are not limited to, those found in Public Resources Code sections 5024 and 5097 and the United States Secretary of the Interior's Guidelines for Historic Preservation. Tenant's operations under this Lease shall ensure that the State's goals of ensuring historical preservation and proper cultural, scenic and natural resource management are continually achieved in a manner consistent with applicable law.

15. RECORD KEEPING. The State may require periodic reports from Tenant as the State deems necessary for the proper administration of the State's water bottoms.

Tenant agrees that the Fish and Game Commission, Department of Fish and Game, and the Bureau of State Audits, or their designated representative, shall have the right to review and copy any records and supporting documentation pertaining to the

performance of this Lease. Tenant agrees to maintain such records for possible audit for a minimum of three years after final payment. Tenant agrees to allow the auditor(s) prompt access to such records during normal business hours and similarly to allow interviews of any employees who might reasonably have information related to such records. Tenant agrees to include a similar right of the State to audit records and to interview staff in any sublease or contract related to performance of this Lease.

16. WAIVER AND CONSENT. Unless expressly acknowledged by the State in writing, no term, covenant, or condition of this Lease and no default or breach is waived by the acceptance of a late or nonconforming performance. The State's consent for one transaction or event under this Lease is not consent to any subsequent occurrence of the same or any other transaction or event.

17. BREACH. The occurrence of any one of the following shall constitute a breach of this Lease by Tenant: (1) Failure of Tenant to make any annual Lease payment within ninety (90) days of the commencement date of the Lease or within ninety (90) days of any anniversary thereof; (2) Failure of Tenant to make any other payment more than thirty (30) days after such payment is due; (3) abandonment of the Lease area determined after the State has followed the procedures set forth in Civil Code section 1951.3; or (4) any failure by Tenant to comply with laws applicable to the conduct of aquaculture.

Should a threat to public health or safety or to the environment be created or exist on the Lease area, the State may declare an emergency event and, unless an alternative arrangement is preferable in the State's discretion, may enter upon and take possession of the Lease area to remedy the emergency without prior notice and/or demand an assignment of the right to operate the Lease area. Upon entering the Lease area under this Section, the State shall provide immediate notice of such action by hand delivery or fax of its declaration to Tenant. The State may retain possession of the Lease area until the emergency event has been completely and adequately addressed to the State's satisfaction. Where a breach of this Lease has caused or exacerbated the emergency event, or where the Tenant is non-cooperative in allowing or addressing any remedial action necessary because of the emergency event, the State may terminate the Lease. The State shall not be liable in any manner for any inconvenience, disturbance, loss of business, nuisance or other damage arising out of the State's entry in the Lease area as provided herein, except damage resulting from the active negligence or willful misconduct of the State or its authorized representatives.

Any failure by Tenant to observe or perform another provision of this Lease where such failure continues for twenty (20) days after written notice thereof by the State to Tenant; any such notice shall be deemed to be the notice required under Code of Civil Procedure section 1161. However, if the nature of Tenant's breach is such that it cannot reasonably be cured within the twenty (20) day period, Tenant shall not be deemed to be in breach if Tenant shall commence such cure within the twenty (20) day period and thereafter diligently prosecutes such cure to completion.

Neither this Lease nor any interest of Tenant hereunder in the Lease area shall be subject to involuntary assignment or transfer by operation of law in any manner whatsoever, including, without limitation, the following: (a) transfer by testacy or intestacy; (b) assignments or arrangements for the benefit of creditors; (c) levy of a writ

of attachment or execution on this Lease; (d) the appointment of a receiver with the authority to take possession of the Lease area in any proceeding or action in which the Tenant is a party; or (e) the filing by or against Tenant of a petition to have Tenant adjudged a bankrupt, or of a petition for reorganization or arrangement under any law relating to bankruptcy. Any such involuntary assignment or transfer by operation of law shall constitute a breach by Tenant and the State shall have the right to elect to take immediate possession of the Lease area, to terminate this Lease and/or invoke other appropriate remedies, in which case this Lease shall not be treated as an asset of Tenant.

Notices of breach shall specify the alleged breach and the applicable Lease provision and shall demand that Tenant perform the provisions of this Lease within the applicable time period or quit the Lease area. No such notice shall be deemed a forfeiture or a termination of this Lease unless the State specifically so states in the notice.

18. REMEDIES. In the event of breach by Tenant, the State shall have the following remedies. These remedies are not exclusive; they are cumulative and are in addition to any other right or remedy of the State at law or in equity.

Collection of Rent: In any case where the State has a cause of action for damages, the State shall have the privilege of splitting the cause to permit the institution of a separate suit for rent due hereunder, and neither institution of any suit, nor the subsequent entry of judgment shall bar the State from bringing another suit for rent; it being the purpose of this provision to provide that the forbearance on the part of the State in any suit or entry of judgment for any part of the rent reserved under this Lease, to sue for, or to include in, any suit and judgment the rent then due, shall not serve as defense against, nor prejudice a subsequent action for, rent or other obligations due under the Lease. The claims for rent may be regarded by the State, if it so elects, as separate claims capable of being assigned separately.

Continued Performance: At the State's option, Tenant shall continue with its responsibilities under this Lease during any dispute.

Termination of Tenant's Right to Possession: Upon an event of breach of this Lease by Tenant, in addition to any other rights or remedies it may have, the State may give Tenant a three-day notice to cure the breach or quit the Lease area. If Tenant fails to do either, the State may bring a statutory proceeding in unlawful detainer to regain possession of the Lease area. Any notice give by the State pursuant to this Section does not constitute a termination of this Lease unless expressly so declared by the State in the notice. In the absence of written notice from the State, no act by the State, including, but not limited to, acts of maintenance, efforts to re-let and/or assign rights to possession of the Lease area, or the appointment of a receiver on the State's initiative to protect the State's interest under this Lease shall constitute an acceptance of Tenant's surrender of the Lease area, or constitute a termination of this Lease or of Tenant's right to possession of the Lease area. Upon such termination, the State has the right to recover from Tenant: (a) the worth, at the time of the award, of the unpaid rent that had been earned at the time of termination of this Lease; (b) the worth, at the time of the award, of the amount by which the unpaid rent that would have been earned after the date of termination of this Lease until the time of the award exceeds the amount of loss of rent that Tenant proves could have reasonably been avoided; (c) the worth, at the time of the award, of the amount by which the unpaid rent for the balance

of the term after the time of the award exceeds the amount of the loss of rent that Tenant proves could have been reasonably avoided; and (d) any other amount necessary to compensate the State for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease, and costs of clearing the State's title of any interest of Tenant, commissions, attorneys' fees, and any other costs necessary or appropriate to make the Lease area operational by a new Tenant.

“The worth, at the time of the award," as used herein above shall be computed by allowing interest at the lesser of a rate of ten percent (10%) per annum or the maximum legal rate.

Receiver: If Tenant is in breach of this Lease, the State shall have the right to have a receiver appointed to collect rent and conduct Tenant's business or to avail itself of any other pre-judgment remedy. Neither the filing of a petition for the appointment of a receiver nor the appointment itself shall constitute an election by the State to terminate this Lease.

Right to Cure Tenant's Breach: At any time after Tenant commits a breach, the State can cure the breach at Tenant's cost. If the State, at any time by reason of Tenant's breach, pays any sum or does any act that requires the payment of any sum, the sum paid by the State shall be due immediately from Tenant to the State, and if paid at a later date shall bear interest at the rate of ten percent (10%) per annum from the date the sum is paid by the State until the State is reimbursed by Tenant.

Personal Property of Tenant: In the event any personal property or trade fixtures of Tenant remain at the Lease area after the State has regained possession, that property or those fixtures shall be dealt with in accordance with the provisions for Surrender of the Lease area provided below.

State's Obligations After Breach: The State shall be under no obligation to observe or perform any covenant of this Lease on its part to be observed or performed that accrues after the date of any breach by Tenant. Such nonperformance by the State shall not constitute a termination of Tenant's right to possession nor a constructive eviction.

No Right of Redemption: Tenant hereby waives its rights under California Code of Civil Procedure sections 1174 and 1179 or any present or future law that allows Tenant any right of redemption or relief from forfeiture in the event the State takes possession of the Lease area by reason of any breach by Tenant.

Other Relief: The State shall have such rights and remedies for failure to pay any and all monetary obligations under this Lease as the State would have if Tenant failed to pay rent due. The remedies provided in this Lease are in addition to any other remedies available to the State at law, in equity, by statute, or otherwise.

Attorney’s Fees and Costs: Tenant shall reimburse the State on demand for all reasonable attorney fees and expenses incurred by the State as a result of a breach under this Lease, provided that, in any litigation between the parties to this Lease concerning it, the prevailing party shall be entitled to recover court costs, reasonable attorney fees, and other costs reasonably incurred to secure the remedy obtained in the action.

The State shall not be in breach of the performance of any obligation required of it under this Lease unless and until it has failed to perform such obligation for more than thirty (30) days after written notice by Tenant to the State specifying the alleged breach and the applicable Lease provision giving rise to the obligation. However, if the nature of the State's obligation is such that more than thirty (30) days is required for its performance, then the State shall not be deemed in breach if it shall commence performance within such 30-day period and thereafter diligently prosecute the same to completion.

19. ASSIGNMENT AND SUBLEASES. Pursuant to Fish and Game Code section 15412, this Lease may not be assigned, in whole or in part, by Tenant, either voluntarily or by operation of law, and no subleases or other rights may be granted under it by Tenant without the prior written approval of the State, subject to the conditions that it prescribes. At the election of the State, any attempted assignment or subletting without such prior approval of the State shall terminate this Lease.

20. TERMINATION. In the event the Lease area becomes unsuitable for the practical cultivation or harvest of shellfish, or in the event the Tenant becomes unable to continue operating the Lease for aquaculture for reasons beyond Tenant's ability to control, Tenant may terminate the Lease after thirty (30) days written notice to the State. Tenant may terminate the Lease for any other reason through a written request presented to and approved by the State at a public hearing held for purposes of consideration of Tenant's termination request. Such termination shall be effective thirty (30) days after State approval.

On expiration of or within thirty (30) days after earlier termination of the Lease, Tenant shall surrender the Lease area to the State. Tenant shall remove all of its personal property as well as all man-made material deposited during Tenant's occupancy within the above stated time unless otherwise agreed to in writing.

If Tenant fails to surrender the Lease area to the State on the expiration, or within thirty (30) days after earlier termination of the term as provided by this Section, Tenant shall hold the State harmless for all damages resulting from Tenant's failure to surrender the Lease area.

21. QUITCLAIM. Tenant shall, within ninety (90) days of the expiration or sooner termination of this Lease, execute, acknowledge and deliver to the State in a recordable form provided by the State a release of all rights under this Lease. Should Tenant fail or refuse to deliver such a release, a written notice by the State reciting such failure or refusal shall, from the date of its recordation, be conclusive evidence against Tenant of the expiration or termination of this Lease.

22. TIME OF THE ESSENCE. Time is of the essence of this Lease and any term, covenant or condition in which performance is a factor.

23. CHANGES. Nothing in this Lease may be waived, modified, amended, or discharged except by an instrument in writing signed by Tenant and the State, in consultation with the Department of Fish and Game Aquaculture Coordinator. At its discretion, the Department of Fish and Game may charge Tenant for any and all costs it incurs in any lease amendment requested by Tenant.

24. SEVERABILITY. If a court of competent jurisdiction determines that a Lease provision is legally invalid, illegal or unenforceable, and such decision becomes final, the provision shall be severed and deleted from the Lease and the remainder reasonably interpreted to achieve its intent. Tenant and the State agree to replace such void or unenforceable provision with a valid and enforceable provision that will achieve, to the extent possible, the purpose of the original provision.

25. SITE CLEANUP. Tenant shall provide to the State financial assurance sufficient to ensure that, upon termination or abandonment of this Lease, the Lease area is surrendered in a condition that is in accordance with Section 20, to the satisfaction of the State.

The financial assurance amount shall be calculated based on an analysis of the physical activities and materials necessary to surrender the site in the required condition; the unit costs or costs for third party contracting, for each of the identified activities as applicable; the number of units of these activities; and a contingency amount not to exceed ten percent (10%) of the costs of the activities.

Financial assurances may take the form of surety bonds executed by an admitted surety insurer, as defined in subdivision (a) of section 995.120 of the Code of Civil Procedure, irrevocable letters of credit, trust funds, or other forms of financial assurances specified by the State which it reasonably determines to be adequate to perform restoration of the site. Personal surety bonds cannot provide financial assurance under this requirement. The financial assurance shall be payable to the State and shall remain in effect throughout the duration of the tenancy under the Lease, and until the State accepts surrender of the Lease area or until replaced by an equivalent financial assurance.

The financial assurance shall be applied by the State to place the Lease area in the condition required for surrender under Section 20, whenever the Tenant fails or refuses to accomplish such activities, and to reimburse the State for all its costs of achieving that condition of the Lease area. Any assets remaining from the financial assurance after all costs to the State, including administrative costs to secure the funds, have been reimbursed therefrom, shall be returned to the Tenant.

26. NON-DISCRIMINATION. In its use of the Lease area, Tenant shall not discriminate against, harass, or allow harassment against any person or class of persons on the basis of race, color, creed, religion, national origin, ancestry, sex, sexual orientation, age, marital status, medical condition or disability. Tenant shall ensure that the evaluation and treatment of its employees and applicants for employment are free from such discrimination and harassment.

Tenant shall comply with the provisions of the Fair Employment and Housing Act (Government Code section12900 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, section 7285.0 et seq.). Tenant shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement. Tenant shall include the non-discrimination and compliance provisions of this clause in all contracts to perform work under and/or in connection with this Lease.

Tenant shall be solely responsible for complying with the requirements of the Americans With Disabilities Act of 1990 (P.L. 101-336, commencing at section 12101 of Title 42, United States Code and including Titles I, II and III), the Rehabilitation Act of 1973, and all related regulations, guidelines and amendments to both laws.

27. DRUG-FREE WORKPLACE. Tenant will comply with the requirements of the Drug-Free Workplace Act of 1990, as amended, and will provide a drug-free workplace by taking the following actions:

(a) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.

(b) Establish a Drug-Free Awareness Program to inform employees about: (1) the dangers of drug abuse in the workplace; (2) the Tenant's policy of maintaining a drug-free workplace; (3) any available counseling, rehabilitation and employee assistance programs; and, (4) penalties that may be imposed upon employees for drug abuse violations.

(c) Provide that every employee who works on the Lease area will: (1) receive a copy of the Tenant's drug-free policy statement; and, (2) agree to abide by the terms of the Tenant's statement as a condition of employment on the Lease area.

Failure to comply with these requirements may result in suspension or termination of this Lease, and Tenant may be ineligible for award of any future State Water Bottom Leases if the State determines that any of the following has occurred: (1) the Tenant has made false certification, or (2) violated the certification by failing to carry out the requirements as noted above.

28. ENTIRE AGREEMENT. This Lease contains the entire agreement between the parties, and an agreement hereafter shall be ineffective to change, modify or discharge it in whole or in part, unless such agreement is in writing and contains the authorized signature of the party against whom enforcement of the change, modification or discharge is sought.

29. CONSTRUCTION. This Lease shall be governed by and construed in accordance with the laws of the State of California. The Section titles in this Lease are inserted only as a matter of convenience and for reference, and in no way define, limit, or describe the scope or intent of this Lease or in any way affect this Lease.

Tenant shall maintain annual registration of its aquaculture facility in accordance with Fish and Game Code sections 15101 and 15103 and shall keep current with all fees and surcharges, including any penalties for late payment of same, required by those statutes.

30. INCORPORATION BY REFERENCE. The provisions of Chapters 1 through 8 of Division 12 of the Fish and Game Code (commencing with section 15000) and the provisions of Chapter 9 of Division 1 of Title 14, California Code of Regulations (commencing with section 235), as may be amended from time to time, are made part of this Lease by this reference. If there is a conflict between any term or condition of

this Lease and any of the provisions incorporated by reference in it, the incorporated provisions shall control.

31. CONFLICTS OF INTEREST. Tenant warrants that no official, employee in the state civil service or other appointed state official, or any person associated with same by blood, adoption, marriage, cohabitation, and/or business relationship: (a) has been employed or retained to solicit or aid in the procuring of this Lease; or (b) will be employed in the performance of this Lease without the immediate divulgence of such fact to the State. In the event the State determines that the employment of any such official, employee, associated person, or business entity is not compatible, Tenant shall terminate such employment immediately. For breaches or violations of this Section, the State shall have the right to annul this Lease without liability.

32. EXPATRIATE CORPORATION. Tenant hereby declares that it is not an expatriate corporation or subsidiary of an expatriate corporation, within the meaning of Public Contract Code sections 10286 and 10286.1 and is eligible to contract with the State.

33. NO AGENCY. The Tenant, and the agents and employees of the Tenant in the performance of the Lease, shall act in an independent capacity and not as officers or agents of the State of California.

34. CLOSURE. Neither the State nor the Department of Fish and Game shall have any liability arising from a closure of waters by the Department of Fish and Game Director pursuant to Fish and Game Code section 5654, where aquaculture operations are taking place.

35. NOTICES. Notices to the parties to this Lease shall be made in writing and may be given by delivery in person, by U.S. Mail with postage prepaid, or by receipt-confirmed facsimile to:

FISH AND GAME COMMISSION Executive Director 1416 Ninth Street, 13TH Floor Sacramento, CA 95814 Telephone: (916) 653-4899 Facsimile: (916) 653-5040	[BUSINESS NAME] [PERSON/TITLE] [ADDRESS] [CITY/STATE/ZIP] Telephone: (000) 000-0000 Facsimile: (000) 000-0000

Notices shall be deemed given upon delivery to the addressee. Any notice given by facsimile shall also be given to the addressee by U.S. Mail, with postage prepaid. If a notice given by facsimile is delivered to the addressee after 5:00 p.m. Pacific time, or on a Saturday, Sunday or State of California or national holiday, the notice shall be deemed given on the next business day. Either party may change its address for notice purposes by giving written notice to the other party in the manner provided in this Section.

36. SPECIAL CONDITIONS. [THIS SPACE RESERVED FOR ANY SITE-SPECIFIC PROVISIONS OR EXCEPTIONS/MODIFICATIONS TO THE PRECEDING SECTIONS.]

SIGNATURE PAGE

This Lease and any amendment(s) may be executed in counterparts, each of which, when executed and delivered by the State and Tenant, shall be an original and together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

Each signatory attests he or she is duly authorized to execute this Lease on behalf of the principal he or she represents.

Where Tenant is a corporation, the signature of the Tenant on this Lease will be verifying that Tenant is currently qualified to do business in the State of California, as defined in Revenue and Taxation Code section 23101, in order to ensure that all obligations to the State are fulfilled. Both domestic and foreign corporations (those incorporated outside the State of California) must be in good standing in order to be qualified to do business in California.

STATE,

California Fish and Game Commission

By: _____
[NAME], Executive Director

Date: _____

TENANT,

[BUSINESS NAME]

By: _____
[NAME], [TITLE]

Date: _____

EXHIBIT A

Official Map and Description of State Water Bottom M-000-00

Number M-654-03

RENEWAL OF LEASE

Made this ninth day of December, 2005 at Concord, California by and between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "Lessor" and Neushul Mariculture, Inc., hereinafter referred to as "Lessee.

WITNESSETH:

WHEREAS, Lessee indicated an interest in renewing a prior lease agreement in correspondence dated March 31, 2005 and requested an extension of the lease to renegotiate specific terms of the lease, and

WHEREAS, the Fish and Game Commission at the June 24, 2005 meeting in Bishop, California granted the Lessee's request to extend the lease for 120 days to renegotiate specific terms for the new lease, and

WHEREAS, the Fish and Game Commission at the September 30, 2005 meeting in Susanville, California granted the Lessee's request to extend the lease for an additional 120 days to renegotiate specific terms for the new lease, and

WHEREAS, Lessee is presently a registered aquaculturist authorized to grow marine life for profit in the waters of the State of California as provided in Section 15101 of the Fish and Game Code, and

WHEREAS, Lessee expressed support for the Lessor's recommended approval of the requested lease renewal for a 10-year period, at an initial lease rate of twenty-one dollars ($21.00) per acre at signing and subject to adjustment considering changes in the Consumer Price Index and current lease rates no more often than every five years, at the Fish and Game Commission's discretion, and

WHEREAS, the Fish and Game Commission determined that a lease renewal was in the best interest of the State of California at the December 9, 2005 meeting and approved the renewal based on the renegotiated lease terms recommended by the Department of Fish and Game.

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That, in consideration of payment of the monies hereinafter stated in accordance with the renegotiated terms recommended by the Lessor and accepted at a duly called and noticed hearing of the Fish and Game Commission of the State of California, pursuant to law and in consideration of the covenants contained herein on the part of the Lessee, Lessor does hereby grant to Lessee the exclusive privilege to cultivate approved marine algae hereon and in those certain waters of the State of California described as follows, to wit:

All that area of state water bottoms lying within the Santa Barbara Channel (Santa Barbara County), State of California, consisting of two (2) parcels of water bottom lying adjacent to the Ellwood Pier near Ellwood, Santa Barbara County, as shown on the Dos Pueblos Canyon Quadrangle, California, 7-1/2 minute series (topographic) United States Department of Interior, Geological Survey, ranging in depth from 3.05-10.6 meters (10-35 feet), and being more particularly described as follows:

Parcel 1 (of two parcels)
Beginning at a point 1,617 feet from the base, which is the new end of Ellwood Pier, located at approximately 34° 25' 56" North Latitude, 119° 55' 27" West Longitude; thence N 61° 50' W 418 feet, thence South 28° 10' West 209 feet, thence North 61° 51' West 1,254 feet; thence North 28°10' East 418 feet; thence South 61° 50' East 1,254 feet; thence North 28° 10' East 1,045 feet; thence South 61° 50' East 418 feet; thence South 28° 10' West 1,254 feet along the alignment of and contiguous to, the Ellwood Pier to the point of beginning, containing twenty-four (24) acres more or less.

Parcel 2 (of two parcels)
Beginning at a point which is approximately 393 feet southwesterly from the end of the Ellwood Pier located at approximately 34°25' North Latitude, 119° 55' 23" West Latitude along the old pier alignment South 28° 10' West 209 feet, thence South 61° 50' East 104.5 feet, thence North 28° 10' East 209 feet, thence North 61° 50' West 104.5 to the point of beginning, containing one (1) acre more or less. All bearings true.

These parcels (1 and 2), containing 25 acres more or less, together comprise Aquaculture Lease M-654-03 (Exhibit 1).

This lease, in accordance with the provisions of Fish and Game Code Section 15400, as may from time to time be amended or changed by the State Legislature, is for the sole purpose of cultivating the native marine algae *Gelidium spp.* , *Macrocystis pyrifera, M. angustifolia, M. intergrifolia*, and *Pelagophycus spp.*, and the exotic algae *Euchema uncinatum* (male plants only) in the previously designated area. All algae shall be planted by the Lessee in a manner approved by the Lessor, to assure that only healthy seed plants will be planted in compliance with Section 15200 of the Fish and Game Code.

Selective removal by hand only, of competing vegetation and sea urchins will be permitted where necessary to enhance survival, growth and proliferation of cultivated plants.

Juvenile plants may be grown in facilities approved by Lessor for transplanting on lease area. Cultivated plants may be harvested in any manner to establish the most suitable method of harvest.

The notice of intent to plant marine algae on the lease shall be given to the Department of Fish and Game's, Marine Region Aquaculture Coordinator, P.O. Box 1560, Bodega Bay, California 94923, telephone (707) 875-4261, or at such other place as Lessor may from time to time designate. In addition to the required ten (10) day notice, at least a 24-hour notice shall be

given to the aquaculture coordinator or their designee, giving the details on where the marine algae can be inspected.

All notices herein provided to be given or which may be given by either party to the other, shall be deemed to have been fully given when made in writing and deposited in the United States Mail, certified and postage prepaid and addressed as follows:

To the Lessor	DEPARTMENT OF FISH AND GAME 1416 Ninth Street Sacramento, CA 95814
To the Lessee	MR. BRUCE HARGER Neushul Mariculture, Inc. 475 Kellogg Way Goleta, CA 93117

Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed as aforesaid to either party may be changed by written notice given by such party to the other, as hereinbefore provided.

This lease renewal is for a term of ten (10) years commencing on the 9th day of December 2005 and ending on December 8, 2015, for the total rental of five hundred and twenty-five dollars ($525) per year and the privilege tax on all marine algae harvested from the lease as provided by Fish and Game Code Sections 6652,6680 and 15003, and Sections 165(c) (5) and (d) (I) (H) of the Fish and Game Commission regulations. Beginning January 1, 2006, said annual rental fee will be payable to Lessor on a calendar year basis, January 1 -- December 31. If said annual rental fee is not paid within sixty (60) days after the close of the month in which it is due, an additional 10 percent penalty shall be paid. Lessor, at its option, may declare the lease abandoned for failure to pay such rental fees within 90 days from the beginning of the rental period; although such abandonment shall not relieve Lessee of its obligation to pay such rental and penalty which are due and owing. Lessee agrees to pay Lessor reasonable attorney fees and costs incurred in collecting any amounts and/or penalties due and owing from Lessee under the provisions of this lease. Lessee agrees to pay said fee(s) to Lessor at its office in the City of Sacramento, State of California, or at such other place as Lessor may, from time to time, designate.

Lessee expressly recognizes and acknowledges that any payments by Lessee as provided for herein are subject to the provisions of Section 15410 of the Fish and Game Code which states "All leases shall be subject to the power of the Legislature to increase or decrease the rents, fees, taxes, and other charges relating to the lease, but no increase in rent shall be applicable to an existing lease until it is renewed".

This lease is made upon the following additional terms, conditions, and covenants, to wit:

A. This lease may, at the option of Lessee, be renewed for additional periods not to exceed 25 years each. If the Lessee desires to enter into a new lease for a period commencing after expiration of the initial 10-year term, Lessee shall give notice to Lessor one (1) year

prior to termination of the lease. The lease may be renewed if, during the notification period, terms for a new lease are agreed upon by Lessee and the Commission. Lessor retains the right to renegotiate terms of the lease, including annual rental rates, subject to adjustment considering changes in the Consumer Price Index and current lease rates, at the Fish and Game Commission's discretion, no more often than every five (5) years during the current renewal period.

B. Lessee shall keep records as required in accordance with Fish and Game Code Section 15414 on forms to be supplied by Lessor, and shall maintain adequate accounting records sufficient to determine monies due Lessor by the 10th day of each month for all marine algae harvested during the preceding calendar month. Lessor reserves the right to inspect Lessee's premises, equipment and all books at any time, and Lessee's records pertaining to its cultivation of approved species of marine algae on the leased premises and all such marine algae taken from the leased premises.

C. In order to provide assurance to lessor that this aquaculture lease is utilized for the development of techniques that may be employed for commercial cultivation of algae as stated in the lease application, Lessee shall report on its planting and harvesting activities each year in the annual proof-of-use statement required in Section H of this agreement. Lessor may declare this lease terminated if Lessee at any time, is proven to be failing in good faith, to pursue the purpose of this lease.

D. If, at any time subsequent to the beginning date of this lease the use of algae culture equipment authorized herein shall fall into a state of disrepair or otherwise become an environmental or aesthetic degradation, as determined by Lessor, then upon written notice by Lessor, Lessee shall have sixty (60) days to repair and correct conditions cited by Lessor. Failure to comply with the written notice shall be grounds for termination of this lease and Lessee shall, at the option of Lessor, remove all improvements located on lands covered by this lease.

As a financial guarantee of growing structure removal and/or clean-up expense in the event the lease is abandoned or otherwise terminated, Lessee shall place on deposit, pursuant to the "Escrow Agreement for Clean-up of Aquaculture Lease M-653-09, Santa Barbara Channel, Santa Barbara County, California", (Addendum 2) the sum of five hundred dollars ($500). Such money shall be deposited upon entering the lease. The escrow account shall be increased if the Fish and Game Commission determines that, if abandoned, the culture operation is likely to be more expensive to remove. The escrow account may be reduced by the Commission upon demonstration that the probable cost of removal of all improvements would be less than the deposit previously required. In its annual Proof-of Use Report, the Lessor shall advise the Commission of its best estimate of the probable cost of removal the lease operation. The escrow agreement, escrow holder, and escrow depository shall be agreed upon by the Executive Director of the Fish and Game Commission and the Lessor.

If Lessee abandons this lease without removing growing structures therefrom, the escrow deposit shall be expended to remove growing structures or otherwise clean up the lease.

In order to assure compliance with the escrow provisions of this lease, Lessee shall dedicate to the agreed upon escrow account specified in the "Escrow Agreement for Clean-up of Aquaculture Lease M-653-09, Santa Barbara Channel, Santa Barbara County, California", hereby attached to and made part of this agreement, a total of five hundred dollars ($500). This amount equals the whole of the amount, five hundred dollars ($500), to be deposited in the "Escrow Agreement for Clean-up of Aquaculture Lease M-653-09, Santa Barbara Channel, Santa Barbara County, California, Escrow Account".

E. Lessee shall observe and comply with all rules and regulations now or hereinafter promulgated by any governmental agency having authority by law, including but not limited to State Water Resources Control Board, State Coastal Commission, State Lands Commission, and U.S. Army Corps of Engineers. Any other permits or licenses required by such agencies will be obtained by Lessee at his own sole cost and expense.

F. Lessee recognizes and understands in accepting this lease that his interest therein may be subject to a possible possessory interest tax that the county may impose on such interest, and that such tax payment shall not reduce any rent or royalty due the Lessor hereunder and any such tax shall be the liability of and be paid by Lessee.

G. Any modification of natural or existing features of the real property described in this lease, which are not consistent with the authorized uses under this lease are expressly prohibited without prior written consent of the Lessor.

H. As evidence of progress in aquaculture, Lessee shall submit each year to the State at the Marine Region office, P.O. Box 1560, Bodega Bay, California 94923, a written declaration under penalty of perjury, showing the date and amount of each type of aquaculture development and date and amount of designated species comprising each planting, including a diagram (map) showing area, amounts, and dates planted. Such annual proof-of-use shall be submitted on or before February 1 of each year for the previous year, January 1 -- December 31, inclusive.

I. This lease shall be canceled at any time Lessee fails to possess a valid aquaculture registration issued pursuant to Section 15101 of the Fish and Game Code. Lessee agrees not to commit, suffer, or permit any waste on said premises or any act to be done thereon in violation of any laws or ordinances. This lease shall be subject to termination by Lessee at any time during the term hereof, by giving Lessor notice in writing at least ninety (90) days prior to the date when such termination shall become effective. In the event of such termination by Lessee, any unearned rental shall be forfeited to the Lessor.

J. In addition to the conditions and restrictions herein provided for in this lease, and any right or privilege granted, conveyed or leased hereunder, shall be subject to, and Lessee agrees to comply with all applicable provisions of the California Fish and Game Code, and regulation of the Fish and Game Commission, in particular Sections 15400 - 15415, inclusive, of the Fish and Game Code, and expressly recognizes the right of the Legislature and the Fish and Game Commission to enact new laws and regulations. In the event of any conflict between the provisions of this lease and any law or regulation,

the latter will control. This lease shall be deemed amended automatically upon the effective date of such conflicting law or regulation.

K. This lease is personal to the Lessee and shall not be transferred, assigned, hypothecated or subleased, either voluntarily or by operation of law, without prior approval of the Fish and Game Commission.

L. The waiver by the Lessor of any default or breach of any term, covenant or condition shall not constitute a waiver of any other default or breach, whether of the same or any other term, covenant or condition, regardless of the Lessor's knowledge of such other defaults or breaches. The subsequent acceptance of monies hereunder by the Lessor shall not constitute a waiver of any preceding default or breach of any term, covenant or condition, other than the failure of the Lessee to pay the particular monies so accepted, regardless of the Lessor's knowledge of such preceding default or breach at the time of acceptance of such monies, nor shall acceptance of monies after termination constitute a reinstatement, extension or renewal of the agreement or revocation of any notice or other act by the Lessor. In the event of any breach by Lessee of any of the provisions hereof, other than the payment of any sum due from Lessee to Lessor hereunder, which breach is not remedied, abated and cured by Lessee within sixty (60) days after notice in writing, shall cause this lease to thereupon cease and terminate.

M. Lessee shall not assign or transfer this agreement without prior written approval. Such written approval of the assignment or transfer of lease shall be subject to any and all conditions required by the Fish and Game Commission including, without limitation by reason of the specifications herein, the altering, changing or amending of this agreement as deemed by the Commission to be in the best interest of the State.

N. Lessee hereby indemnifies and holds harmless the Lessor, its officers, agents and employees against any and all claims and demands of every kind and nature whatsoever arising out of or in any way connected with the use by the Lessee of said lease or the exercise of the privilege granted herein.

P. The terms, provisions, and conditions hereof shall be binding upon and inure to the benefit of the parties and the successors, and assigns of the parties hereto.

Q. The attached Nondiscrimination Clause (OCP-1) is hereby made a part of this agreement.

Except as herein amended, all other terms of said lease agreement shall remain unchanged and in full force and effect.

IN WITNESS THEREOF, the parties hereto have caused this lease to be duly executed as of the day and year first above written.

APPROVED:

FISH AND GAME COMMISSION

By:_____
JOHN CARLSON JR., EXECUTIVE DIRECTOR

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

By:_____
LESSOR

BRUCE HARGER
NEUSHUL MARICULTURE, INC.

By: _____
LESSEE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF _____ } SS

On _____ before me, _____,

personally appeared _____,
NAME(S) OF SIGNER(S)

personally known to me

- OR - proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

_____
SIGNATURE OF NOTARY

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER

INDIVIDUAL
CORPORATE OFFICER

_____
TITLE(S)

PARTNER(S)
LIMITED or GENERAL
ATTORNEY-IN-FACT
TRUSTEE(S)
GUARDIAN/CONSERVATOR
OTHER:

SIGNER IS REPRESENTING:
NAME OF PERSON(S(OR ENTITY(IES)

_____

_____

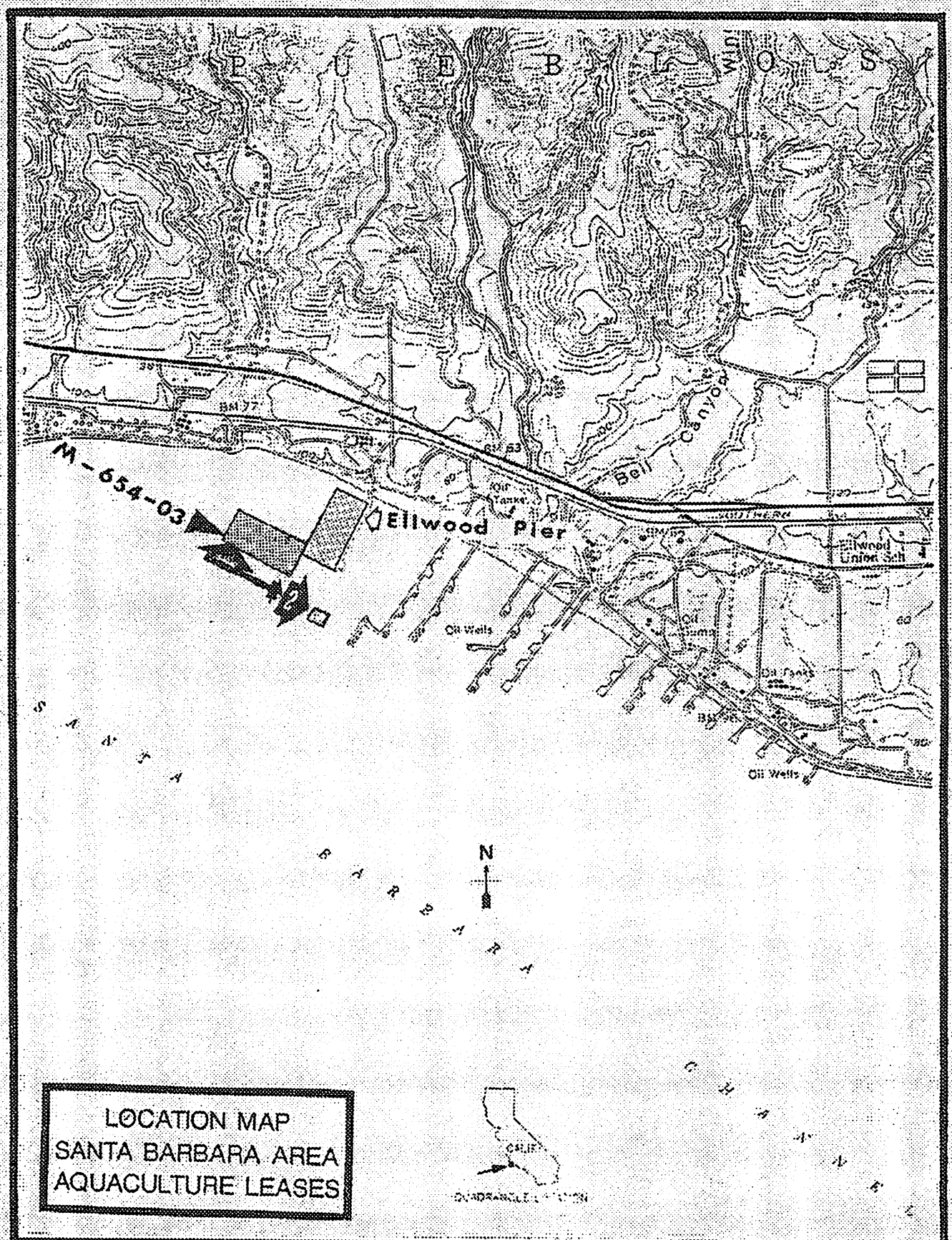
DESCRIPTION OF ATTACHED DOCUMENT

_____
TITLE OR TYPE OF DOCUMENT

_____
NUMBER OF PAGES

_____
DATE OF DOCUMENT

_____
SIGNER(S) OTHER THAN NAMED ABOVE



LOCATION MAP
SANTA BARBARA AREA
AQUACULTURE LEASES

DEPARTMENT OF FISH AND GAME MARINE RESOURCES DIVISION

EXHIBIT 1

ADDENDUM TO
AQUACULTURE LEASE BETWEEN DEPARTMENT OF FISH AND GAME, LESSOR AND NEUSHUL MARICULTURE, INC.

ESCROW AGREEMENT FOR
CLEANUP OF AQUACULTURE LEASE M-654-03
SANTA BARBARA CHANNEL, SANTA BARBARA COUNTY, CALIFORNIA

(Addendum 2)

This Escrow Agreement is an addendum to the original lease M-654-03, dated May 1, 1980 and is being entered into as of the eleventh day of May, 2010, between the State of California, acting by and through its Department, of Fish and Game, hereinafter referred to as "Lessor", and Neushul Mariculture, Inc., hereinafter referred to as "Lessee".

This Escrow Agreement is subject to the original Lease Agreement for Lease No. M-654-03, dated May 1, 1980 and subsequent lease renewal for Lease M-654-03, dated December 9, 2005 and in accordance with Paragraph D thereof.

As a financial guarantee of growing structure or other lease improvement removal and/or cleanup expense in the event that the aforementioned aquaculture lease is abandoned or otherwise terminated, the parties agree as follows:

1. Lessee will deposit or cause to be deposited in escrow in cash or by certified check, funds totaling $500, which funds will consist of the following:

(a) $500.00 deposited upon entering upon the lease;

In the event that Lessor fails to deposit funds as required by Subparagraph (a) herein, Lessor may terminate Lessee's aquaculture lease by giving sixty days notice to Lessee by registered or certified mail.

2. Mr. Bruce Harger shall act as Escrow Agent and shall place the escrow deposits in an interest-bearing account in Santa Barbara Bank and Trust, Santa Barbara, California, subject to disposition as hereinafter provided. Account shall be established with a warning to all bank employees that funds may not be released without written permission from an agent of The State of California. Such deposits shall be retained in a separate account designated "Lease M-654-03, Santa Barbara Channel, Santa Barbara County, Cleanup Fund" by Escrow Agent as trustee for Lessor.

3. Neushul Mariculture Inc. shall be responsible for paying all fees and expenses incurred by Escrow Agent in administering the escrow account. These expenses and payment terms shall be determined by the Escrow Agent.

4. The interest earned on the trust account held in escrow and all interest earned on that interest shall be for the sole account of Neushul Mariculture Inc., and may be withdrawn by Neushul Mariculture Inc., at any time for distribution without notice to Lessor.

5. Lessee shall make payments to the Escrow Agent on account of the Lease M-653-09, Offshore Waters, Santa Barbara County, Cleanup Fund in the manner prescribed in paragraph 1(a) until the sum of five hundred dollars ($500.00) is reached.

6. When Lessee deposit funds into escrow, Escrow Agent shall notify Lessor in writing within ten days of receipt thereof.

7. Escrow Agent shall notify Lessor in writing when five hundred dollars ($500.00) has been deposited to the escrow account and provide written verification from the bank of such deposit. Thereafter, on the anniversary date of such initial notification, Escrow Agent shall report and certify the balance of funds on deposit accompanied by the accounting records provided by the banking institution of deposit.

8. The Lessor may increase or decrease the security amount held in escrow upon cause shown therefore and sixty days notice to Neushul Mariculture Inc. Lessee's Annual Proof of Use Report shall contain a reasonable estimate of the cost of removal of growing structures from each operation. Any increase required by the Lessor shall be deposited by the Lessee in the same proportion as provided in Paragraph 1; and any decrease shall be returned to the Lessee by the Escrow Agent in the same proportion provided in Paragraph 1.

9. Should Lessee transfer his interest under the lease with the approval of the California Fish and Game Commission, Escrow Agent shall transfer such escrow deposit to the successor in interest, and thereafter notify all parties hereto of such transfer. The successor in interest shall have all of the rights and obligations of Lessee with respect to such escrow deposit.

10. If, on termination of an aquaculture lease, Lessee removes all growing structures and improvements within sixty days, Lessee's escrow deposit shall be returned to Lessee by Escrow Agent no later than two weeks after receipt of written notice by Escrow Agent from Lessor authorizing such return.

11. If at any time during the lease term, Lessee abandons the lease without removing growing structures and improvements, Lessor shall do the following:

(a) Lessor shall appropriate and apply any portion of the escrow security as may be reasonably necessary to fund the cleanup;

12. Lessor shall have a right to draw upon the escrow account in the event of default by the Lessee. Upon seven days written notice to the Escrow Agent from the Lessor of the default, Escrow Agent must immediately distribute funds as instructed by Lessor.

13. Should Lessor actually resort to any monies contained within the escrow account under any of the above applicable provisions, Lessee agrees to deposit to the escrow account, in the same proportion as provided in Paragraph 1, the amount for which resort to the escrow security was had and necessary to restore the escrow security to the original sum required hereunder in thirty days after written demand by Lessor.

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Restoration of escrow security shall be postponed during any period that Lessor re-advertises for bid and subsequently re-awards Lease M-654-03, Santa Barbara Channel, Santa Barbara County. Upon Lessor granting a lease to a successful bidder, the Lessee thereunder shall assume the obligations and rights of his predecessor Lessee, including, but not limited to, the deposit of funds as prescribed in Paragraph 1 (a).

Lessor shall not award or re-award a lease until the notice of deposit required by Paragraph 6 is received.

14. Escrow Agent shall rely on the written notifications from the Lessor, and the Lessor shall hold Escrow Agent harmless in it's duties as Escrow Agent when Escrow Agent releases and disburses funds and interest pursuant to such a written notification.

15. Any notice required to be given under this Escrow Agreement may be given by personal delivery in writing or by registered or certified mail, postage prepaid, return receipt requested. Notice shall be deemed communicated as of mailing. Mailed notices shall be addressed as set forth below, but each party may change its address by written notice in accordance with this paragraph.

To the Lessor:	DEPARTMENT OF FISH AND GAME 1416 Ninth Street Sacramento, CA 95814
To the Escrow Agent:	NEUSHUL MARICULTURE INC. 475 Kellogg Way Goleta, Ca 93117-3804
To the Lessee:	NEUSHUL MARICULTURE INC. 475 Kellogg Way Goleta, Ca 93117-3804

16. At the time this Escrow Agreement is executed by all parties, the Lessor shall deliver to the Escrow Agent a fully executed counterpart of this agreement.

In witness whereof, the parties have executed this agreement by their proper officers on the date first set above.

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

LESSOR:_____

BRUCE HARGER
NEUSHUL MARICULTURE INC.

LESSEE:_____

ADDENDUM TO
AQUACULTURE LEASE BETWEEN DEPARTMENT OF FISH AND GAME, LESSOR AND NEUSHUL MARICULTURE, INC.

ESCROW AGREEMENT FOR
CLEANUP OF AQUACULTURE LEASE M-654-03
SANTA BARBARA CHANNEL, SANTA BARBARA COUNTY, CALIFORNIA

(Addendum 2)

John Carlson
Fish and Game Commission

LESSEE: _____

From: **Bruce Harger**
Date: Tue, Mar 17, 2015 at 11:45 PM
Subject: Amended Request for Renewal of M-654-03
To: fgc@fgc.ca.gov
Cc: Kirsten Ramey <kramey@dfg.ca.gov>

To the Commission,

I would like to formally request a renewal of Aquaculture Lease M-654-03, Registration Number 0015 for 15 years.

Thank you for your consideration.

Sincerely,

Devon Harger
Owner, Neushul Mariculture, Inc.

cc: Kirsten L. Ramey; Susan Ashcraft

State of California
Department of Fish and Wildlife

Memorandum

Date: September 10, 2015

To: Sonke Mastrup
Executive Director
Fish and Wildlife Commission

From: Charlton H. Bonham
Director

Subject: **Agenda Item for the October 7-8, 2015, Fish and Game Commission Meeting Regarding Proposed Renewal of State Water Bottom Lease, M-654-03, Neushul Mariculture, Inc., Santa Barbara**

The Department of Fish and Wildlife (Department) is providing the following comments in regard to a request by Mrs. Devon Harger, Neushul Mariculture, Inc., for Fish and Game Commission (Commission) approval to renew state water bottom lease M-654-03 for a period of 15 years. The existing lease encompasses 25 acres of state water bottoms along the Santa Barbara coastline and is set to expire on December 8, 2015.

The lease was created with the expressed intent to cultivate marine algae for research purposes and has been used for this purpose by Neushul Mariculture, Inc. during that period. There are no proposed changes in the culture methods or species currently approved by the Commission for the lease. However, if the lease renewal is approved, the lease should require the Lessee to establish financial assurances of growing structure removal and/or cleanup in the event the lease is abandoned or otherwise terminated.

Upon staff review, it was determined that the proposed project is subject to the "Class 1" or "Existing Facilities" categorical exemption pursuant to CEQA Guidelines section 15301 (Cal. Code Regs., tit. 14, § 15301). In general, the Class 1 exemption consists of the leasing of existing facilities, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. All provisions of the lease are identical to the original lease, with the only exception being the 15 year renewal of the lease term. This lease does not increase, decrease, or change existing operations in any way or allow for any new activities by the lessee.

The Department recommends approval of the request to renew state water bottom lease, Neushul Mariculture, Inc., to Mrs. Devon Harger for a period of 15 years.

If you have any questions regarding this item, please contact Dr. Craig Shuman, Regional Manager of the Department's Marine Region, at (805) 568-1246 or at Craig.Shuman@Wildlife.ca.gov.

Attachment

ec: Department of Fish and Wildlife

Dan Yparraguirre, Deputy Director
Wildlife and Fisheries Division
Dan.Yparraguirre@wildlife.ca.gov

Craig Shuman, D.Env., Regional Manager
Marine Region (7)
Craig.Shuman@wildlife.ca.gov

Stafford Lehr, Chief
Fisheries Branch
Stafford.Lehr@Wildlife.ca.gov

Kirsten Ramey, Senior Environmental
Scientist Supervisor
Marine Region (7)
Kirsten.Ramey@wildlife.ca.gov

Randy Lovell, State Aquaculture
Coordinator
Randy.Lovell@wildlife.ca.gov

State Water Bottom Lease M-654-03 Legal Description

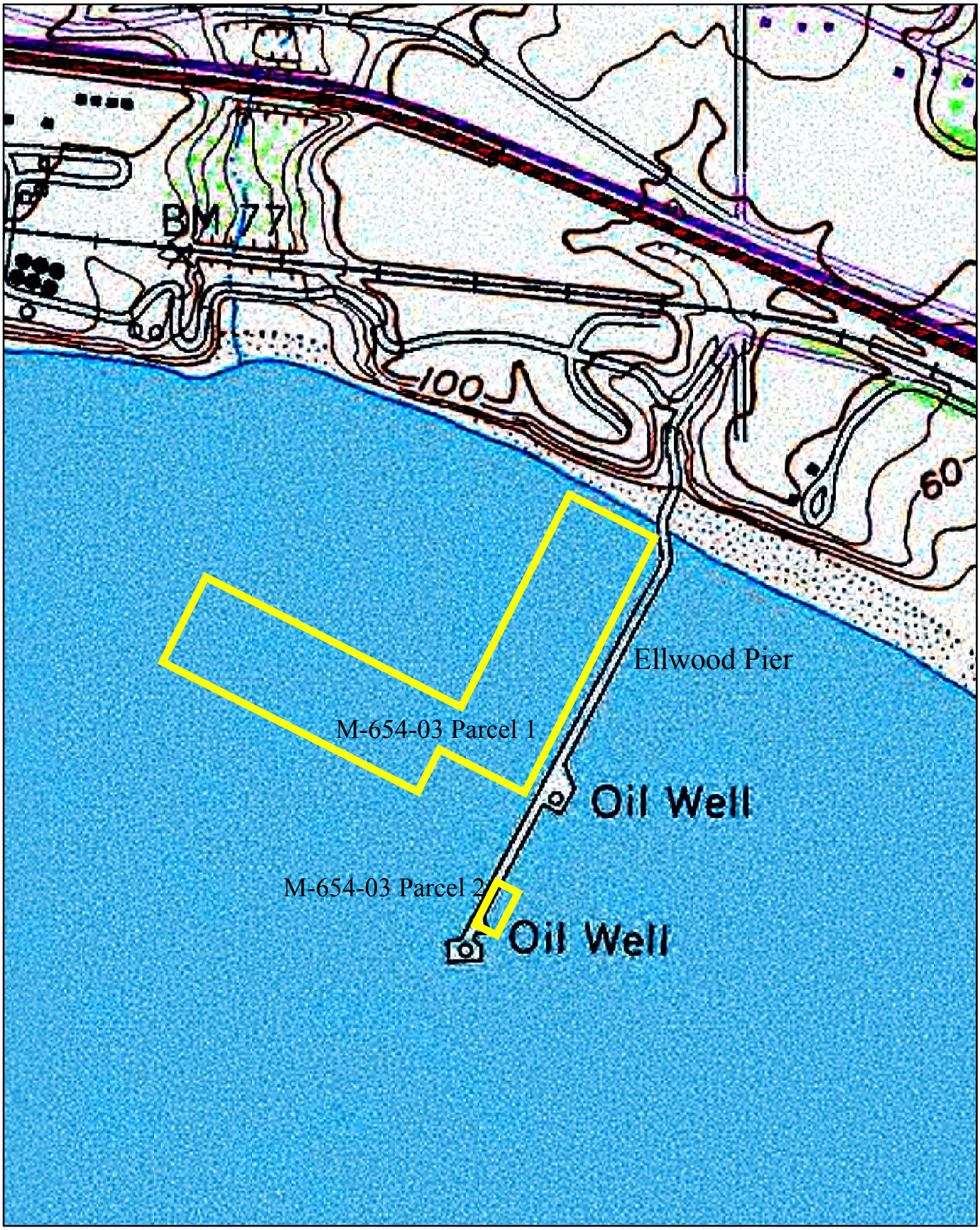
All that area of state water bottoms lying within the Santa Barbara Channel (Santa Barbara County), State of California, consisting of two (2) parcels of water bottom lying adjacent to the Ellwood Pier near Ellwood, Santa Barbara County, as shown on the Dos Pueblos Canyon Quadrangle, California, 7-1/2 minute series (topographic) United States Department of Interior, Geological Survey, ranging in depth from 3.05-10.6 meters (10-35 feet), and being more particularly described as follows:

Parcel 1 (of two parcels)
Beginning at a point 1,617 feet from the base, which is the new end of Ellwood Pier, located at approximately 34° 25' 56" North Latitude, 119° 55' 27" West Longitude; thence N 61° 50' W 418 feet, thence South 28° 10' West 209 feet, thence North 61° 51' West 1,254 feet; thence North 28°10' East 418 feet; thence South 61° 50' East 1,254 feet; thence North 28° 10' East 1,045 feet; thence South 61° 50' East 418 feet; thence South 28° 10' West 1,254 feet along the alignment of and contiguous to, the Ellwood Pier to the point of beginning, containing twenty-four (24) acres more or less.

Parcel 2 (of two parcels)
Beginning at a point which is approximately 393 feet southwesterly from the end of the Ellwood Pier located at approximately 34°25' North Latitude, 119° 55' 23" West Latitude along the old pier alignment South 28° 10' West 209 feet, thence South 61° 50' East 104.5 feet, thence North 28° 10' East 209 feet, thence North 61° 50' West 104.5 to the point of beginning, containing one (1) acre more or less. All bearings true.

These parcels (1 and 2), containing 25 acres more or less, together comprise Aquaculture Lease M-654-03 (Exhibit 1).

State Water Bottom Lease M-654-03
Santa Barbara, CA



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0 0.1 0.2 0.4 Miles

CA Dept. Fish and Game

Coordinate system:
NAD 1983 California Teale Albers
Coordinates displayed in Decimal Degrees

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Northern California Agency
1900 Churn Creek Road, Suite 300
Redding, California 96002-0292

RECEIVED
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FISH AND GAME
COMMISSION
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TAKE PRIDE IN AMERICA

MLS

IN REPLY REFER TO:

Executive Direction

AUG 15 2012

Sonke Mastrup, Executive Director
California Fish and Game Commission
PO Box 944209
Sacramento, CA 94244-2090

Dear Mr. Mastrup:

At the request of the Resighini Rancheria, this correspondence is in support of the Tribe's position that the Resighini Rancheria should be identified as eligible for "tribal take" as defined in the California Marine Life Protection Act, Marine Protected Areas.

Resighini Rancheria is a Federally Recognized Tribe comprised of Yurok people, and is aboriginal to the area within the North Coast Study Area. Further, the Resighini Rancheria has been listed on the Department of Interior, Bureau of Indian Affairs, list of Indian Entities Recognized to Receive Services From the Bureau of Indian Affairs, published annually in the Federal Register, since its inception. The original list, Federal Register, Vol. 44, No. 26 – Tuesday, February 6, 1979, Indian Tribal Entities that Have a Government-to-Government Relationship with the United States, lists the Resighini Rancheria as Resighini Rancheria, Coast Indian Community of Yurok Indians, California.

The Northern California Agency is unaware of any Federal Law that grants any state agency the authority to exclude the Resighini Rancheria under the current circumstances.

If there is a question, please contact me, at (530) 246-5141, Ext. 31, or you may write to the above address.

Sincerely,

Dr. Virgil Akins
Superintendent

RESIGHINI RANCHERIA

P.O. Box 529 • Klamath, CA 95548
Tel (707) 482-2431 • Fax (707) 482-3425

August 13, 2012

Sonke Mastrup, Executive Director
California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

RECEIVED
CALIFORNIA
FISH AND GAME
COMMISSION
2012 AUG 20 AM 9:46

MLS
CC: S. Fonbuena
C. Shuman
A. Bredeimann
B. Ota
S. Mastrup
A. Shea

Dear Mr. Mastrup:

The Resighini Rancheria would like to respectfully request to be included on the October 3-4, 2012 agenda of the California Fish and Game Commission (Commission) to reconsider the exclusion of our Tribe on Marine Protected Areas within our ancestral waters within the North Coast Study Region.

Problem Statement: On June 6th, 2012, the Commission adopted regulations that designated a network of marine protected areas (MPAs) within the North Coast Study Region under the California Marine Life Protection Act (MLPA). Those adopted regulations included the identification of certain federally-recognized Tribes that could continue to harvest for traditional, non-commercial purposes under the newly adopted definition of "tribal take" within specific MPAs. For a Tribe to be identified as eligible for "tribal take" within specific MPAs, a Factual Record had to be submitted that demonstrated a current or historic use within that geography and that the Tribe was federally-recognized.

Resighini Rancheria submitted a brief factual record affirming that we are a federally-recognized Indian Tribe of Yurok Indians, eligible to receive services from the United States Bureau of Indian Affairs (Federal Register Vol. 75, No. 190) and that our citizens have current or historic uses within specific MPAs and Special Closures proposed in the North Coast Study Region. Subsequently, we were included in the Initial Statement of Reasons for Regulatory Action in the following MPAs: Pyramid Point SMCA, Point St. George Reef SMCA, and the Redding Rock SMCA/SMR Complex.

Although we do maintain current or historic uses within those MPAs and reserve all rights to continue to rely on the ocean and marine resources in all usual and customary fishing places, due to the implied/perceived jurisdictional concerns that the State associated with this process,

we signed on to a joint multi--tribal letter that was sent to the Commission, requesting to be removed from the Pyramid Point SMCA and Point St. George Reef SMCA, out of respect for the Smith River Rancheria and Elk Valley Rancheria. However, Resighini Rancheria should have remained on the Redding Rock SMCA/SMR complex for the Commission's consideration at your June 6th meeting in Eureka.

In the interim, Chairman McCovey contacted Mr. Mastrup to confirm that no other information was required by the Commission to ensure our inclusion at Redding Rock and that the Tribe was included in the draft regulations as required for adoption consideration. Mr. Mastrup confirmed that no other information was required and the item would proceed accordingly. Then at the June 6th meeting Mr. Mastrup made the erroneous statement for the Motion of only including the Yurok Tribe as a Tribe eligible of "tribal take" within the Redding Rock MPAs, which the Commission ultimately adopted. We understand this may have been a misunderstanding and thus, we request this to be amended appropriately.

On July 26, 2012, in a meeting with Resighini Rancheria, Mr. Mastrup suggested a request be made of the Commission to reconsider our Tribe as eligible for "tribal take" at the Redding Rock SMCA/SMR complex to resolve this misunderstanding. This request for reconsideration should include substantiating from a federal entity that we are a federally-recognized Tribe of Yurok people. The following is a factual basis demonstrating that the United States federal government recognizes us as a federally-recognized Tribe of Yurok people.

Factual Basis: The Yurok people are aboriginal to Northern California and are dispersed among several distinct federally recognized Tribes located within their ancestral territory, including the Resighini Rancheria. The Resighini Rancheria is a federally recognized Indian Tribe that is formally organized under the authority of the Indian Reorganization Act of 1934.

By deed dated January 7, 1938, Gus Resighini deeded to the United States in trust approximately 228 acres[1] of land that constitutes the Resighini Rancheria, under the authority of the Indian Reorganization Act. By Proclamation dated October 21, 1939, the Secretary of the Interior declared the land purchased to be an Indian reservation. All of the lands that comprise the Reservation are located within the exterior boundaries of the original Klamath River Reservation and are located at the intersection of Highway 101 and the Klamath River.

After the establishment of the Reservation, two disastrous floods occurred, one in 1955 and another in 1964. The tragic flood of 1964 swept away all but two homes, forcing thirteen families to evacuate and move. Despite this, the people of the Resighini Rancheria stood together and remained a structured Indian organization with a strong desire to return to the

[1] The 1973 survey map of the Reservation recorded by Richard B. Davis shows the original lands purchased from Gus Resighini that because the Resighini Rancheria as containing 238.78 acres.

reservation. On April 4, 1975, the people of the Resighini Rancheria formed a Tribal government and adopted a Constitution.

Since 1975, when members adopted a Constitution, the Tribe has been actively involved in developing a tribal government and in protecting its land base and advocating for our traditional rights as Yurok Indians. In 1988, Congress enacted the Hoopa-Yurok Settlement Act, which partitioned the extended Hoopa Valley Reservation into the present Hoopa Valley Reservation, consisting of the original twelve-mile square bisected by the Trinity River and established under Executive Order in 1864, and the Yurok Reservation, consisting of the area along the Klamath River within the old Klamath River Reservation, including the 1892 Extension,[2] and excluding the Resighini Rancheria. The Resighini Rancheria is the only Indian Reservation in California situated within the exterior boundaries of lands granted to a separate federally recognized Indian Tribe.

The fact that members of the Resighini Rancheria are Yurok is indisputable. The first federally-published list in the Federal Register of Indian Tribes that maintain a government-to-government relationship with the United States and are eligible to receive related services was on January 31, 1979. It includes the "*Resighini Rancheria, Coast Indian Community of Yurok Indians, California*" (see Exhibit A). As Exhibit B demonstrates, all subsequent lists from 1979 to 2003 also recognize that the Resighini Rancheria are Yurok. After 2003, the Tribe changed our name to simply the *Resighini Rancheria* for solely simplification purposes (see Exhibit C). This is reflected in the Federal Register from 2005 to the most recent list published in 2010.

Under Article of the Tribe's Secretarially-approved Constitution, the jurisdiction of the Tribe, acting through its Tribal Council, extends to: (a) all land encompassing the ancestral territory of the Klamath River Tribe; (b) all lands, water, and other resources within the exterior boundaries of those lands constituting what is commonly known as the Resighini Rancheria purchased by the Secretary of the Interior on January 7, 1938, under the authority of the Wheeler Howard Act,[3] June 18, 1934; (c) all of the lands, water, and resources as may hereinafter be acquired by the Tribe, whether within or without said boundary lines, under any grant, transfer, purchase, adjudication, treaty, Executive Order, Act of Congress, or other acquisitions; (d) all persons within any territory under the jurisdiction of the tribe; and (e) all tribal members, wherever located.

The Yurok people of the Resighini Rancheria historically and currently have exercised our rights to hunt, fish, and gather foods and materials for subsistence, ceremonial, and customary uses throughout our ancestral lands. We also maintain that we have unceded rights that have never

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[2] The "Extension" included a stretch, one-mile on each side of the Klamath River, connecting the old Klamath River Reservation to the Hoopa Square.

[3] Also referred to as the Indian Reorganization Act.

been extinguished, to continue to fish in all usual and customary traditional fishing places as identified by our members. We reserve all rights to continue these practices that are inherent to use as Yurok. Like our ancestors, we have continued to practice traditional Yurok customs, traditions, and religious practices. We are committed to our culture and language. Tribal members are recognized as skilled basket weavers and makers of ceremonial regalia and many participate in local Yurok ceremonies and dances.

Request: To agendize this request at your October 3-4, 2012 meeting in Sacramento in order to resolve this issue of extreme importance to our members and include the Resighini Rancheria within the Redding Rock SMCA/SMR complex at this time.

Please contact us to confirm whether we will be included on the October 3-4, 2012 agenda. We wish to deal with this issue expeditiously before the regulatory review process concludes for the North Coast Study Region.

Sincerely,

Don McCovey

Donald McCovey
Chairman

cc: Dr. Virgil Atkins
Superintendent
Northern California Agency
Bureau of Indian Affairs

Amy Dutschke
Regional Director
Pacific Region
Bureau of Indian Affairs

[4310-02-M]

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

INDIAN TRIBAL ENTITIES [1] THAT HAVE A GOVERNMENT-TO-GOVERNMENT RELATIONSHIP WITH THE UNITED STATES

Delegation of Authority

JANUARY 31, 1979.

This notice is published in exercise of authority delegated by the Assistant Secretary—Indian Affairs under 5 U.S.C. 2 and 9; and 230 DM 1 and 2.

Notice is hereby given in accordance with 25 CFR 54.6(b) by the Bureau of Indian Affairs of the tribal entities that have a government-to-government relationship with the United States. The United States recognizes its trust responsibility to these Indian entities and, therefore, acknowledges their eligibility for programs administered by the Bureau of Indian Affairs. The listed entities are not necessarily eligible for programs administered by other Federal Agencies. The list of eligible Alaskan entities will be published at a later date.

INDIAN TRIBAL ENTITIES [1] THAT HAVE A GOVERNMENT-TO-GOVERNMENT RELATIONSHIP WITH THE UNITED STATES

Absentee-Shawnee Tribe of Oklahoma, Acoma Pueblo of New Mexico
Aqua-Caliente Band of Cahuilla Indians (Palm Springs), Aqua-Caliente Indian Reservation, California
Ak Chin Indian Community, Maricopa, Ak Chin Reservation, Arizona
Alabama-Quassarte Creek Tribal Town, Oklahoma
Alturas Rancheria of Pit River Indians, California
Apache Tribe of Oklahoma
Arapahoe Tribe of Wind River Reservation, Wyoming
Assiniboine and Sioux Tribes of the Fort Peck Reservation, Montana
Augustine Band of Cahuilla Mission Indians, Augustine Reservation, California
Bad River Band of Lake Superior Chippewa Indians, Bad River Reservation, Wisconsin
Barona Capitan Grande Band of Diegueno Mission Indians, Barona Reservation, California
Bay Mills Indian Community, Bay Mills Reservation, Michigan
Berry Creek Rancheria of Maidu Indians, California
Big Bend Rancheria of Pit River Indians, California
Big Lagoon Rancheria of Smith River Indians, California
Big Pine Band of Owens Valley Paiute Shoshone Indians, Big Pine Reservation, California
Blackfeet Tribe, Blackfeet Indian Reservation, Montana
Bridgeport Paiute Indian Colony, California
Burns Paiute Indian Colony, Oregon
Cabazon Band of Cahuilla Mission Indians, Cabazon Reservation, California
Cachil Delle Band of Wintun Indians of Colusa Rancheria, California
Caddo Tribe of Oklahoma
Cahuilla Band of Mission Indians, Cahuilla Reservation, California
Cahto Indian Tribe of the Laytonville Rancheria, California
Campo Band of Diegueno Mission Indians, Campo Reservation, California
Capitan Grande Band of Diegueno Mission Indians, Capitan Grande Reservation, California
Cayuga Nation of New York
Cedarville Rancheria of Northern Paiute Indians, California
Chemehuevi Tribe, Chemehuevi Reservation, Arizona
Cher-Ae Heights Indian Community of the Trinidad Rancheria, California
Cherokee Nation of Oklahoma
Cheyenne-Arapaho Tribes of Oklahoma
Cheyenne River Sioux Tribe, Cheyenne River Reservation, South Dakota
Chickasaw Nation of Oklahoma
Chippewa-Cree Tribe of the Rocky Boy Reservation, Montana
Chitimacha Tribe of Louisiana
Choctaw Nation of Oklahoma
Citizen Band of Potawatomi Indians of Oklahoma
Cochiti Pueblo of New Mexico
Cocopah Tribe of Arizona
Coeur D'Alene Tribe, Coeur D'Alene Reservation, Idaho
Cold Springs Rancheria of Mono Indians, California
Colorado River Tribes of the Colorado River Indian Reservation, Arizona
Comanche Tribe of Oklahoma
Confederated Tribes of the Chehalis Reservation, Washington
Confederated Tribes of the Colville Reservation, Washington
Confederated Tribes of the Goshute Reservation, Nevada & Utah
Confederated Salish & Kootenai Tribes of the Flathead Reservation, Montana
Confederated Tribes of the Siletz Reservation, Oregon
Confederated Tribes of the Umatilla Reservation, Oregon
Confederated Tribes of the Warm Springs Reservation, Oregon
Cortina Rancheria of Wintum Indians, California
Coushatta Tribe of Louisiana
Covelo Indian Community of the Round Valley Reservation, California
Coyote Valley Band of Pomo Indians, California
Creek Nation of Oklahoma
Crow Tribe of Montana
Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota
Cuyapaipe Band of Diegueno Mission Indians, Cuyapaipe Reservation, California
Delaware Tribe of Western Oklahoma
Devils Lake Sioux Tribe, Devils Lake Sioux Reservation, North Dakota
Dry Creek Rancheria of Pomo Indians, California
Duckwater Shoshone Tribe, Duckwater Reservation, Nevada
Eastern Band of Cherokee Indians of North Carolina
Eastern Shawnee Tribe of Oklahoma
Elem Indian Colony of Pomo Indians of California
Ely Indian Colony, Nevada
Enterprise Rancheria of Maidu Indians, California
Flandreau Santee Sioux Tribe, South Dakota
Forest County Potawatomi Indian Community of Wisconsin
Fort Belknap Indian Community, Fort Belknap Reservation, Montana
Fort Bidwell Indian Community, Paiute Indians of the Fort Bidwell Reservation, California
Fort Independence Indian Community, Paiute Indians of the Fort Independence Reservation, California
Fort McDermitt Paiute-Shoshone Tribes, Fort McDermitt Reservation, Nevada
Fort McDowell, Mohave-Apache Indian Community, Fort McDowell Indian Reservation, Arizona
Fort Mojave Tribe of Arizona
Fort Still Apache Tribe of Oklahoma
Gila River Indian Community, Gila River Reservation, Arizona
Grindstone Indian Rancheria of Wintun-Wailaki Indians, California
Hannahville Potawatomi Indian Community of Michigan
Havasupai Tribe, Havasupai Reservation, Arizona
Hoh Tribe, Hoh Indian Reservation, Washington
Hoopa Valley Tribe of the Hoopa Valley Reservation, California
Hopi Tribe of Arizona
Hopland Band of Pomo Indians, Hopland Rancheria, California
Hualapai Tribe, Hualapai Reservation, Arizona
Inaja & Cosmit Reservation (Diegueno Indians), California
Iowa Tribe of Kansas & Nebraska
Iowa Tribe of Oklahoma
Isleta Pueblo of New Mexico
Jackson Rancheria of Me-Wuk Indians, California
Jemez Pueblo of New Mexico
Jicarilla Apache Tribe, Jicarilla Apache Indian Reservation, Arizona
Kaibab Band of Paiute Indians, Kaibab Indian Reservation, Arizona
Kalispel Indian Community, Kalispel Reservation, Washington
Karok Tribe of California
Kashia Band of Pomo Indians of Stewards Point Rancheria, California
Kaw Tribe of Oklahoma
Keweenaw Bay Chippewa Indian Community, L'Anse Reservation, Michigan
Kialegee Tribal Town of Creek Indians, Oklahoma
Kickapoo Tribe of Kansas
Kickapoo Tribe of Oklahoma
Kiowa Tribe of Oklahoma
Kootenai Tribe of Idaho
La Jolla Band of Luiseno Mission Indians, LaJolla Reservation, California
La Posta Band of Diegueno Mission Indians, La Posta Reservation, California
Lac Courte Oreilles Band of Lake Superior Chippewa Indians, Lac Courte Oreilles Reservation, Wisconsin
Lac du Flambeau Band of Lake Superior Chippewa Indians, Lac du Flambeau Reservation, Wisconsin
Laguna Pueblo of New Mexico
Las Vegas Tribe of Paiute Indians, Las Vegas Colony, Nevada
Lookout Rancheria of Pit River Indians, California
Los Coyotes Band of Cahuilla Mission Indians, Los Coyotes Reservation, California
Lovelock Paiute Tribe, Lovelock Indian Colony, Nevada

[1] Includes within its meaning Indian tribes, bands, villages, groups and pueblos as well as Eskimos and Aleuts.

ower Brule Sioux Tribe, Lower Brule Reservation, South Dakota
ower Elwha Tribal Community, Lower Elwha Reservation, Washington
ower Sioux Indian Community, Lower Sioux, Reservation, Minnesota
ummi Tribe, Lummi Reservation, Washington
lakah Tribe, Makah Reservation, Washington
lanchester Band of Pomo Indians, Manchester-Pt. Arena Rancheria, California
lanzanita Band of Diegueno Mission Indians, Manzanita Reservation, California
lenominee Tribe, Menominee Reservation, Wisconsin
lesa Grande Band of Diegueno Mission Indians, Mesa Grande Reservation, California
lescalero Apache Tribe, Mescalero Reservation, New Mexico
liami Tribe of Oklahoma
liccosukee Tribe of Florida
liddletown Rancheria of Pomo Indians, California
linnesota Chippewa Tribe, Minnesota (Six component reservations: Boise Fort Band (Nett Lake), Fond du Lac Band, Grand Portage Band, Leech Lake Band, Mille Lac Band, White Earth Band)
lississippi Band of Choctaw Indians, Mississippi
loapa Band of Paiute Indians, Moapa River Reservation, Nevada
lodoc Tribe of Oklahoma
lontgomery Creek Rancheria of Pit River Indians, California
lorongo Band of Cahuilla Mission Indians, Morongo Reservation, California
luckleshoot Tribe, Muckleshoot Reservation, Washington
lambe Pueblo of New Mexico
lavajo Tribe of Arizona, New Mexico and Utah
lez Perce Tribe of Idaho, Nez Perce Reservation, Idaho
lisqually Indian Community, Nisqually Reservation, Washington
looksack Indian Tribe of Washington
lorthern Cheyenne Tribe, Northern Cheyenne Reservation, Montana
lorthwestern Band of Shoshone Indians of Utah (Washakie)
)glala Sioux Tribe of the Pine Ridge Reservation, South Dakota
)maha Tribe of Nebraska
)neida Nation of New York
)neida Tribe of Wisconsin, Oneida Reservation, Wisconsin
)nondaga Nation of New York
)sage Tribe of Oklahoma
)ttawa Tribe of Oklahoma
)toe-Missouria Tribe, Oklahoma
'aiute-Shoshone Indians of the Bishop Community, Bishop Colony, California
'aiute-Shoshone Indians of the Fallon Reservation, Nevada
'aiute-Shoshone Indians of the Lone Pine Community, Lone Pine Reservation, California
'ala Band of Luiseno Mission Indians, Pala Reservation, California
'apago Tribe of Arizona
'ascua Yaqui Tribe of Arizona
'assamaquoddy Tribe of Maine
'auma Band of Luiseno Mission Indians, Pauma & Yuima Reservation, California
'awnee Tribe of Oklahoma
'ayson Tonto Apache Tribe of Arizona
'echanga Band of Luiseno Mission Indians, Pechanga Reservation, California
'enobscot Tribe of Maine
Peoria Tribe of Oklahoma
Picuris Pueblo of New Mexico
Pit River Tribe, X-L Ranch Reservation, California
Pojoaque Pueblo of New Mexico
Ponca Tribe of Oklahoma
Port Gamble Indian Community, Port Gamble Reservation, Washington
Prairie Band of Potawatomi Indians of Kansas
Prairie Island Sioux Indian Community, Prairie Island Reservation, Minnesota
Puyallup Tribe, Puyallup Reservation, Washington
Pyramid Lake Paiute Tribe, Pyramid Lake Reservation, Nevada
Quapaw Tribe of Oklahoma
Quechan Tribe of the Fort Yuma Indian Reservation, California
Quileute Tribe, Quileute Reservation, Washington
Quinault Tribe, Quinault Reservation, Washington
Ramona Reservation, California
Red Cliff Band of Lake Superior Chippewa Indians, Red Cliff Reservation, Wisconsin
Red Lake Band of Chippewa Indians, Red Lake Reservation, Minnesota
Reno-Sparks Indian Colony, Nevada
Resighini Rancheria, Coast Indian Community of Yurok Indians, California
Rincon Band of Luiseno Mission Indians, Rincon Reservation, California
Roaring Creek Rancheria of Pit River Indians, California
Robinson Rancheria of Pomo Indians, California
Rosebud Sioux Tribe, Rosebud Indian Reservation, South Dakota
Rumsey Rancheria of Wintun Indians, California
Sac & Fox Tribe of the Mississippi in Iowa
Sac & Fox Tribe of the Missouri in Kansas
Sac & Fox Tribe of Oklahoma
Saginaw Chippewa Tribe of the Isabella Reservation, Michigan
Salt River Pima-Maricopa Indian Community, Salt River Reservation, Arizona
San Carlos Apache Tribe, San Carlos Reservation, Arizona
San Felipe Pueblo of New Mexico
San Ildefonso Pueblo of New Mexico
San Juan Pueblo of New Mexico
San Manual Band of Serrano Mission Indians, San Manual Reservation, California
San Pasqual Band of Diegueno Indians, San Pasqual Reservation, California
Sandia Pueblo of New Mexico
Santa Ana Pueblo of New Mexico
Santa Clara Pueblo of New Mexico
Santa Rosa Indian Community, Santa Rosa Rancheria of California
Santa Rosa Band of Cahuilla Mission Indians, Santa Rosa Reservation, California
Santa Ynez Band of Chumash Mission Indians, Santa Ynez Reservation, California
Santa Ysabel Band of Diegueno Mission Indians, Santa Ysabel Reservation, California
Santee Sioux Tribe, Santee Reservation, Nebraska
Santo Domingo Pueblo of New Mexico
Sauk-Suiattle Indian Tribe of Washington
Sault Ste. Marie Chippewa Tribe of Michigan
Seminole Nation of Oklahoma
Seminole Tribe of Florida
Seneca Nation of New York
Seneca-Cayuga Tribe of Oklahoma
Shakopee Mdewakanton Sioux Community of Minnesota (Prior Lake)
Sheep Ranch Rancheria of Me-Wuk Indians, California
Sherwood Valley Rancheria of Pomo Indians, California
Shingle Springs Rancheria (Verona Tract) of Miwok Indians, California
Shoalwater Bay Tribe, Shoalwater Bay Reservation, Washington
Shoshone Tribe of the Wind River Reservation, Wyoming
Shoshone-Bannock Tribes of the Fort Hall Reservation, Idaho
Shoshone-Paiute Tribe of the Duck Valley Reservaton, Nevada
Sisseton-Wahpeton Sioux Tribe, Lake Traverse Reservation, South Dakota
Skokomish Tribe, Skokomish Reservation, Washington
Skull Valley Band of Goshute Indians, Utah
Soboba Band of Luiseno Mission Indians, Soboba Reservation, California
Sokoagon Chippewa Community, Mole Lake Band, Wisconsin
Southern Ute Tribe, Southern Ute Reservation, Colorado
Spokane Tribe of the Spokane Reservation, Washington
Squaxin Island Tribe, Squaxin Island Reservation, Washington
St. Croix Chippewa Indians of Wisconsin, St. Croix Reservation, Wisconsin
St. Regis Band of Mohawk Indians of New York
Standing Rock Sioux Tribe, Standing Rock Reservation, North & South Dakota
Stockbridge-Munsee Mohican Indian Community, Wisconsin
Stillaguamish Tribe of Washington
Summit Lake Paiute Tribe, Summit Lake Reservation, Nevada
Suguamish Tribe, Port Madison Reservation, Washington
Susanville Rancheria of Paiute, Maidu, Pit River & Washoe Indians of California
Swinomish Indian Tribal Community, Swinomish Reservation, Washington
Sycuan Band of Diegueno Mission Indians, Sycuan Reservation, California
Table Bluff Rancheria of California
Table Mountain Rancheria of Yokut Indians of California
Taos Pueblo of New Mexico
Te-Moak Bands of Western Shoshone Indians, Nevada (Battle Mountain, Elko & South Fork)
Tesuque Pueblo of New Mexico
Thlopthlocco Creek Tribal Town of Oklahoma
Three Affiliated Tribes of the Fort Berthold Reservation, North Dakota
Tonawanda Band of Seneca Indians of New York
Tonkawa Tribe of Oklahoma
Torres-Martinez Band of Cahuilla Mission Indians, Torres-Martinez Reservation, California
Tule River Tribe, Tule River Reservation, California
Tulalip Tribes of the Tulalip Reservation, Washington
Tuolumne Band of Me-Wuk Indians, Tuolumne Rancheria, California
Turtle Mountain Band of Chippewa Indians, Turtle Mountain Reservation, North Dakota
Tuscarora Nation of New York
Twenty-Nine Palms Band of Luiseno Mission Indians, 29 Palms Reservation, California
United Keetoowah Band of Cherokee Indians, Oklahoma

Exhibit B. All References of the Resighini Rancheria as a Federally Recognized Tribe in the Federal Register

1979	Federal Register Vol. 44 No. 26 7236	Resighini Rancheria, Coast Indian Community of Yurok Indians, California
1980	Federal Register Vol. 45 No. 81 27828	Coast Indian Community of Yurok Indians of the Resighini Rancheria, California
1988	Federal Register Vol. 53 52829	Coast Indian Community of Yurok Indians of the Resighini Rancheria, California
1995	Federal Register Vol. 60 No. 32 9250	Coast Indian Community of Yurok Indians of the Resighini Rancheria, California
1996	Federal Register Vol. 61 No. 220 58211	Coast Indian Community of Yurok Indians of the Resighini Rancheria, California
1997	Federal Register Vol. 62 No. 205 55270	Coast Indian Community of Yurok Indians of the Resighini Rancheria, California
1998	Federal Register Vol. 63, No. 250 71941	Resighini Rancheria, California (formerly known as the Coast Indian Community of Yurok Indians of the Resighini Rancheria)
1999	Federal Register Vol. 62 No. 250 55270	Coast Indian Community of Yurok Indians of the Resighini Rancheria, California
2000	Federal Register Vol. 65 No. 49 13298	Resighini Rancheria, California (formerly known as the Coast Indian Community of Yurok Indians of the Resighini Rancheria)
2002	Federal Register Vol. 67 No. 134 46328	Resighini Rancheria, California (formerly the Coast Indian Community of Yurok Indians of the Resighini Rancheria)
2003	Federal Register Vol. 68 No. 234 68180	Resighini Rancheria, California (formerly the Coast Indian Community of Yurok Indians of the Resighini Rancheria)
2005	Federal Register Vol. 70 No. 226 71194	Resighini Rancheria, California
2007	Federal Register Vol. 72 No. 055 13648	Resighini Rancheria, California
2008	Federal Register Vol. 73 No. 066 18553	Resighini Rancheria, California
2009	Federal Register Vol. 74 No. 153 40218	Resighini Rancheria, California
2010	Federal Register Vol. 75 No. 190 60810	Resighini Rancheria, California

Exhibit C

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Indian Entities Recognized and Eligible To Receive Services From the United States Bureau of Indian Affairs

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice.

SUMMARY: This notice publishes the current list of 561 tribal entities recognized and eligible for funding and services from the Bureau of Indian Affairs by virtue of their status as Indian tribes. The list is updated from the notice published on December 5, 2003 (68 FR 68180).

FOR FURTHER INFORMATION CONTACT: Daisy West, Bureau of Indian Affairs, Division of Tribal Government Services, Mail Stop 320–SIB, 1951 Constitution Avenue, NW., Washington, DC 20240. Telephone number: (202) 513–7641.

SUPPLEMENTARY INFORMATION: This notice is published pursuant to Section 104 of the Act of November 2, 1994 (Pub. L. 103–454; 108 Stat. 4791, 4792), and in exercise of authority delegated to the Assistant Secretary—Indian Affairs under 25 U.S.C. 2 and 9 and 209 DM 8.

Published below is a list of federally acknowledged tribes in the contiguous 48 states and in Alaska.

The Delaware Tribe of Indians, Oklahoma, was removed from the list in response to a final judgment and order sought by the Cherokee Nation of Oklahoma in the United States District Court for the Northern District of Oklahoma in *Cherokee Nation of Oklahama* v. *Norton, et al.*, Case No. 98–CV–903–TCK–FHM on remand from the Tenth Circuit Court of Appeals in *Cherokee Nation of Oklahoma* v. *Norton*, 389 F.3d 1074 (10th Cir. 2004), as amended, 2005 U.S. App. LEXIS 2773 (10th Cir. Feb. 16, 2005).

The list does not include any additional new tribes. The updates are limited to several tribal name changes. To aid in identifying tribal name changes, the tribe's former name is included with the new tribal name. We will continue to list the tribe's former name for several years before dropping the former name from the list. We have also made several corrections. To aid in identifying corrections, the tribe's previously listed name is included with the tribal name.

The listed entities are acknowledged to have the immunities and privileges available to other federally acknowledged Indian tribes by virtue of their government-to-government relationship with the United States as well as the responsibilities, powers, limitations and obligations of such tribes. We have continued the practice of listing the Alaska Native entities separately solely for the purpose of facilitating identification of them and reference to them given the large number of complex Native names.

Dated: November 14, 2005.

Michael D. Olsen,

Acting Principal Deputy Assistant Secretary—Indian Affairs.

Indian Tribal Entities Within the Contiguous 48 States Recognized and Eligible To Receive Services From the United States Bureau of Indian Affairs

Absentee-Shawnee Tribe of Indians of Oklahoma
Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation, California
Ak Chin Indian Community of the Maricopa (Ak Chin) Indian Reservation, Arizona
Alabama-Coushatta Tribes of Texas
Alabama-Quassarte Tribal Town, Oklahoma
Alturas Indian Rancheria, California
Apache Tribe of Oklahoma
Arapahoe Tribe of the Wind River Reservation, Wyoming
Aroostook Band of Micmac Indians of Maine
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana
Augustine Band of Cahuilla Mission Indians of the Augustine Reservation, California
Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation, Wisconsin
Bay Mills Indian Community, Michigan
Bear River Band of the Rohnerville Rancheria, California
Berry Creek Rancheria of Maidu Indians of California
Big Lagoon Rancheria, California
Big Pine Band of Owens Valley Paiute Shoshone Indians of the Big Pine Reservation, California
Big Sandy Rancheria of Mono Indians of California
Big Valley Band of Pomo Indians of the Big Valley Rancheria, California
Blackfeet Tribe of the Blackfeet Indian Reservation of Montana
Blue Lake Rancheria, California
Bridgeport Paiute Indian Colony of California
Buena Vista Rancheria of Me-Wuk Indians of California
Burns Paiute Tribe of the Burns Paiute Indian Colony of Oregon
Cabazon Band of Mission Indians, California (previously listed as the Cabazon Band of Cahuilla Mission Indians of the Cabazon Reservation)
Cachil DeHe Band of Wintun Indians of the Colusa Indian Community of the Colusa Rancheria, California
Caddo Nation of Oklahoma (formerly the Caddo Indian Tribe of Oklahoma)
Cahuilla Band of Mission Indians of the Cahuilla Reservation, California
Cahto Indian Tribe of the Laytonville Rancheria, California
California Valley Miwok Tribe, California (formerly the Sheep Ranch Rancheria of Me-Wuk Indians of California)
Campo Band of Diegueno Mission Indians of the Campo Indian Reservation, California
Capitan Grande Band of Diegueno Mission Indians of California:
  Barona Group of Capitan Grande Band of Mission Indians of the Barona Reservation, California
  Viejas (Baron Long) Group of Capitan Grande Band of Mission Indians of the Viejas Reservation, California
Catawba Indian Nation (aka Catawba Tribe of South Carolina)
Cayuga Nation of New York
Cedarville Rancheria, California
Chemehuevi Indian Tribe of the Chemehuevi Reservation, California
Cher-Ae Heights Indian Community of the Trinidad Rancheria, California
Cherokee Nation, Oklahoma
Cheyenne-Arapaho Tribes of Oklahoma
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota
Chickasaw Nation, Oklahoma
Chicken Ranch Rancheria of Me-Wuk Indians of California
Chippewa-Cree Indians of the Rocky Boy's Reservation, Montana
Chitimacha Tribe of Louisiana
Choctaw Nation of Oklahoma
Citizen Potawatomi Nation, Oklahoma
Cloverdale Rancheria of Pomo Indians of California
Cocopah Tribe of Arizona
Coeur D'Alene Tribe of the Coeur D'Alene Reservation, Idaho
Cold Springs Rancheria of Mono Indians of California
Colorado River Indian Tribes of the Colorado River Indian Reservation, Arizona and California
Comanche Nation, Oklahoma
Confederated Salish & Kootenai Tribes of the Flathead Reservation, Montana
Confederated Tribes of the Chehalis Reservation, Washington
Confederated Tribes of the Colville Reservation, Washington
Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians of Oregon
Confederated Tribes of the Goshute Reservation, Nevada and Utah
Confederated Tribes of the Grand Ronde Community of Oregon

Confederated Tribes of the Siletz Reservation, Oregon
Confederated Tribes of the Umatilla Reservation, Oregon
Confederated Tribes of the Warm Springs Reservation of Oregon
Confederated Tribes and Bands of the Yakama Nation, Washington
Coquille Tribe of Oregon
Cortina Indian Rancheria of Wintun Indians of California
Coushatta Tribe of Louisiana
Cow Creek Band of Umpqua Indians of Oregon
Cowlitz Indian Tribe, Washington
Coyote Valley Band of Pomo Indians of California
Crow Tribe of Montana
Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota
Death Valley Timbi-Sha Shoshone Band of California
Delaware Nation, Oklahoma
Dry Creek Rancheria of Pomo Indians of California
Duckwater Shoshone Tribe of the Duckwater Reservation, Nevada
Eastern Band of Cherokee Indians of North Carolina
Eastern Shawnee Tribe of Oklahoma
Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria, California
Elk Valley Rancheria, California
Ely Shoshone Tribe of Nevada
Enterprise Rancheria of Maidu Indians of California
Ewiiaapaayp Band of Kumeyaay Indians, California (formerly the Cuyapaipe Community of Diegueno Mission Indians of the Cuyapaipe Reservation)
Federated Indians of Graton Rancheria, California (formerly the Graton Rancheria)
Flandreau Santee Sioux Tribe of South Dakota
Forest County Potawatomi Community, Wisconsin
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana
Fort Bidwell Indian Community of the Fort Bidwell Reservation of California
Fort Independence Indian Community of Paiute Indians of the Fort Independence Reservation, California
Fort McDermitt Paiute and Shoshone Tribes of the Fort McDermitt Indian Reservation, Nevada and Oregon
Fort McDowell Yavapai Nation, Arizona
Fort Mojave Indian Tribe of Arizona, California & Nevada
Fort Sill Apache Tribe of Oklahoma
Gila River Indian Community of the Gila River Indian Reservation, Arizona
Grand Traverse Band of Ottawa and Chippewa Indians, Michigan
Greenville Rancheria of Maidu Indians of California
Grindstone Indian Rancheria of Wintun-Wailaki Indians of California
Guidiville Rancheria of California
Habematolel Pomo of Upper Lake, California (formerly the Upper Lake Band of Pomo Indians of Upper Lake Rancheria of California)
Hannahville Indian Community, Michigan
Havasupai Tribe of the Havasupai Reservation, Arizona
Ho-Chunk Nation of Wisconsin
Hoh Indian Tribe of the Hoh Indian Reservation, Washington
Hoopa Valley Tribe, California
Hopi Tribe of Arizona
Hopland Band of Pomo Indians of the Hopland Rancheria, California
Houlton Band of Maliseet Indians of Maine
Hualapai Indian Tribe of the Hualapai Indian Reservation, Arizona
Huron Potawatomi, Inc., Michigan
Inaja Band of Diegueno Mission Indians of the Inaja and Cosmit Reservation, California
Ione Band of Miwok Indians of California
Iowa Tribe of Kansas and Nebraska
Iowa Tribe of Oklahoma
Jackson Rancheria of Me-Wuk Indians of California
Jamestown S'Klallam Tribe of Washington
Jamul Indian Village of California
Jena Band of Choctaw Indians, Louisiana
Jicarilla Apache Nation, New Mexico
Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, Arizona
Kalispel Indian Community of the Kalispel Reservation, Washington
Karuk Tribe of California
Kashia Band of Pomo Indians of the Stewarts Point Rancheria, California
Kaw Nation, Oklahoma
Keweenaw Bay Indian Community, Michigan
Kialegee Tribal Town, Oklahoma
Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
Kickapoo Tribe of Oklahoma
Kickapoo Traditional Tribe of Texas
Kiowa Indian Tribe of Oklahoma
Klamath Tribes, Oregon (formerly the Klamath Indian Tribe of Oregon)
Kootenai Tribe of Idaho
La Jolla Band of Luiseno Mission Indians of the La Jolla Reservation, California
La Posta Band of Diegueno Mission Indians of the La Posta Indian Reservation, California
Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin
Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin
Lac Vieux Desert Band of Lake Superior Chippewa Indians, Michigan
Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, Nevada
Little River Band of Ottawa Indians, Michigan
Little Traverse Bay Bands of Odawa Indians, Michigan
Lower Lake Rancheria, California
Los Coyotes Band of Cahuilla & Cupeno Indians of the Los Coyotes Reservation, California (formerly the Los Coyotes Band of Cahuilla Mission Indians of the Los Coyotes Reservation)
Lovelock Paiute Tribe of the Lovelock Indian Colony, Nevada
Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota
Lower Elwha Tribal Community of the Lower Elwha Reservation, Washington
Lower Sioux Indian Community in the State of Minnesota
Lummi Tribe of the Lummi Reservation, Washington
Lytton Rancheria of California
Makah Indian Tribe of the Makah Indian Reservation, Washington
Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria, California
Manzanita Band of Diegueno Mission Indians of the Manzanita Reservation, California
Mashantucket Pequot Tribe of Connecticut
Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan
Mechoopda Indian Tribe of Chico Rancheria, California
Menominee Indian Tribe of Wisconsin
Mesa Grande Band of Diegueno Mission Indians of the Mesa Grande Reservation, California
Mescalero Apache Tribe of the Mescalero Reservation, New Mexico
Miami Tribe of Oklahoma
Miccosukee Tribe of Indians of Florida
Middletown Rancheria of Pomo Indians of California
Minnesota Chippewa Tribe, Minnesota (Six component reservations:
Bois Forte Band (Nett Lake); Fond du Lac Band; Grand Portage Band; Leech Lake Band; Mille Lacs Band; White Earth Band)
Mississippi Band of Choctaw Indians, Mississippi
Moapa Band of Paiute Indians of the Moapa River Indian Reservation, Nevada
Modoc Tribe of Oklahoma
Mohegan Indian Tribe of Connecticut
Mooretown Rancheria of Maidu Indians of California
Morongo Band of Cahuilla Mission Indians of the Morongo Reservation, California

Muckleshoot Indian Tribe of the Muckleshoot Reservation, Washington
Muscogee (Creek) Nation, Oklahoma
Narragansett Indian Tribe of Rhode Island
Navajo Nation, Arizona, New Mexico & Utah
Nez Perce Tribe of Idaho
Nisqually Indian Tribe of the Nisqually Reservation, Washington
Nooksack Indian Tribe of Washington
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana
Northfork Rancheria of Mono Indians of California
Northwestern Band of Shoshoni Nation of Utah (Washakie)
Oglala Sioux Tribe of the Pine Ridge Reservation, South Dakota
Omaha Tribe of Nebraska
Oneida Nation of New York
Oneida Tribe of Indians of Wisconsin
Onondaga Nation of New York
Osage Tribe, Oklahoma
Ottawa Tribe of Oklahoma
Otoe-Missouria Tribe of Indians, Oklahoma
Paiute Indian Tribe of Utah (Cedar City Band of Paiutes, Kanosh Band of Paiutes, Koosharem Band of Paiutes, Indian Peaks Band of Paiutes, and Shivwits Band of Paiutes)
Paiute-Shoshone Indians of the Bishop Community of the Bishop Colony, California
Paiute-Shoshone Tribe of the Fallon Reservation and Colony, Nevada
Paiute-Shoshone Indians of the Lone Pine Community of the Lone Pine Reservation, California
Pala Band of Luiseno Mission Indians of the Pala Reservation, California
Pascua Yaqui Tribe of Arizona
Paskenta Band of Nomlaki Indians of California
Passamaquoddy Tribe of Maine
Pauma Band of Luiseno Mission Indians of the Pauma & Yuima Reservation, California
Pawnee Nation of Oklahoma
Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation, California
Penobscot Tribe of Maine
Peoria Tribe of Indians of Oklahoma
Picayune Rancheria of Chukchansi Indians of California
Pinoleville Rancheria of Pomo Indians of California
Pit River Tribe, California (includes XL Ranch, Big Bend, Likely, Lookout, Montgomery Creek and Roaring Creek Rancherias)
Poarch Band of Creek Indians of Alabama
Pokagon Band of Potawatomi Indians, Michigan and Indiana
Ponca Tribe of Indians of Oklahoma
Ponca Tribe of Nebraska
Port Gamble Indian Community of the Port Gamble Reservation, Washington
Potter Valley Tribe, California (formerly the Potter Valley Rancheria of Pomo Indians of California)
Prairie Band of Potawatomi Nation, Kansas
Prairie Island Indian Community in the State of Minnesota
Pueblo of Acoma, New Mexico
Pueblo of Cochiti, New Mexico
Pueblo of Jemez, New Mexico
Pueblo of Isleta, New Mexico
Pueblo of Laguna, New Mexico
Pueblo of Nambe, New Mexico
Pueblo of Picuris, New Mexico
Pueblo of Pojoaque, New Mexico
Pueblo of San Felipe, New Mexico
Pueblo of San Juan, New Mexico
Pueblo of San Ildefonso, New Mexico
Pueblo of Sandia, New Mexico
Pueblo of Santa Ana, New Mexico
Pueblo of Santa Clara, New Mexico
Pueblo of Santo Domingo, New Mexico
Pueblo of Taos, New Mexico
Pueblo of Tesuque, New Mexico
Pueblo of Zia, New Mexico
Puyallup Tribe of the Puyallup Reservation, Washington
Pyramid Lake Paiute Tribe of the Pyramid Lake Reservation, Nevada
Quapaw Tribe of Indians, Oklahoma
Quartz Valley Indian Community of the Quartz Valley Reservation of California
Quechan Tribe of the Fort Yuma Indian Reservation, California & Arizona
Quileute Tribe of the Quileute Reservation, Washington
Quinault Tribe of the Quinault Reservation, Washington
Ramona Band or Village of Cahuilla Mission Indians of California
Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin
Red Lake Band of Chippewa Indians, Minnesota
Redding Rancheria, California
Redwood Valley Rancheria of Pomo Indians of California
Reno-Sparks Indian Colony, Nevada
Resighini Rancheria, California
Rincon Band of Luiseno Mission Indians of the Rincon Reservation, California
Robinson Rancheria of Pomo Indians of California
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota
Round Valley Indian Tribes of the Round Valley Reservation, California
Rumsey Indian Rancheria of Wintun Indians of California
Sac & Fox Tribe of the Mississippi in Iowa
Sac & Fox Nation of Missouri in Kansas and Nebraska
Sac & Fox Nation, Oklahoma
Saginaw Chippewa Indian Tribe of Michigan
St. Croix Chippewa Indians of Wisconsin
St. Regis Band of Mohawk Indians of New York
Salt River Pima-Maricopa Indian Community of the Salt River Reservation, Arizona
Samish Indian Tribe, Washington
San Carlos Apache Tribe of the San Carlos Reservation, Arizona
San Juan Southern Paiute Tribe of Arizona
San Manual Band of Serrano Mission Indians of the San Manual Reservation, California
San Pasqual Band of Diegueno Mission Indians of California
Santa Rosa Indian Community of the Santa Rosa Rancheria, California
Santa Rosa Band of Cahuilla Mission Indians of the Santa Rosa Reservation, California
Santa Ynez Band of Chumash Mission Indians of the Santa Ynez Reservation, California
Santa Ysabel Band of Diegueno Mission Indians of the Santa Ysabel Reservation, California
Santee Sioux Nation, Nebraska (formerly the Santee Sioux Tribe of the Santee Reservation of Nebraska)
Sauk-Suiattle Indian Tribe of Washington
Sault Ste. Marie Tribe of Chippewa Indians of Michigan
Scotts Valley Band of Pomo Indians of California
Seminole Nation of Oklahoma
Seminole Tribe of Florida, Dania, Big Cypress, Brighton, Hollywood & Tampa Reservations
Seneca Nation of New York
Seneca-Cayuga Tribe of Oklahoma
Shakopee Mdewakanton Sioux Community of Minnesota
Shawnee Tribe, Oklahoma
Sherwood Valley Rancheria of Pomo Indians of California
Shingle Springs Band of Miwok Indians, Shingle Springs Rancheria (Verona Tract), California
Shoalwater Bay Tribe of the Shoalwater Bay Indian Reservation, Washington
Shoshone Tribe of the Wind River Reservation, Wyoming
Shoshone-Bannock Tribes of the Fort Hall Reservation of Idaho
Shoshone-Paiute Tribes of the Duck Valley Reservation, Nevada
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota (formerly the Sisseton-Wahpeton Sioux Tribe of the Lake Traverse Reservation)
Skokomish Indian Tribe of the Skokomish Reservation, Washington
Skull Valley Band of Goshute Indians of Utah

Cher-Ae Heights Indian Community of the Trinidad Rancheria

August 14, 2013

Sonke Mastrup
Executive Director
CA Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

Director Mastrup:

On behalf of the Cher-Ae Heights Indian Community of the Trinidad Rancheria, please accept this letter to clarify an error made in the August 9, 2013 Trinidad Rancheria letter to you requesting formal Government to Government Consultation with the CA Fish and Game Commission. I inadvertently noted Trinidad Rancheria CEO Jacque Hostler-Carmesin as the point of contact for the Trinidad Rancheria in regards to this consultation request. As Mrs. Hostler-Carmesin was recently appointed to serve on the CA Fish and Game Commission, she has requested recusal from any interactions between the Tribe and the Commission in order to avoid any potential conflict of interest due to her due positions.

Please contact Trinidad Rancheria Executive Manager Amy Atkins at (707) 677-0211 ext. 2702 or Tribal Historic Preservation Officer Rachel Sundberg at (707) 677-0211 ext. 2726 to plan and coordinate meeting dates and times for a Government to Government Consultation of Reading Rock as originally requested in the August 9, 2013 letter.

Sincerely,

Garth Sundberg
Tribal Chairman
Trinidad Rancheria

Santa Ynez Band of Chumash Indians
P.O. Box 517 • Santa Ynez, CA 93460
805-688-7997 • Fax 805-686-9578
www.santaynezchumash.org

BUSINESS COMMITTEE
Vincent Armenta, *Chairman*
Richard Gomez, *Vice Chairman*
Kenneth Kahn, *Secretary/Treasurer*
David D. Dominguez, *Committee Member*
Gary Pace, *Committee Member*

November 1, 2011

Mr. Jim Kellogg, President
California Fish and Game Commission (F&GC)
P.O. Box 944209
Sacramento, CA 94244-2090

RE: **Santa Ynez Band of Chumash Indians Request for Exemption for Cultural and Ceremonial Fishing In Marine Protected Areas (MPAs) pursuant to the Marine Life Protection Act (MLPA)**

Dear Mr. Kellogg:

The Santa Ynez Band of Chumash Indians (Chumash) makes this request for an exemption from the Fish and Game Commission for cultural and ceremonial fishing and gathering within State Marine Conservation Areas and Marine Parks in Santa Barbara County under the MLPA.

In support of such exemption, the Chumash provide the attached: "*Factual Record of Current and Historical Uses by the Santa Ynez Band of Chumash Indians within the proposed State Marine Conservation Areas and Marine Parks of Santa Barbara County.*" In addition, this request for exemption incorporates by reference the following documents which have been previously delivered to Mr. Sonke Mastrup, F&GC Executive Director:

1. Summary of our August 5, 2011 meeting regarding an exemption;
2. Santa Barbara County Marine Conservation Areas and Parks;
3. Chumash cultural and ceremonial gathering list;
4. Possible additional provisions to gathering list;
5. Chumash fishing and gathering text from the Santa Barbara Museum of Natural History website;
6. Chumash towns at the time of European settlement;
7. "The Origins of a Pacific Coast Chiefdom, The Chumash of the Channel Islands";
8. "Ethnohistoric and Archaeological Evidence for Chumash Use of Marine Plants";
9. "A Review of the Analysis of Fish Remains in Chumash Sites";
10. "The Economics of Island Chumash Fishing Practices"; and
11. Summary of Chumash Coastal Sites—January 2011.

Sincerely,

Vincent P. Armenta, Tribal Chairman

CC: Mr. Richard B. Rogers, Vice President
Mr. Michael Sutton, Member
Mr. Daniel W. Richards, Member
Mr. Jack Baylis, Member

Factual Record of Current and Historical Uses by the Santa Ynez Band of Chumash Indians within the proposed State Marine Conservation Areas and Marine Parks of Santa Barbara County

The Santa Ynez Band of Chumash Indians have been actively engaged in the Marine Life Protection Act (MLPA) process since 2007. It started with Chumash attempts to get any Tribal consultation in the South Central Coast Marine Protected Area (MPA) from Pointe Conception north. Our letters from 2007 remain unresponded to even after we personally attended Fish and Game Commission meetings and requested a response.

After the South Central Coast MPA, the Chumash began demanding Tribal consultation in the South Coast MPA from Point Conception south to the border of Mexico. All Tribes in this long stretch of coast we given two representatives in the South Coast Regional Stakeholders Group, Louis Guassac and Roberta Cordero. Again we requested consultation with the federally recognized tribes in this region and were told to contact "our" stakeholders. Ultimately, the Tribal South Coast Regional Stakeholders Committee recommended an elaborate system of co-management and co-enforcement, which also included cultural and ceremonial MPA access, none of which were accepted by the Blue Ribbon Task Force (BRTF) nor included in the final regulations.

During 2009 we also learned of a Memorandum of Understanding (MOU) between the Department of Fish and Game and Vandenberg Air Force Base pursuant to the MLPA restricting Chumash historical fishing rights at the Base. After multiple California Public Records Act (CPRA) requests beginning in 2009 we are pleased to have just received a copy of the MOU in 2011.

Upon the completion of the South Central and South Coast MPAs without any recognition of Tribal rights, we then learned of the North Coast MPA process. We read with interest the motion made by Jacque Hostler in the North Coast Regional Stakeholders Group (NCRSG) and the emergency subsistence regulations proposed for the Kashia Band of Pomo Indians. We wrote letters to Ms. Hostler offering our assistance and to work together with the Northern Tribes in October of 2010. We also saw the response of the BRTF to Ms. Hostler and the NCRSG that the legal authority for tribal cultural and ceremonial MPA access needed to be clarified. To date, we are informed that federally recognized Tribes within the North Coast MPA have been invited to submit a factual record upon with an exception can be considered for Tribal cultural, ceremonial and subsistence fishing in State Marine Conservation Areas and Marine Parks but not Marine Reserves.

The Santa Ynez Band of Chumash Indians hereby introduce this factual record the South Coast and South Central Coast MPAs upon which an exception can be considered for Tribal cultural, ceremonial and subsistence fishing in State Marine Conservation Areas and Marine Parks but not Marine Reserves in Santa Barbara County.

Chumash Historical Summary

The Chumash occupied the region from San Luis Obispo County to Malibu Canyon on the coast, and inland as far as the western edge of the San Joaquin Valley, and the four northern Channel Islands (Grant 1978). The Chumash are subdivided into factions based on distinct dialects.

Chumash society developed over the course of some 9,000 years and achieved a level of social, political and economic complexity not ordinarily associated with hunting and gathering groups (Morrato, 1984). The prehistoric Chumash are believed to have maintained one of the most elaborate bead money systems in the world, as well as one of the most complex non-agricultural societies (King, 1990).

The archaeological record indicates that Chumash populations occupied the coastal regions of California more than 9,000 years ago (Greenwood 1972). Several chronological frameworks have been developed for the Chumash region. One of the most definitive works on Chumash chronology is that of King (1990). King postulates three major periods; Early, Middle and Late. Based on artifact typologies from a great number of sites, he was able to discern numerous style changes within each of the major periods.

The Early Period (8000 to 3350 Before Present [B.P.]) is characterized by a primarily seed processing subsistence economy. The Middle Period (3350 to 800 B.P.) is marked by a shift in the economic/subsistence focus from plant gathering and the use of hard seeds, to a more generalized hunting-maritime gathering adaptation, with an increased focus on acorns. The full development of the Chumash culture, one of the most socially and economically complex hunting and gathering groups in North America, occurred during the Late Period (800 to 150 B.P.).

The Chumash aboriginal way of life ended with Spanish colonization. As neophytes were brought into the mission system, they were transformed from fishermen, hunters and gatherers into agricultural laborers and exposed to diseases from which they had no resistance. By the end of the Mission Period in 1834, the Chumash population had been decimated by disease and declining birthrates. Population loss as a result of disease and economic deprivation continued into the next century.

The Mission Era

The Spanish built five Catholic missions among the Chumash people. Mission Santa Ines was established in 1804 as a halfway point between the Santa Barbara and La Purisma (Lompoc) missions. Each mission was granted about seven square leagues of land surrounding it for the use and support of the local Indian communities.

In practice, the missionaries and soldiers were brutal men who enslaved the local Chumash people and nearly decimated them through disease, starvation and harsh treatment. Despite this, the sentiment of the Spanish and Mexican governments and the Catholic Church was that the land of the missions essentially were what we know of today as reservations, for the use and upkeep of the Indians. The tribal members forced to live and work near the missions were considered to be neophytes or Christianized Indians.

The Church viewed the land to be held in trust for the Indians, who had a "natural" right of occupancy. The Church and Spain considered title to the land to be with the Indians as decreed from the "laws of nature and imminent occupation." The priests were just the administrators of the land on behalf of their Indian "wards."

The slave-like conditions at the mission led to the Chumash Revolt of 1824. It started when soldiers flogged an Indian from La Purisma mission who was at Santa Ines. The revolt spread to the Santa Barbara and La Purisma missions and led to the burning of the Santa Ines mission. Many Chumash feared the soldiers would kill them and fled to the San Joaquin Valley. The priests and military knew they couldn't keep the missions going without the Indian slave labor. Soldiers rounded up the Chumash and brought them back to the mission.

A decade after the revolt, the Mexican government secularized the missions and intended to disperse the lands to the Indians and settlers. The goal never was fully accomplished. The missionaries still were regarded as the guardians of the Indians and the tribal lands.

Many Chumash after the secularization efforts did flee the mission and ended up in the area around Zanja de Cota Creek in the Canada de la Cota. The area still was considered to be within the lands of the Catholic Church.

Significance of Refugio Bay

The marine environment of the Santa Barbara Channel supports a wide variety of habitats that include kelp beds, sandy beaches, rocky intertidal, bays, estuaries, and lagoons. Historically, the largest kelp beds on the California coast occurred between Point Conception and Rincon Point. Kelp beds support a large invertebrate community including abalone, crabs, clams, oysters, shrimp, lobster, and squid. Kelp beds also feed and provide shelter for numerous species of fish. Seals and sea lions feed in the kelp beds and haul out and breed on adjacent sandy beaches. The bays, estuaries, and lagoons are important habitats for resident bird species as well as migrating waterfowl. The Mediterranean climate of the project area is typified by long, hot summers, and wet, mild winters. Perennial and seasonal drainages run down the slopes of the Santa Ynez Mountains and foothills to the coast.

The rich plant and animal resources of the surrounding terrestrial and marine environments, availability of fresh water, and Mediterranean climate combined

to make the Santa Barbara Channel region a desirable location for prehistoric habitation and supported one of the highest prehistoric population densities among hunter-gatherers anywhere in the world. These same attributes would later encourage settlement of the Santa Barbara Channel region by the Spanish, Mexican, and American cultures.

In 1769, Gaspar de Portola and Father Junipero Serra departed the newly established San Diego settlement and marched northward toward Monterey, with the objective to secure that port and establish five missions along the route. The combined sea and land 1769-1770 Portola expedition, which passed through Santa Barbara County on its way to Monterey, was the prelude to systematic Spanish colonization of Alta California.

In 1795, Jose Francisco Ortega (the original founder of the Santa Barbara Presidio) was granted six leagues known as the *Rancho Nuestra Senora del Refugio* (Cowan, 1977). This was the only land grant licensed under Spanish Rule in what today is known as Santa Barbara County. The Ortegas built adobes at Refugio and later at Tajiguas Canyon, Arroyo Hondo, and Cañada del Corral. They grew wheat, maintained a vineyard, and ran large herds of cattle and horses on the rancho.

By the early 1800's Refugio Bay was a well-known port to ships visiting the California coast, as the captains could trade at the Ortega settlement free of the duties imposed by the Spanish colonial government (Bancroft 1886, Tomkins 1960). However, the pirate Bouchard effectively ended the bay's era as a trading/smuggling port when he sacked and burned the Refugio hacienda in 1818.

In 1822, Mexico gained its independence from Spain, and in 1834 the Missions were secularized and their lands granted as rewards for loyal service or in response to an individual's petition.

Significance of the Goleta Slough

According to Dr. John Johnson at the Santa Barbara Museum of Natural History, the Goleta Slough villages had the highest population density in the Santa Barbara region at the time of European settlement." Dr. John Johnson, personal communication, April 9, 2008.

This is due to the great diversity of habitat and wildlife within this setting providing for a wide variety of subsistence adaptations.

One example of such villages within the prehistoric time frame of the Goleta Slough was the village of heló or Mescalitan Island. It was occupied continuously for thousands of years by the early Chumash.

There has been study after study by over a dozen accredited, credentialed archaeological specialists/professors regarding the Goleta Slough. No matter what was their particular expertise, all agree that these villages are significant and tell much about the prehistory of the Chumash.

Professor Jon Erlandson, along with David Stone, described the entire Goleta Slough as the sociopolitical nexus of the Chumash world:

> Subsequent archaeological studies of Rogers' sites have contributed to our growing understanding of the past in the Santa Barbara Channel area. Radiocarbon dating of sites excavated by Rogers, when combined with the development of calibration programs for ^{14}C dates, has allowed us to place his cultural stages—Oak Grove, Hunting People, and Canaliño—in real time, and a probable cultural continuum that may span more than 9000 years. In the process, archaeologists working in the Chumash area have constructed one of the longest and best documented coastal sequences in the world. Unfortunately, the past 75 years have also seen phenomenal population growth and unprecedented development along the California Coast, destroying or damaging countless archaeological sites. These include many of the 100 or so sites Rogers (1929) described along the Santa Barbara Coast. Among the hardest hit was the remarkable complex of sites that formed a nearly continuous ring around the Goleta Slough, the sociopolitical nexus of the Chumash world. Fortunately, there are still intact remnants of many of these Goleta Slough sites, including some key sites once thought to have been completely destroyed. Many of these site remnants have also been investigated by archaeologists using methods more advanced than Rogers' relatively crude techniques.

Erlandson, et al., CA-SBA-56: An "Oak Grove" and "Canaliño" Site on Goleta Lagoon, California, p. 1 (emphasis added.)

Conclusion

There is a clear factual basis for an exception for Tribal cultural, ceremonial and subsistence fishing in State Marine Conservation Areas and Marine Parks in the South Coast and South Central Coast MPAs in Santa Barbara County for the Santa Ynez Band of Chumash Indians, a federally recognized Indian Tribe.

The historical record demonstrates that the Chumash have taken finfish, invertebrates, mammals, and marine plants within this region since time immemorial, and should be included as traditional uses protected under the proposed state regulations. This factual record is being submitted as an act of good faith by the Chumash, who wish to establish a collaborative relationship with the State of California, to work towards our mutual respective goal to protect the marine resources that are of such significance to all of us. Given the time constraints, if necessary, the Chumash reserve the right to supplement the record at a later date.

Historical Connections of the Santa Ynez Chumash
to Refugio Beach, Goleta Beach, and Santa Rosa Island

John R. Johnson, Ph.D.
Santa Barbara Museum of Natural History

October, 2011

Refugio Beach

The ethnohistoric ranchería of *Qasil* (spelled "Casil" in the mission registers) was located at Refugio Beach. Not long after Mission Santa Bárbara was established, the missionaries wrote that a number of native people from the Santa Ynez Valley had established themselves at *Qasil* and its nearest neighbor *Shish'uchi* at Arroyo Quemada. Indeed, the mission registers record a number of marriages and family relationships between the citizens of these two coastal towns and the principal ranchería of *Kalawashaq'* (spelled "Calahuasa" in the mission books). After Mission Santa Inés was founded in 1804, most of the people who came from *Qasil* and *Shish'uchi* became affiliated with that mission, including their chiefs, showing the close social and political relationships that existed between the peoples who had lived in these two coastal towns and those who inhabited the Santa Ynez rancherías.

Those rancherías in the central Santa Ynez Valley that have been investigated by archaeologists show that there had been abundant access to marine resources by their indigenous inhabitants. In particular, the skeletal elements of many species of marine fishes and shells of marine mollusks are quite common in archaeological assemblages from inland sites. These material remains demonstrate that the close social connections documented through mission records also extended to economic exchange and/or that periodic visits over Refugio Pass by inland peoples to fish and gather shellfish were permitted by the rancherías on the coast.

The social, political, and economic connections documented in mission records and archaeological excavations are not the only evidence that we have of the connections of the Santa Ynez Chumash to the Refugio area. There are also direct links revealed in the genealogies of most residents of the Santa Ynez Reservation today. One of the family lineages that has many descendants who are tribal members is the direct descendant of a woman from *Qasil* named Policarpa, who had been born at that ranchería about 1751. Policarpa's second husband was Bernabé Pilaljaut, who was listed as the capitán (chief) of *Qasil* in a 1796 census prepared by the *comandante* of the Santa Bárbara Presidio, Felipe de Goycoechea. Bernabé Pilaljaut originally had been born in *Kalawashaq'*. Another family connection pertains to the ancestry of María Solares, whose grandparents, Estevan and Eulalia, although originally from *Kalawashaq'*, had lived for a time at *Qasil*, where one of their children was born.

Goleta Beach

The Goleta lagoon, referred to as "Mescaltitán" by the Spanish, was perhaps the most densely settled region in all of the territory where Chumash languages were spoken. While most of the citizens of the Goleta Chumash towns were baptized at Mission Santa Bárbara, there exist nonetheless numerous connections to the Santa Ynez Chumash. Some of these links include marriages revealed in mission records between people from the four principal towns that existed in the Goleta Valley (*S'axpilil, Helo'*, *Heliyik*, and *'Alkash*) and spouses who came from rancherías in the Santa Ynez Valley.

In 1798, Comandante Goycoechea conducted a reconnaissance of the valley in order to select a suitable site for the future mission of Santa Inés. When he visited two of the largest Santa Ynez Valley rancherías, *Kalawashaq'* and *Teqepsh*, he reported that many of the residents were absent because they were attending a fiesta at one of the Goleta Chumash towns.

One family with Goleta Chumash connections that was historically associated with the Santa Ynez tribe was that of Francisca Flores (aka Francisca Solares). Francisca had been born at the Santa Barbara Chumash community of La Cieneguita, but her mother married a man from Mission Santa Inés and the family moved to Zanja de Cota when she was a small girl. On her mother's side, Francisca was descended from Pedro Yanonali, the chief of *Syuxtun* on the Santa Barbara waterfront. On her father's side, both of her paternal grandparents were descended from citizens of *Helo'*, the famous Goleta Chumash town that once existed on what later became known as Mescalitan Island. After moving to Zanja de Cota, Francisca became a lifelong member of the Santa Ynez Indian community. She was a member of the Santa Ynez Reservation when it was established in 1901, and her children Frank Flores and Gus Flores, and granddaughter Juanita ("Jennie") Espinosa Wilson were all Santa Ynez tribal members listed on reservation rolls until their deaths.

Santa Rosa Island

The Santa Ynez Chumash tribal connections to Santa Rosa Island extend back to the days of the missions. A large number of people from rancherías on Santa Rosa Island were baptized at Mission Santa Inés in 1815-1816. These islanders continued to intermarry and reside among Santa Ynez Chumash families when the community became established at Zanja de Cota in 1855. María Solares's second husband was named Nicomedes, whose mother had come from *Qshiwqshiw*, the largest ranchería on Santa Rosa Island. The daughter Nicomedes and María Solares was Clara Miranda, who is the direct ancestor of many Santa Ynez tribal members today.

Marine Resources Committee (MRC) 2015-16 Work Plan: Scheduled topics and timeline for items referred to MRC

Topic	Type of Topic	2015			2016		
		MAR (Marina)	JUL *Canceled*	**NOV (Ventura)**	MAR (Los Alamitos)	JUL (Napa)	NOV (Irvine)
Current Topics Previously Referred to MRC:							
Lobster FMP	DFW project	X / R					
Special Closures in Central Coast (stakeholder proposal review)	Referral for review	X / R					
Experimental Squid Permits (review of regulations)	Referral for review	X / R					
Abalone FMP / ARMP update	DFW project	X	X	**X**	X	X / R	
Fisheries Bycatch Workgroup	MRC workgroup		X	**X**	X		
Pier and Jetty Fishing Review	Special FGC project		X	**X**	X		
Herring FMP Development Updates	DFW project	X					
California's Fishing Communities	Potential special FGC project	X	X	**X**			
Update to MLMA Master Plan- Fisheries	DFW project		X	**X**			
Update to MLPA Master Plan- MPAs	DFW project		X	**X**			
Annual Sportfish Regulations	Annual cycle	X			X		
* Kelp and Algae Harvest Management and Regulations - Phase 2 (Fees)	DFW project			**X**			

KEY **X** Discussion scheduled
R Recommendation developed and moved to FGC
* Pending FGC approval

State of California
Department of Fish and Wildlife

M e m o r a n d u m

Date: May 14, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Agenda Item for June 10 - 11, 2015 Fish and Game Commission Meeting request for Notice Authorization Re: Commercial Fishing Logbooks for Market Squid (Amend Subsection (e) of Section 149 and Appendix A of Subdivision 1 of Division 1, Title 14 CCR)**

The Department of Fish and Wildlife (Department) requests that the Fish and Game Commission (Commission) authorize publication of notice of its intent to consider amendment of existing regulations for the commercial market squid fishery (Section 149). The Initial Statement of Reasons (ISOR) includes proposed modifications to the regulatory text to reflect new logbook versions.

Proposed changes to the Market Squid Logbook provisions include:

- Update Market Squid Vessel Logbook (DFG 149a) and Market Squid Light/Brail Boat Logbook (DFG 149b) to bring these forms into compliance with the standards set by the Department's Forms Management Coordinator.
- Improve instructions that explain how the logs are to be filled out.
- Improve the quality of data that are received by the Department.
- Refer to the revised forms entitled with an updated version number "Market Squid Vessel Logbook – DFW 149a (Rev. 05/01/15)", and "Market Squid Light/Brail Boat Logbook – DFW 149b (Rev. 05/01/15)."

Additionally, other non-substantive changes are proposed to the regulations of Section 149 in order to improve clarity and organization. All amendments proposed in this rulemaking would be consistent with the Market Squid Fishery Management Plan, and fall within its scope.

At the April 8, 2015 Fish and Game Commission meeting, the Department presented a potential regulatory package which included the above changes as well as proposed changes to lighting requirements in Subsection (f), (g), and (h) of Section 149, Title 14 CCR. These proposed lighting changes have been removed from this package to allow for further scoping of current practices. Further scoping has been deemed necessary to more fully evaluate the proposed lighting modifications.

If you have any questions or need additional information, please contact Dr. Craig Shuman, Regional Manager in the Department's Marine Region, by telephone at (805) 568-1246. The public notice for this rulemaking should identify Environmental Scientist, Laura Ryley as the Department's point of contact. She can be reached at (831) 649-7142 or by email at Laura.Ryley@wildlife.ca.gov.

Attachments

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STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Section 149 and
Appendix A of Subdivision 1 of Division 1
Title 14, California Code of Regulations
Re: Commercial Fishing Logbooks
for Market Squid

I. Date of Initial Statement of Reasons: June 26, 2015

II. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: June 10, 2015
Location: Mammoth Lakes

(b) Discussion/Adoption Hearing: Date: October 7, 2015
Location: Los Angeles

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

Market squid (*Doryteuthis (Loligo) opalescens*) is managed under the California Market Squid Fishery Management Plan (MSFMP). Section 149, Title 14, California Code of Regulations (CCR), governs commercial market squid fishing activities off California, pursuant to the MSFMP. Market squid are important to California's commercial and recreational fisheries and as forage species for fish, marine mammals, and birds. Market squid is one of the most valuable California commercial fisheries. Although the market squid population fluctuates due to environmental conditions, commercial harvest typically occurs south of San Francisco with the majority taken from southern California waters.

The proposed regulations will revise and standardize logbooks that are currently in use.

Subsection 149(e), Title 14, CCR, currently requires that any operator of a commercial market squid vessel, or person who possesses a valid Market Squid Vessel Permit, Market Squid Brail Permit, or Market Squid Light Boat Permit shall complete and submit an accurate record of his/her fishing, lighting, or brailing activities on a form provided by the California Department of Fish and Wildlife (Department), as appropriate to the type of fishing activity. The forms provided by the Department, referred to as

logs or logbooks, are used to assist the Department in management of the commercial market squid fishery.

Subsection 149(e) currently specifies the fishing, lighting, or brailing activity records for commercial market squid as “Market Squid Vessel Logbook – DFG 149a (9/01), or Market Squid Light/Brail Boat Logbook – DFG 149b (10/05)”.

Proposed Regulation Changes

Amend Subsection (e) of Section 149, Title 14, CCR to update and reorganize existing logbook forms.
Market Squid Vessel Logbook (DFG 149a) and Market Squid Light/Brail Boat Logbook (DFG 149b) are proposed to be updated to bring these forms into compliance with the standards set by the Department’s Forms Management Coordinator, improve instructions that explain how the logs are to be filled out, and improve the quality of data that are received by the Department.

Updated instructions that explain when and how logs are to be filled out as well as when the logs are to be turned in to the Department will accompany the forms. The instructions for completing the market squid logs tell the licensee or operator how to fill out the forms to ensure that accurate and consistent data are recorded (CCR Title 14 sections 149 and 190, Fish and Game Code sections 8010 and 8026). The forms and instructions will be inserted as part of CCR, Title 14, Appendix A and the old forms (DFG 149a (9/01) and DFG 149b (10/05)) will be removed.

Proposed changes to subsection 149(e) refer to the revised forms entitled with an updated version number “Market Squid Vessel Logbook – DFW 149a (Rev. 05/01/15)”, and “Market Squid Light/Brail Boat Logbook – DFW 149b (Rev. 05/01/15).”

Market Squid Vessel Logbook - DFW 149a (Rev. 05/01/15) differs from DFG 149a (9/01) as follows:

1. Form instructions were updated to include additional instructions for new fields and to improve the clarity of existing instructions.
2. Form contents have been updated to replace all instances of “Department of Fish and Game” with “Department of Fish and Wildlife” so that the form reflects the Department’s name change, effective January 1, 2013, pursuant to Assembly Bill 2402.
3. Form header section has been updated to be in compliance with the standards set by the Department’s Forms Management Coordinator.
4. The “Market Squid Vessel Summary Page” has been retitled “Market Squid Vessel Profile”. The page name was changed to be consistent with the name used in the Market Squid Light/Brail Boat

Logbook. The title of profile better fits the type of information collected on this page.

5. The log page and profile page now ask for “Vessel ID Number” as opposed to “Vessel F&G Number”. This represents a change in language used and not in data collected. The field name was changed to be consistent with language used in landing receipt books and other logbooks.
6. The log page and profile page now ask for “Captain’s Name” and “Captain’s ID Number” as opposed to “Fisherman’s Name” and “Fisherman’s ID Number”. This represents a change in language used and not in data collected. The change was made to make the text consistent with the light/brail boat log.
7. Addition of a field to collect the “Vessel Permit Number”. This new field was added to the profile and log page. The purpose of this field is to better facilitate the link between logbook records and the unique vessel permit numbers in the Department’s Automated License Data System (ALDS).
8. The profile page now asks for “Light Generated” under the heading of “Attracting Lights Used” as opposed to “Wattage”. The captain is instructed to circle the appropriate unit type (“W” for watts or “L” for lumens). The purpose of this change is to offer more options for data collection as technology evolves.
9. An extra line was added under “Attracting Lights Used” to allow for more space for collection of light information.
10. Units of measure have been added next to “Boat Length” and “Hold Capacity” in the “Vessel Characteristics” section of the profile page to ensure clarity and consistency in measurements recorded.
11. Units of measure have been added next to all net characteristics on the profile page to ensure clarity and consistency in measurements recorded.
12. “Auxiliary Engine” was changed to “Generator” in the “Horsepower” section of the profile page since it is more important to know the vessel’s generator size. Changes in generator horsepower over time may indicate changes in efficiency of attractant lights and other fishing gear which has implications for management of the fishery.
13. The “Please mark whether this is:” section of the profile page has been removed as this information is no longer necessary since the intent is to have this page fully completed with each logbook.
14. An “Other” section was added to the section of the profile page that collects details of types of “Electronics Used”. The Department is interested in capturing details of new types of electronics that may be used since new electronics may increase the efficiency of the vessel and associated increases in rate of catch may impact the market squid population.
15. A section to collect “Brail scoop capacity” was added to the profile page in the event that a vessel permitted boat uses brail instead of seine gear. Brail scoop capacity information is important because it can be used to estimate catch per unit effort.

16. The “Crew members” section of the profile page now asks for “ID Number” as opposed to “License No.” This does not represent a change in the data collected but a change in the language used to collect the data. The change makes this field consistent with other language used on the form.
17. The “List Captain first” text was removed from the “Crew members” section of the profile page. Listing of captain in this section of the profile page is not necessary since the captain’s information is already recorded in the “Captain’s Name” and “Captain’s ID Number” fields.
18. A field named “Alpha Code” was added to the log page. This field has been automatically populated with values between “A” and “H”. The presence of this field is related to the accuracy of data entry into the squid logbook database and does not represent extra work for the captain filling out the log.
19. The “Set Number” field description on the log page was updated to include additional text that instructs captains to record “B” in the “Set Number” field if they are recording fishing activity using brail gear. Vessels with valid squid vessel permits have the ability to use both seine gear as well as brail. The previous version of the logbook did not include a way of indicating when this specific gear type was used. This made it difficult for Department staff to determine whether a vessel fishing with seine gear had filled out the logbook incorrectly or if the vessel had been using brail gear. The updated field description will help ensure that the Department can identify records of brail fishing recorded in the Market Squid Vessel Logbook. Identifying when vessels use brail gear as opposed to seine gear may indicate changing trends in the fishery which may have implications for management.
20. The “Set Time” field on the log page was updated so that the captain has the option to record set time in 12 hour format and when using this format, the captain will need to circle “AM” or “PM”. These changes were made to eliminate uncertainty related to whether or not set time had been recorded using 24 hour format.
21. Additional text was added to describe the requirements of the “Set Position” field. The text includes a description of the level of accuracy to which location data should be reported (i.e., decimal minutes to hundredths place) along with examples. This descriptive text was added in an attempt to increase the accuracy and consistency of location information collected.
22. The “Name of light boat used, if any” field name was edited to “Name of light boat set upon”. This does not represent a change to the data collected but ensures clarity and consistency of information recorded.
23. The field that asks whether or not the vessel used its own lights has been removed from the log since the profile page indicates whether the vessel is equipped with its own lights and the Market Squid Light/Brail Boat Logbook dataset will keep track of whether or not a seine vessel was paired with a light boat.

24. The “Catch Estimate” field was updated to specify that “short tons” should be recorded. The purpose of this addition is ensure clarity and consistency in measurements recorded.
25. The word “Primary” was removed from the “Bycatch” field since the intent of this field is to collect all bycatch information. The Department’s knowledge of bycatch is necessary to ensure that the squid fleet is limiting take of sensitive species. It also benefits the fishing industry by ensuring that the bycatch allowance needs of the commercial squid fleet are taken into account when making management decisions that limit take of a bycatch species.
26. The “Comments” section description was modified to include a new example of the type of information that should be recorded and to delete examples of information that are not as necessary for management. Specifically a request for additional bycatch information was added since the Department’s knowledge of bycatch is important in that it helps ensure that the squid fleet is limiting take of sensitive species. It also benefits the fishing industry by ensuring that the bycatch allowance needs of the commercial squid fleet are taken into account when making management decisions that limit take of a bycatch species.
27. “Certified under penalty of perjury as true and correct” was added under the area for captain’s signature. This step was taken to make the logbooks consistent with landing receipt books.
28. The citation of Fish and Game Code Section 7923 was removed from item (C) of the “Notice to Individuals” section of this form because Section 7923 does not apply to squid logbooks.
29. Text related to a Memorandum of Understanding (MOU) with the National Oceanic and Atmospheric Administration was removed from the “Notice to Individuals” section of this form since this MOU is no longer in place.
30. Other minor clerical changes were made to the “Notice to Individuals” section.

<u>Market Squid Light/Brail Boat Logbook - DFW 149b (Rev. 05/01/15) differs from DFG 149b (10/05) as follows:</u>

1. Form instructions were updated to include additional instructions for new fields and to improve the clarity of existing instructions.
2. Form contents have been updated to replace all instances of “Department of Fish and Game” with “Department of Fish and Wildlife” so that the form reflects the Department’s name change, effective January 1, 2013, pursuant to Assembly Bill 2402.
3. Form header sections have been updated so that they are in compliance with the standards set by the Department’s Forms Management Coordinator.
4. The log page and profile page now ask for “Vessel ID Number” as opposed to “Vessel F&G Number” (log page) and “Vessel FG Number” (profile page). This represents a change in language used and not in data collected. The field name was changed to be

consistent with language used in landing receipt books and other logbooks.

5. The profile page now asks for “Captain’s Name” and “Captain’s ID Number” as opposed to “Fisherman’s Name” and “Fisherman’s L#”. This represents a change in language used and not in data collected. The change was made to make the text consistent with the log page.
6. Addition of a field to collect the “Light or Brail Boat Permit Number”. This new field was added to the profile and log pages. The purpose of this field is to better facilitate the link between logbook records and the unique light or brail permit numbers in the Department’s Automated License Data System (ALDS).
7. The profile page now asks for “Light Generated” under the heading of “Attracting Lights Used” as opposed to “Wattage”. The captain is instructed to circle the appropriate unit type (“W” for watts or “L” for lumens). The purpose of this change is to offer more options for data collection as technology evolves.
8. An extra line was added under “Attracting Lights Used” to allow for more space for collection of light information.
9. Units of measure have been added next to “Boat Length” and “Hold Capacity” in the “Vessel Characteristics” section of the profile page to ensure clarity and consistency in measurements recorded.
10. The “Mark whether this is:” section of the profile page has been removed as this information is no longer necessary.
11. An “Other” section was added to the section of the profile page that collects details of other types of “Electronics Used”. The Department is interested in capturing details of new types of electronics that may be used since new electronics may increase the efficiency of the vessel and associated increases in rate of catch may impact the market squid population.
12. The “Net Type” section was removed from the profile page since purse seine, drum seine, and lampara are not legal gear types for the fishing activity recorded in this logbook.
13. The “Scoop Capacity” field was expanded to specifically ask for circumference in feet, depth in feet, and average pounds per scoop. The previous version of the logbook asked for “dimensions” which did not adequately describe what information was needed. Scoop capacity information is important because it can be used to estimate catch per unit effort.
14. A section was added to the profile page to collect information about the vessel’s fish hold’s water system. Information about vessel fish hold water systems is collected as part of the Market Squid Vessel Logbook. This field was added to the Market Squid Light/Brail Boat Logbook to ensure consistency in information collected by the two logbooks. The Department is interested in gathering information related to the attributes of a fishing vessel so that changes can be tracked over time. The ability to monitor changes in fishing gear is

important since changes that increase fishing efficiency may have an impact on rate of catch.

15. The crew member section of the profile page now asks for “ID Number” as opposed to “License #”. This does not represent a change in the data collected but a change in the language used to collect the data. The change makes this field consistent with other language used on the form.
16. The “List Captain first” text was removed from the “Crew members” section of the profile page. Listing of captain in this section of the profile page is not necessary since the captain’s information is already recorded in the “Captain’s Name” and “Captain’s ID Number” fields.
17. The “General Location” field was replaced with a “Location” field that asks for the Department block code if operating as a light boat, or latitude and longitude in degrees decimal minutes to the hundredths place if operating as a brail boat. The purpose of this change is to collect higher resolution spatial data for brail fishing activities and to collect more standardized and easy to interpret location data for light boat activity.
18. Addition of a field to collect start and end time of brail fishing activity (brailing). The purpose is to collect additional data related to time of day and duration of fishing which is needed for management of the fishery.
19. Addition of a field to collect bottom depth during brail fishing activity. Changes in trend of fishing depth can indicate changes in behavior of market squid which would influence how the fishery is managed.
20. Addition of fields to collect bycatch species and weight associated with brail fishing activity. The Department’s knowledge of bycatch is important in that it helps ensure that the squid fleet is limiting take of sensitive species. It also benefits the fishing industry by ensuring that the bycatch allowance needs of the commercial squid fleet are taken into account when making management decisions that limit take of a bycatch species.
21. The “Comments” section description was expanded to include additional examples of the type of information that should be recorded. Specifically a request for additional bycatch information was added since the Department’s knowledge of bycatch is important in that it helps ensure that the squid fleet is limiting take of sensitive species. It also benefits the fishing industry by ensuring that the bycatch allowance needs of the commercial squid fleet are taken into account when making management decisions that limit take of a bycatch species.
22. “Certified under penalty of perjury as true and correct” was added under the area for captain’s signature. This step was taken to make the logbooks consistent with the landing receipt books.
23. The citation of Fish and Game Code Section 7923 was removed from item (C) of the “Notice to Individuals” section of this form because Section 7923 does not apply to squid logbooks.

24. Text related to a Memorandum of Understanding (MOU) with the National Oceanic and Atmospheric Administration was removed from the "Notice to Individuals" section of this form since this MOU is no longer in place.
25. Other minor clerical changes were made to the "Notice to Individuals" section.

Amend Section 149, Title 14, CCR, to make non-substantive changes for clarity and ease of use.
Additional changes are also proposed to improve the organization, clarity and consistency of the regulations.

Benefits of the Regulations

The updated logbooks and regulation will assist the Department's environmental staff in managing the market squid fishery. Consistent with Fish and Game Code Section 7055, the proposed regulations benefit persons engaged in the market squid fishery because the changes are aligned with sustainable fishing activities as described in the MSFMP. The proposed regulatory action will benefit fishermen, processors, the State's economy, and the environment by maintaining a healthy and sustainable market squid fishery.

(b) Authority and Reference Sections from Fish and Game Code for Regulation:

Authority: Sections 7078, 7701, 7708, 8026, 8425 and 8429.5, Fish and Game Code.

Reference: Sections 7701, 7708, 8026, 8425, 8429.5, 8429.7, 12159 and 12160, Fish and Game Code.

(c) Specific Technology or Equipment Required by Regulatory Change:

None

(d) Identification of Reports or Documents Supporting Regulation Change:

CDFG 2005. Final Market Squid Fishery Management Plan (dated March 25, 2005). California Department of Fish and Game, Sacramento, California. http://www.dfg.ca.gov/marine/msfmp/

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

No public meetings are being held prior to the notice publication. The 45-day comment period provides adequate time for review of the proposed amendments.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

No alternatives were identified by or brought to the attention of Commission staff that would have the same desired regulatory effect.

(b) No Change Alternative:

The no change alternative was considered and rejected because the current forms do not meet the Department's Forms Management standards and collect data that is less efficient in assisting the Department in management of the commercial market squid fishery.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the proposed regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made.

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. The proposed regulations continue to allow all actively permitted market squid vessels (vessel, light, and brail) to participate in a directed fishery for market squid during the commercial market squid season until the season closes. The proposed regulations update the logbooks currently in use by commercial squid fishermen. These changes are not expected to increase the time spent to complete the log.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new businesses or the elimination of existing businesses, or the expansion of businesses in California.

The Commission does not anticipate any benefits to the health and welfare of California residents or worker safety.

The Commission anticipates benefits to the environment in the sustainable management of a healthy squid resource.

(c) Cost Impacts on a Representative Private Person or Business:

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

(e) Nondiscretionary Costs/Savings to Local Agencies:

None.

(f) Programs Mandated on Local Agencies or School Districts:

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs:

None.

VII. Economic Impact Assessment

The proposed regulations will revise logbooks that are currently in use.

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State

The proposed action will not affect the creation or elimination of jobs in the State because the proposed amendments update the logbooks currently in use by commercial squid fishermen. These changes are not expected to increase the time spent to complete the log and will not change the volume of economic activity. This change is administrative in nature and will not require new gear, impose compliance costs or impact the volume of fishing activity.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State

The proposed regulations are not anticipated to result in the elimination of existing businesses in the State, nor spur the creation of new businesses because the proposed amendments update the logbooks currently in use by commercial squid fishermen. These changes are not expected to increase the time spent to complete the log and will not change the volume of economic activity. This change is administrative in nature and will not require new gear, impose compliance costs or impact the volume of fishing activity.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State

The proposed regulations are not anticipated to result in the expansion of businesses currently doing business in the State because the proposed amendments update the logbooks currently in use by commercial squid fishermen. These changes are not expected to increase the time spend to complete the log and will not change the volume of economic activity. This change is administrative in nature and will not require new gear, impose compliance costs or impact the volume of fishing activity.

(d) Benefits of the Regulation to the Health and Welfare of California Residents

The Commission anticipates generalized benefits to the health and welfare of California residents through the improved protection of the market squid population and the fish and wildlife resources that depend upon them.

The proposed regulations are intended to add administrative clarity that should help to fulfill the goals set forth in the MSFMP, adopted by the Commission in August 2004. Adherence to the MSFMP is anticipated to benefit persons engaged in the market squid fishery by supporting the long-term viability of market squid fisheries and associated business activities.

(e) Benefits of the Regulation to Worker Safety

The proposed regulations represent a neutral effect, offering neither benefits nor detriment to worker safety in the State.

(f) Benefits of the Regulation to the State's Environment

The proposed regulations are consistent with the goals set forth in the MSFMP; “to manage the market squid resource to ensure long-term resource conservation and sustainability, and to develop a framework for management that [is] responsive to environmental and socioeconomic changes.”

The Commission anticipates benefits to the environment in the sustainable management of the squid resource and benefits to species dependent upon a healthy squid resource. The proposed changes to the regulations support the Marine Life Management Act (MLMA) [MLMA, Statutes 1999 Chapter 483], which declares that “conservation and management programs prevent overfishing, rebuild depressed stocks, ensure conservation, facilitate long term protection and, where feasible, restore marine fishery habitats" [FGC, subsection 7055(b); see also Section 7056(b), (c)].

The Legislature declared that to prevent excessive fishing effort in the market squid fishery and to develop a plan for the sustainable harvest of market squid, it was necessary to adopt and implement a fishery management plan (FMP) for the California market squid fishery that sustains both the squid population and the marine life that depends on it. The proposed regulation change clarifies the implementation of the market squid FMP.

Informative Digest/Policy Statement Overview

The Market Squid Fishery Management Plan (MSFMP) was developed under the provisions set forth by the Marine Life Management Act (MLMA) and sets goals and objectives to govern the conservation, sustainable use, and restoration of the market squid resource. Section 149, Title 14, California Code of Regulations (CCR), governs commercial market squid fishing activities off California, pursuant to the MSFMP.

Current regulations prescribe the use of logbooks for the collection of fishing data. Market Squid Vessel Logbook (DFG 149a) and Market Squid Light/Brail Boat Logbook (DFG 149b) are proposed to be updated to bring these forms into compliance with the standards set by the Department of Fish and Wildlife's (Department) Forms Management Coordinator, improve instructions that explain how the logs are to be filled out, and improve the quality of data that are received by the Department. Updated instructions will accompany the forms. The forms and instructions will be inserted as part of CCR, Title 14, Appendix A, and the old forms (DFG 149a (9/01) and DFG 149b (10/05)) will be deleted.

The follow changes are proposed:

- Subsection 149(e) is proposed to be amended to refer to the revised forms entitled with an updated version number "Market Squid Vessel Logbook – DFW 149a (Rev. 05/01/15)", and "Market Squid Light/Brail Boat Logbook – DFW 149b (Rev. 05/01/15)."

- Additional changes are also proposed to improve the organization, clarity and consistency of the regulations.

Benefits of the Regulations

The proposed regulatory action will benefit fishermen, processors, the State's economy, and the environment by maintaining a healthy and sustainable market squid fishery.

Consistency with State Regulations

The proposed regulations are neither inconsistent nor incompatible with existing State regulations. Commission staff has searched the California Code of Regulations and statutes and has found no other State regulations related to the take of market squid and no other State agency with authority to promulgate commercial squid fishing regulations.

Regulatory Language

Amend Section 149, Title 14, CCR, as follows:

§ 149. Commercial Taking of Market Squid.
Requirements of this Section apply both to vessels taking squid and to vessels attracting squid with lights for the purpose of commercial take. Incidental commercial take of market squid that meets the criteria specified in subsection (*l*) below, and commercial take of market squid for live bait as described in subsection (m) below are not subject to the requirements of this Section, unless expressly specified.
(a) Permit Required. No person shall take, land, or attract squid by light for commercial purposes, except as provided in subsections (*l*) and (m) below, unless the owner of that vessel has a valid market squid permit issued pursuant to Section 149.1 or Section 149.3 of these regulations for use on that vessel that has not been suspended or revoked.
(b) Seasonal Catch Limitation.
(1) For the period from April 1 through March 31 of the following year, a total of not more than 118,000 short tons of market squid may be taken statewide for commercial purposes.
(2) Closure Process
(A) The department shall estimate, from the current trend in landings, when the Seasonal Catch Limit will be reached, and will publicly announce the effective date of closure of the directed commercial fishery on VHF/channel 16 between the hours of 10:00 p.m. and 12:00 a.m. (midnight).
(B) It shall be the responsibility of all operators of permitted market squid vessels to monitor VHF/channel 16 to determine when the Seasonal Catch Limit is expected to be reached and the fishery closed. Any announcement issued or made by the department on VHF/channel 16 shall constitute official notice.
(c) Time Closures. North of a westerly extension of the United States - Republic of Mexico boundary line:
(1) Fishing Days: Market squid may not be taken for commercial purposes between 1200 hours (noon) on Friday and 1200 hours (noon) on Sunday of each week.
(2) Seasonal Closure: When the Seasonal Catch Limit defined in subsection (b) has been reached and the commercial fishery is closed, squid may be taken for commercial purposes only incidentally to the take of other target species and subject to the limitations defined in subsection 149*(l)* or for live bait as defined in subsection 149(m) through March 31.
(d) Closed Areas for Seabirds. Market squid may not be taken for commercial purposes utilizing attracting lights in all waters of the Gulf of the Farallones National Marine Sanctuary. Boundaries of the Sanctuary are defined as those in effect on August 27, 2004, pursuant to Title 15, Code of Federal Regulations (CFR), Part 922, Subpart H. This regulation also applies to vessels pursuing squid for live bait purposes.
(e) Records. Pursuant to Section 190 of these regulations, any operator of a commercial market squid vessel, or person who possesses a valid Market Squid Vessel Permit, Market Squid Brail Permit, or Market Squid Light Boat Permit shall complete and submit an accurate record of his/her squid fishing, lighting, or brailing activities on a form

(Market Squid Vessel Logbook - ~~DFG 149a (9/01~~)DFW 149a (Rev. 05/01/15), or Market Squid Light/Brail Boat Logbook - ~~DFG 149b (10/05)~~DFW 149b (Rev. 05/01/15), which are located in Appendix A of Subdivision 1 of Division 1 of Title 14, CCR) provided by the department, as appropriate to the type of fishing activity. Logbook records shall be transmitted to the department on or before the 10th day of each month following the month that fishing activity occurred.

(f) Use of Lights to Aggregate Squid. It is unlawful to attract squid by light except as authorized under permits described in subsection 149.1(b) or Section 149.3 of these regulations. This regulation does not apply to seine skiffs of a permitted vessel, or to vessels pursuing squid for live bait purposes only.

(g) Maximum Wattage. Each vessel fishing for squid or lighting for squid shall utilize a total of no more than 30,000 watts of lights to attract squid at any time.

(h) Light Shields. Each vessel fishing for squid or lighting for squid will reduce the light scatter of its fishing operations by shielding the entire filament of each light used to attract squid and orienting the illumination directly downward, or providing for the illumination to be completely below the surface of the water. The lower edges of the shields shall be parallel to the deck of the vessel.

(i) Forfeiture. Squid landed or possessed in violation of this Section or any other provision of the Fish and Game Code or ~~Commission~~these regulations shall be forfeited to the department. The squid shall be sold or disposed of in a manner to be determined by the department. The proceeds from all sales shall be paid into the Fish and Game Preservation Fund.

(j) Citations for violations of this Section may be issued to the vessel operator, crewmembers, and/or the holder of a market squid permit issued pursuant to Section 149.1 or 149.3~~, Title 14, CCR~~ of these regulations.

(k) Exemption from Tidal Invertebrate Permit. Operators and crewmembers of a commercial market squid vessel or light boat operating under the provisions of a commercial market squid permit are not required to possess a Tidal Invertebrate Permit, but are subject to the provisions of Section 123 of these regulations.

(*l*) Incidental Take Allowance. Pursuant to this subsection, market squid may be taken for commercial purposes incidentally when engaged in fishing activities for other target species. Other requirements of this Section do not apply to incidental take. Incidentally-taken squid shall meet all of the following criteria:

(1) The volume of squid landed or possessed on a vessel shall not exceed 2 tons per trip.

(2) Market squid taken incidentally to other fisheries shall not exceed 10 percent of the total volume by weight of all fish landed or possessed on a vessel.

(m) Exemption for Live Bait. Squid taken for live bait purposes shall only be possessed for use as live bait or sold as live bait. Other requirements of this Section do not apply to take of live squid for bait, unless expressly specified.

Note: Authority cited: Sections 7078, 7701, 7708, ~~7923,~~ 8026, 8425 and 8429.5, Fish and Game Code. Reference: Sections 7701, 7708, ~~7923,~~ 8026, 8425, 8429.5, 8429.7, 12159 and 12160, Fish and Game Code.

MARKET SQUID VESSEL LOGBOOK

BOOK #####

PROPOSED LOGBOOK

MAILING ADDRESS:
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
20 LOWER RAGSDALE DR, SUITE 100
MONTEREY, CA 93940

DFW 149a (Rev. 05/01/15) Previously DFG 149a

MARKET SQUID VESSEL LOGBOOK
IMPORTANT INSTRUCTIONS

1. Insert the folded flap between sets of pages to prevent duplicating on other pages.
2. Please return completed (white) copies to the California Department of Fish and Wildlife (CDFW) **on or before** the **10th** of the following month (20 Lower Ragsdale Dr., Suite 100, Monterey, CA 93940 or 4665 Lampson Ave, Suite C, Los Alamitos, CA 90720).
3. Additional logbooks and envelopes may be obtained through the CDFW office in Monterey or Los Alamitos at the above addresses.
4. The duplicate copy (yellow) is the property of the permittee and should remain in the logbook as a permanent fishing record.
5. Use a blue or black ballpoint pen. DO NOT use pencil or felt marker.
6. Write legibly.

PROFILE PAGE

1. Complete the Market Squid Vessel Profile page after reading the instructions.
2. Complete the Market Squid Vessel Profile page when starting each new logbook. Submit the pink copy with your next submission of log pages.

Definitions:

- **Vessel ID Number**: The registration number assigned by CDFW to a particular vessel.
- **Captain's ID Number**: The number assigned by CDFW to the fisherman. This number consists of an "L" and five numbers.
- **Attracting lights used**: Type (sodium, incandescent, metal halide, light emitting diode (LED), other), amount of light generated by individual bulb (circle W for watts or L for lumens), and number of total bulbs for each type. Please indicate if light is submerged by adding S to type (i.e. S-LED).
- **Vessel characteristics**: Boat length (feet), gross tonnage, and hold capacity (short tons) of the vessel.
- **Net type**: If applicable, circle appropriate response.
- **Net dimensions**: Depth and length of net in fathoms.
- **Mesh size**: Mesh size in inches.
- **Scoop capacity**: Enter the circumference (distance around the circle) and depth of bag in feet.
- **Electronics used**: Circle appropriate response.
- **Horsepower**: Both the main and auxiliary (generator) engines.
- **Fish hold's water system**: Circle appropriate response. RSW is the acronym for refrigerated sea water and CSW is the acronym for chilled sea water.
- **Crew members**: List names and CDFW license ID numbers.

LOG PAGE

1. Use **<u>one line per set</u>**.
2. Fishing activity must be recorded before fishing activity is complete.

Definitions:

- **Date**: Date of fishing activity.
- **Set Number**: Numerical order of sets. Set number should restart at the start of each new trip. If fishing with brail gear, record "B" instead of a set number and record one line per brail fishing location.
- **Set Time**: Time of start and end of set. Hours and minutes may be entered in 24-hour or 12-hour format. If using 12-hour format, circle AM or PM.
- **Set Position**: Latitude and longitude of set. Use degree decimal minutes to the hundredths place. Example: 34º 05.15' N, 120º 04.85' W.
- **SST**: Sea surface temperature in Fahrenheit.
- **Bottom Depth**: Depth at set location in fathoms.
- **Light Boat**: Enter name of light boat set upon. If no light boat was used, then leave blank.
- **Catch Estimate**: Enter your catch estimate for that set in short tons.
- **Market Order Limit**: Enter Y (Yes) or N (No) if your fishing was limited by your market.
- **Bycatch**: Species common name and amount in pounds.
- **Landing Receipt**: Enter landing receipt or receipt numbers if delivering to multiple receivers.
- **Comments**: List by date any anecdotal information such as equipment problems, interference from other boats, weather-related problems, day set activity, additional bycatch information, etc.

PROPOSED LOGBOOK

State of California - Department of Fish and Wildlife
MARKET SQUID VESSEL LOGBOOK
DFW 149a (Rev. 05/01/15) Previously DFG 149a

LOG #

Market Squid Vessel Profile

Vessel Name_____

Vessel ID Number_____

Vessel Permit Number_____

Captain's Name_____

Captain's ID Number_____

Attracting Lights Used:

Type:	Light Generated:	Number:
_____	_____ W L (circle one)	_____
_____	_____ W L (circle one)	_____
_____	_____ W L (circle one)	_____

Vessel Characteristics:

Boat Length (ft) _____

Hold Capacity (st)_____

Gross Tonnage _____

Purse Seine / Drum Seine / Lampara / Brail Net (circle one)

Net Depth (fm) _____

Net Length (fm) _____

Mesh Size (in) _____

Electronics Used:

Side-scan Sonar: Yes No (circle one)

Fathometer: Yes No (circle one)

Other: _____

Horsepower:

Main Engine _____

Generator _____

If Brail, scoop capacity (ft): Circumference _____Depth _____Average lbs per scoop _____

Fish Hold's Water System (circle one): **Brine** **RSW** **Dry** **CSW (live)** **Other** (please specify) _____

Crew members:

Name	ID Number	Name	ID Number

Captain's Signature_____Date_____

Certified under penalty of perjury as true and correct

PROPOSED LOGBOOK

State of California - Department of Fish and Wildlife

MARKET SQUID VESSEL LOGBOOK

DFW 149a (Rev. 05/01/15) Previously DFG 149a

LOG #

Vessel Name:_____ Vessel Permit Number:_____ Captain's Name:_____

Vessel ID Number:_____ Captain's ID Number:_____

Alpha Code	Date	Set Number (or B if using brail gear)	Set Time: hr:min AM or PM (circle one)		Set Position: **decimal minutes to hundredths place**				SST (°F)	Bottom Depth (fm)	Name of light boat set upon	Catch Estimate (Short Tons)	Was catch limited by market order? Y/N	Bycatch:		Landing Receipt(s)
					Latitude		Longitude									
			Start	End	Degree Ex. 34°	Minutes Ex. 05.15'	Degree Ex. 120°	Minutes Ex. 04.85'						Species	Amount (lbs)	
A			AM / PM	AM / PM												
B			AM / PM	AM / PM												
C			AM / PM	AM / PM												
D			AM / PM	AM / PM												
E			AM / PM	AM / PM												
F			AM / PM	AM / PM												
G			AM / PM	AM / PM												
H			AM / PM	AM / PM												

PROPOSED LOGBOOK

Comments: List by date any anecdotal information such as additional bycatch information, equipment problems, interference from other boats, weather-related problems, day set activity, etc.

Captain's Signature_____ Date_____

Certified under penalty of perjury as true and correct

STATE OF CALIFORNIA
NATURAL RESOURCES AGENCY

MARKET SQUID VESSEL LOGBOOK

NOTICE TO INDIVIDUALS

(A) This information is being requested by:

THE STATE OF CALIFORNIA,
Department of Fish and Wildlife, Marine Region

(B) The official responsible for maintaining this information is:

Regional Manager, Marine Region
4665 Lampson Ave, Suite C, Los Alamitos, CA 90720

(C) Any person who owns and/or operates any vessel used to take squid shall complete and submit an accurate record of his/her squid fishing activities on forms provided by the Department. The authority to collect this information is granted pursuant to Fish and Game Code section 8026, and California Code of Regulations, Title 14, sections 149 and 190.

(D) It is mandatory to furnish all the information requested by the Department.

(E) The law authorizes penalties and permit/license suspension or revocation for failing to provide this information as stated in Fish and Game Code sections 8026 and 12002.

(F) Fisheries research and management are the principal purposes for which this information is to be used.

(G) Information from this form may be given “To a person, or to another agency where the transfer is necessary for the transferee agency to perform its constitutional or statutory duties, and the use is compatible with a purpose for which the information was collected” and “To a government entity when required by state or federal law” (Civil Code Section 1798.24, subdivisions (e) and (f)).

(H) An individual has a right of access to records containing their personal information maintained by the Department. Records may be accessed by contacting the official listed in Section (B) above.

PROPOSED LOGBOOK

MARKET SQUID LIGHT/BRAIL BOAT LOGBOOK

BOOK #~~#####~~

PROPOSED LOGBOOK

MAILING ADDRESS:
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
20 LOWER RAGSDALE DR, SUITE 100
MONTEREY, CA 93940

MARKET SQUID LIGHT/BRAIL BOAT LOGBOOK
IMPORTANT INSTRUCTIONS

1. Insert the folded flap between sets of pages to prevent duplicating on other pages.
2. Please return completed (white) copies to the California Department of Fish and Wildlife (CDFW) **on or before** the **10th** of the following month (20 Lower Ragsdale Dr., Suite 100, Monterey, CA 93940 or 4665 Lampson Ave, Suite C, Los Alamitos, CA 90720).
3. Additional logbooks and envelopes may be obtained through the CDFW office in Monterey or Los Alamitos at the above addresses.
4. The duplicate copy (yellow) is the property of the permittee and should remain in the logbook as a permanent fishing record.
5. Use a blue or black ballpoint pen. DO NOT use pencil or felt marker.
6. Write legibly.

PROFILE PAGE

1. Complete the Market Squid Light/Brail Profile page after reading the instructions.
2. Complete the Market Squid Light/Brail Profile page when starting each new logbook. Submit the pink copy with your next submission of log pages.

Definitions:

- **Vessel ID Number**: The registration number assigned by CDFW to a particular vessel.
- **Captain's ID Number**: The number assigned by CDFW to the fisherman. This number consists of an "L" and five numbers.
- **Attracting lights used**: Type (sodium, incandescent, metal halide, light emitting diode (LED), other), amount of light generated by individual bulb (circle W for watts or L for lumens), and number of total bulbs for each type. Please indicate if light is for use underwater (submerged) by adding S to type (i.e. S-metal halide).
- **Vessel characteristics**: Boat length (feet), gross tonnage, and hold capacity (short tons) of the vessel.
- **Electronics used**: Circle appropriate response.
- **Horsepower**: Both the main and auxiliary (generator) engines.
- **Scoop capacity**: Enter the circumference (distance around the circle) and depth of bag in feet. Also include an estimate of average pounds of squid caught per scoop.
- **Fish hold's water system**: Circle appropriate response. RSW is the acronym for refrigerated sea water and CSW is the acronym for chilled sea water.
- **Crew members**: List names and CDFW license ID numbers.

LOG PAGE

1. Use only one line per day, unless you provided light for more than two seiners or fished in more than one location. Several fishing days, but no more than seven, may be recorded per page.
2. Fishing activity must be recorded before fishing activity is complete.

Definitions:

- **Date**: Date of fishing activity.
- **Location**: If fishing with brail gear enter latitude and longitude using degree decimal minutes to the hundredths place. Example: 34°05.15' N, 120° 04.85' W. If operating as a light boat, enter the CDFW block code that encompasses your location of fishing. If the CDFW block code is unknown enter your latitude and longitude. If you move to a new block record details on a new line.
- **Hours spent searching**: Hours spent metering for squid. This time also includes time spent holding locations for day sets. Only enter one value per date or one value for each location if you operated in multiple locations on the same date. Do not enter a unique value for each seiner if you provided light for more than one seiner.
- **Hours spent lighting**: Hours spent attempting to attract squid with lights. Only enter one value per date or one value for each location if you operated in multiple locations on the same date. Do not enter a unique value for each seiner if you provided light for more than one seiner.
- **Name of seiner that set squid**: Provide the name of the seiner that set squid on each line. If you lit for more than two seiners, use the next line.
- **Estimated total tons taken by each seiner:** Enter total short tons taken by each seiner. Use one line per seiner.
- **Estimated tonnage, if any, remaining after fishing is completed:** Was there any squid left? Enter amount in short tons. Only enter one value per date or one value for each location if you operate in multiple locations on the same date. Do not enter a unique value for each seiner if you provided light for more than one seiner.
- **Were birds present?** Y/N: Enter appropriate response.
- **Were mammals present?** Y/N: Enter appropriate response.
- **Time of brail fishing activity (brailing):** Time of start and end of brail fishing activity. Hours and minutes may be entered in 24-hour or 12-hour format. If using 12-hour format, circle AM or PM.
- **Bottom Depth:** Depth in fathoms to be completed if fishing by brail.
- **Amount sold to market:** Record amount of your vessel's brail caught squid sold to market in short tons.
- **Landing receipt #**: Enter landing receipt of your vessel's brail caught squid or receipt numbers if delivering to multiple receivers.
- **Amount for live bait:** Enter your vessel's live bait catch amount in pounds.
- **Bycatch:** Species common name and amount in pounds of your vessel's brail caught bycatch.
- **Comments:** List by date any anecdotal information such as additional bycatch information, equipment problems, interference from other boats, weather-related problems, day set activity, etc.

PROPOSED LOGBOOK

State of California - Department of Fish and Wildlife
MARKET SQUID LIGHT/BRAIL BOAT LOGBOOK
DFW 149b (Rev. 05/01/15) Previously DFG 149b

LOG#

Market Squid Light/Brail Boat Profile

Vessel Name:_____

Vessel ID Number:_____

Light or Brail Boat Permit Number:_____

Captain's Name:_____

Captain's ID Number:_____

Attracting Lights Used:

Type:	Light Generated:	Number:
_____	_____ W L (circle one)	_____
_____	_____ W L (circle one)	_____
_____	_____ W L (circle one)	_____

Vessel Characteristics:

Boat Length (ft):_____

Gross Tonnage:_____

Hold capacity (st):_____

Electronics:

Side-scan Sonar: Yes No (circle one)

Fathometer: Yes No (circle one)

Other: _____

Horsepower:

Main Engine _____

Generator _____

Scoop capacity: Circumference (ft)_____Depth (ft)_____Average lbs per scoop _____

Fish Hold's Water System (circle one): **Brine** **RSW** **Dry** **CSW (live)** **Other** (please specify) _____

Crew Members:

Name	ID Number

Captain's Signature:_____Date_____

Certified under penalty of perjury as true and correct

PROPOSED LOGBOOK

State of California - Department of Fish and Wildlife
MARKET SQUID LIGHT/BRAIL BOAT LOGBOOK
DFW 149b (Rev. 05/01/15) Previously DFG 149b

LOG #

Vessel Name:_____ Light or Brail Boat Permit Number:_____ Captain's Name:_____

Vessel ID Number:_____ Captain's ID Number:_____

Date	Location: For brail activity enter latitude and longitude using decimal minutes to hundredths place. Ex. 34° 05.15', 120° 04.85' For light boat activity enter block code or lat/long if block code unknown.	Hours spent:		Name of Seiner that set squid	Total tons (st) of squid caught by seiner	Estimated tonnage (st) remaining after fishing is completed	Were birds present? Y/N	Were mammals present? Y/N	**Your vessel's estimated BRAIL catch** Leave blank if you are a light boat permittee or a brail boat permittee operating solely as a light boat							
		Searching (includes day sets)	Lighting						Time of brailing: hr:min AM or PM (circle one) Start	End	Bottom depth (fm)	Amount sold to Market (short tons)	Landing receipt #	Amount for Live Bait (lbs)	Brail Bycatch: Species	Amount (lbs)
									AM/PM	AM/PM						
									AM/PM	AM/PM						
									AM/PM	AM/PM						
									AM/PM	AM/PM						
									AM/PM	AM/PM						
									AM/PM	AM/PM						
									AM/PM	AM/PM						

Comments: List by date any anecdotal information such as additional bycatch information, equipment problems, interference from other boats, weather-related problems, day set activity, etc.

Captain's Signature:_____ Date:_____

Certified under penalty of perjury as true and correct

PROPOSED LOGBOOK

STATE OF CALIFORNIA
NATURAL RESOURCES AGENCY

MARKET SQUID LIGHT/BRAIL BOAT LOGBOOK

NOTICE TO INDIVIDUALS

(A) This information is being requested by:

THE STATE OF CALIFORNIA,
Department of Fish and Wildlife, Marine Region

(B) The official responsible for maintaining this information is:

Regional Manager, Marine Region
4665 Lampson Ave, Suite C, Los Alamitos, CA 90720

(C) Any person who owns and/or operates any vessel used to take squid shall complete and submit an accurate record of his/her squid fishing activities on forms provided by the Department. The authority to collect this information is granted pursuant to Fish and Game Code section 8026, and California Code of Regulations, Title 14, sections 149 and 190.

(D) It is mandatory to furnish all the information requested by the Department.

(E) The law authorizes penalties and permit/license suspension or revocation for failing to provide this information as stated in Fish and Game Code sections 8026 and 12002.

(F) Fisheries research and management are the principal purposes for which this information is to be used.

(G) Information from this form may be given “To a person, or to another agency where the transfer is necessary for the transferee agency to perform its constitutional or statutory duties, and the use is compatible with a purpose for which the information was collected” and “To a government entity when required by state or federal law” (Civil Code Section 1798.24, subdivisions (e) and (f)).

(H) An individual has a right of access to records containing their personal information maintained by the Department. Records may be accessed by contacting the official listed in Section (B) above.

PROPOSED LOGBOOK

From:	Martz, Craig@Wildlife
To:	Mastrup, Sonke@FGC
Cc:	Yparraguirre, Dan@Wildlife; Shuman, Craig@Wildlife; Yaremko, Marci@Wildlife; Ryley, Laura@Wildlife; Miller-Henson, Melissa@FGC; Fonbuena, Sherrie@FGC; Snellstrom, Jon@FGC; Tiemann, Sheri@FGC; Woodson, Caren@FGC; Ashcraft, Susan@FGC; Alminas, Ona@Wildlife; Barrow, Scott@Wildlife; Duncan, Margaret@Wildlife; Randall, Mike@Wildlife
Subject:	149 Market squid logbooks pre-adoption statement
Date:	Monday, September 14, 2015 3:54:50 PM

Sonke,

To date the Department of Fish and Wildlife (Department) has received no comments in opposition to the proposed amendments to regulations for the commercial fishing logbooks for market squid, Section 149 and Appendix A of Subdivision 1 of Division 1, Title 14, California Code of Regulations (CCR). Additionally, no changes have been made to the proposed regulatory text in the Initial Statement of Reasons (ISOR).

As presented in the ISOR, the Department is providing the following recommendations to the Fish and Game Commission for consideration at the October meeting:

- Amend subsection 149(e) to refer to the revised forms entitled with an updated version number "Market Squid Vessel Logbook – DFW 149a (Rev. 05/01/15)", and "Market Squid Light/Brail Boat Logbook – DFW 149b (Rev. 05/01/15)"
- Amend section 149 to make additional, non-substantive changes to improve the organization, clarity and consistency of the regulations.

The proposed changes will not result in a direct or indirect physical change in the environment pursuant to Public Resources Code Section 21065 and Section 15378, Title 14, CCR and are therefore not subject to the California Environmental Quality Act.

Please contact Craig Shuman or Marci Yaremko if you have questions regarding this pre-adoption statement.

Thanks,

Craig

Craig P. Martz
Regulations Unit Manager
Department of Fish and Wildlife
1416 Ninth Street, Room 1208
Sacramento, CA 95814

(916) 653-4674 Office
(916) 838-5739 Mobile

Every Californian should conserve water. Find out how at:

Proposed Changes to Market Squid Logbook Regulations

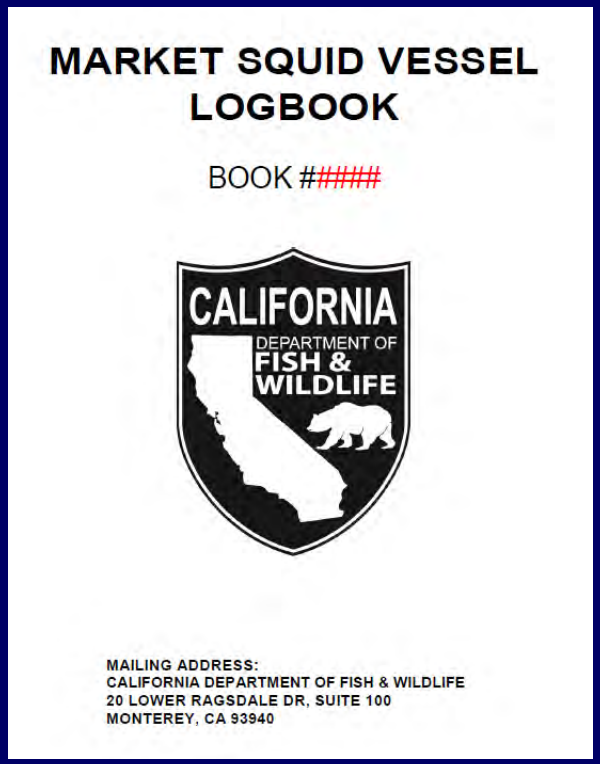
Fish and Game Commission Meeting

October 7, 2015

Marine Region

Department of Fish and Wildlife

Proposed Changes to Market Squid Logbook Regulations (§149)


MARKET SQUID VESSEL LOGBOOK

BOOK #####

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

MAILING ADDRESS:
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
20 LOWER RAGSDALE DR, SUITE 100
MONTEREY, CA 93940

Logbooks

- Modify forms and instructions (Appendix A, T14, CCR)
- Update logbook version numbers (§ 149(e), T14, CCR)

Purpose of Logbook Update

- Improve quality of logbook data
- Improve format & instructions
- Forms management requirements

Conclusion

Department Recommendation

Adopt:

- Proposed changes to market squid logbooks (Appendix A, T14, CCR)
- Updated logbook version numbers (§ 149(e), T14, CCR)

Thank you

Laura Ryley

Laura.Ryley@wildlife.ca.gov

(831) 649-7142

State of California
Department of Fish and Wildlife

M e m o r a n d u m

Date: June 30, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Agenda Item for the August 4-5, 2015, Fish and Game Commission Meeting Regarding the Proposed Amendment of Section 180.6, Title 14, California Code of Regulations, Re: Hagfish Barrel Traps**

The Department of Fish and Wildlife (Department) is recommending a regulation permitting the use of 40-gallon barrel traps in the commercial hagfish fishery, limiting the number of barrel traps to 25 per vessel, and limiting the number of vertical lines attached to the barrel traps to two per vessel. This proposal is intended to maintain the sustainability of California's hagfish fishery, reduce interaction with other bottom fishing gear, and reduce the potential for entanglement of vertical trap lines with marine mammals.

If you have any questions regarding this item, please contact Dr. Craig Shuman, Regional Manager at (805) 568-1246. The public notice for this rulemaking should identify Environmental Scientist, Travis Tanaka as the Department's point of contact. Mr. Tanaka can be reached at (831) 649-2881 or Travis.Tanaka@wildlife.ca.gov.

Attachments

ec: Dan Yparraguirre, Deputy Director
Wildlife and Fisheries Division
Dan.Yparraguirre@wildlife.ca.gov

Craig Shuman, D. Env., Regional Manager
Marine Region
Craig.Shuman@wildlife.ca.gov

Craig Martz, Manager
Regulations Unit
Wildlife and Fisheries Division
Craig.Martz@wildlife.ca.gov

Travis Tanaka, Environmental Scientist
Marine Region
Travis.Tanaka@wildlife.ca.gov

Mike Randall, Analyst
Regulations Unit
Wildlife and Fisheries Division
Mike.Randall@wildlife.ca.gov

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Section 180.6
Title 14, California Code of Regulations
Re: Allow hagfish take in 40-gallon barrel traps

I. Date of Initial Statement of Reasons: June 16, 2015

II. Dates and Locations of Scheduled Hearings:

(a)	Notice Hearing:	Date:	August 4, 2015
		Location:	Fortuna, California
(b)	Discussion/Adoption Hearing:	Date:	October 7, 2015
		Location:	Los Angeles, California

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

Pacific hagfish, *Eptatretus stoutii*, (hagfish) may be taken by Korean style traps or 5-gallon bucket traps (Sections 9000.5 and 9001.6, Fish and Game Code). Both trap types are fished by attaching dozens of traps with groundline snaps to a long, single ground line which is anchored at each end. The string is marked by a single buoy. Total string length may be over 1,000 feet, depending upon the number of traps on the string. Limited data possessed by the Department of Fish and Wildlife (Department) shows that the number of strings fished per vessel is between two and seven. Hagfish traps are fished over deep, muddy habitat. These areas are often targeted by the Dungeness crab fishery, commercial salmon troll fishery, and if in federal waters, the bottom trawl fishery. Multiuse of the same habitat and depth range has led to reported negative gear interactions such as tangled or lost fishing gear, including entire strings of hagfish traps.

Whale entanglement in trap/pot fisheries is also a concern. The number of vertical lines used in this fishery is minimal when compared to other fisheries; however there is still risk of encounter.

Present Regulations

Statutes specify the maximum number of traps allowed by type (whether bucket or Korean), require a general trap permit, prohibit possession of other species or gear while targeting or having in possession hagfish, and prohibit the use of popups on buoy lines for bucket and Korean traps (Sections 9000.5, 9001, 9001.6, Fish and Game Code). Fish and Game Code Section 9001.6(a) is only a limitation on the use of Korean and bucket traps, not a limitation on the type of gear that may be used to take hagfish. Effective January 1, 2015, all escapement holes, except for the entrance funnel, must have a minimum diameter of 9/16 inch (CCR Title 14, Section 180.6) to minimize take of immature hagfish.

Proposed Regulation

The proposed regulation will allow hagfish to be taken in 40-gallon barrel traps, and will allow up to 25 barrel traps on each vessel. To reduce whale entanglements, the proposal requires that all traps on each vessel be fished on no more than two ground lines. The proposed regulation specifies that if using barrel traps, no other trap type may be used or possessed aboard the vessel, and popups are not authorized for use with buoy lines attached to barrel traps.

This proposal is intended to offer hagfish fishermen a gear alternative that, when used in high traffic areas, would lessen the possibility of negative interactions with other fishing gears (lost traps) and cetaceans (entanglement). The 40-gallon barrel is a standard readily available to the fishing industry and currently in use in other jurisdictions such as Oregon. The larger capacity of this trap type could also reduce stress or mortality of captured hagfish due to crowding.

Two fishermen possessed Commission approved Experimental Gear Permits to fish barrel traps for the take of hagfish. The Department conducted an evaluation of this gear, including onboard observation, logbooks, and laboratory dissection of sampled fish. Based on the results from the Department's evaluation, the Department recommends authorizing the use of 40-gallon barrel traps in the commercial hagfish fishery.

40-gallon barrel trap in orientation as if sitting on the sea floor.

Rationale

Hagfish have been exported to South Korea in live condition as human food since 2007, with interest by California fishermen remaining steady. In 2014, hagfish were landed regularly at five port complexes with 31 participating vessels statewide. The hagfish fishery along the west coast of North America now occurs coast-wide from Washington to Mexico. The use of barrel traps for the take of hagfish is legal in the states of Oregon and Washington. Washington allows for the use of up to 100 barrel traps and Oregon allows up to 200 traps with no limitation on trap type or size. The Department does not have information concerning the method(s) used in the Mexican hagfish fishery.

The California hagfish fishery occurs in areas utilized by other commercial and recreational fisheries. Both experimental gear permittees reported that the gear from these fisheries and the hagfish trap fishery, when fished in close proximity, created conflicts. This is apparent in areas where there could be thousands of crab traps (both commercial and recreational) on the same fishing grounds. Due to ocean swells and current, crab traps and hagfish trap strings will move, sometimes resulting in tangles or lost gear. Since hagfish ground lines are very long, many over 1000 ft., they are sometimes snagged by salmon trollers or trawlers fishing the bottom. In addition, the smaller capacity of current legal gear (5-gallon bucket traps) may negatively impact quality and survivorship due to crowding.

Depending up the number of bucket traps fished, fishermen have been reported to use up to six ground lines to fish 200 bucket traps. These

vertical lines combined with vertical lines from other fisheries, present an entanglement hazard to migrating cetaceans.

It is the policy of the State to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the State for the benefit of all the citizens of the State and to promote the development of local California fisheries. The objectives of this policy include, but are not limited to, rebuilding depressed stocks and achieving the sustainable use of the State's fishery resources. Where a species is the object of commercial fishing, a sufficient resource shall be maintained to support reasonable take, taking into consideration the necessity of regulating fishing practice such that a sustainable population exists to withstand fishing pressure.

Allowing hagfish take in 40-gallon barrel traps, when fished on a central ground line, could reduce or eliminate negative interactions with cetaceans and other fishing gear, and lost fishing gear, particularly in areas utilized by multiple fisheries. The larger capacity of this trap type could also reduce stress or mortality of captured hagfish due to crowding.

(b) Authority and Reference Sections from Fish and Game Code for Regulation:

Authority cited: Sections 8403 and 9022, Fish and Game Code.
Reference: Sections 8403, 9022, 9001.6 and 9001.7, Fish and Game Code.

(c) Specific Technology or Equipment Required by Regulatory Change:

None.

(d) Identification of Reports or Documents Supporting Regulation Change:

Final Report: Evaluation of the Use of 40-gallon Barrel Traps for the Take of Hagfish

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

No public meetings were held prior to the notice publication; however, 14 fishery participants were called asking for their opinion regarding the proposal. A message explaining the reason for the call and requesting a prompt return call was left with unresponsive participants. Five hagfish fishermen responded, each providing feedback in favor of the proposal.

The 45-day comment period provides adequate time for review of the proposed amendments.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

No alternatives were identified by or brought to the attention of Commission staff that would have the same desired regulatory effect.

(b) No Change Alternative:

If the proposed regulation is not implemented, fishermen will continue to use current, legal, 5-gallon bucket or Korean traps on long ground lines. Possible gear interactions or gear loss would continue in areas that are used by multiple fisheries. The risk for marine mammal entanglements (due to the number of vertical lines used) would not be reduced.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the proposed regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse

economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. The proposed regulation will offer commercial hagfish fishermen an option to use fishing gear that could reduce financial loss related to lost fishing gear.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new business, the elimination of existing businesses or the expansion of businesses in California or any benefits to the health and welfare of California residents or worker safety.

The Commission does anticipate possible benefits to the State's environment due to the anticipated reduction in lost fishing gear.

(c) Cost Impacts on a Representative Private Person or Business:

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The use of the proposed trap is voluntary. However, should a fisherman choose to change gear types, the approximate cost of one barrel trap is $60, ground line (including buoy and two weights) cost could range from $75 to $150. Based on the current minimum wage, the cost for labor to construct new traps is estimated to be $27.00 per trap.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

(e) Nondiscretionary Costs/Savings to Local Agencies:

None.

(f) Programs Mandated on Local Agencies or School Districts:

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs:

None.

VII. Economic Impact Assessment:

The proposed regulation will allow a new type of hagfish fishing gear in California. Presently the only traps in use are Korean traps (up to 500) and 5-gallon bucket traps (up to 200). In other states the 40-gallon barrel trap is in common use, but not permitted in California waters. This proposal is intended to provide the fishery with an alternative gear type of 40-gallon barrel traps. Use of barrel traps is up to the individual fisherman. No new fees are associated with this regulation. A limit of 25 barrel traps is proposed; therefore the volume of possible catch is the same as with 200 5-gallon bucket traps.

In 2014, hagfish were landed regularly at five port complexes with 31 participating vessels statewide. This fishery is entirely for export. In 2013, the hagfish fishery's ex-vessel value was over $1,015,000.

(a) Effects of the regulation on the creation or elimination of jobs within the State:

The regulation is unlikely to affect the creation or elimination of jobs which are influenced more by the foreign market demand for hagfish.

(b) Effects of the regulation on the creation of new businesses or the elimination of existing businesses within the State:

The regulation is unlikely to affect the creation or elimination of hagfish businesses which are influenced more by the foreign market demand for hagfish. Fisherman will have a choice in the type of gear to use which they may perceive to benefit their business.

(c) Effects of the regulation on the expansion of businesses currently doing business within the State

The regulation is unlikely to affect the expansion of hagfish businesses which are influenced more by the foreign market demand for hagfish.

(d) Benefits of the regulation to the health and welfare of California residents
This fishery is entirely for foreign export; therefore the regulation is unlikely to affect the health and welfare of California residents.

(e) Benefits of the regulation to worker safety

The regulation does not affect worker conditions or safety.

(f) Benefits of the regulation to the State's environment

It is the policy of the State to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the State for the benefit of all the citizens of the State and to promote the development of local California fisheries. The objectives of this policy include, but are not limited to, rebuilding depressed stocks and achieving the sustainable use of the State's fishery resources. Where a species is the object of commercial fishing, a sufficient resource shall be maintained to support reasonable take, taking into consideration the necessity of regulating fishing practice such that a sustainable population exists to withstand fishing pressure.

This proposal is intended to offer hagfish fishermen a gear alternative that could lessen the possibility of negative interactions with other fishing gear or cetaceans. Allowing hagfish take in 40-gallon barrel traps, could reduce or eliminate these interactions and lost fishing gear, particularly in areas utilized by multiple fisheries. The larger capacity of this trap could reduce stress or mortality of captured hagfish due to crowding.

Informative Digest/Policy Statement Overview

Current statutes provide that Pacific hagfish, *Eptatretus stoutii*, (hagfish) may be taken by Korean style traps or 5-gallon bucket traps; specify the maximum number of traps allowed by trap type; require a general trap permit; prohibit possession of other species or gear while targeting or having in possession hagfish, and prohibit the use of popups on buoy lines for bucket and Korean traps (Sections 9000.5, 9001, 9001.6, Fish and Game Code). Fish and Game Code subsection 9001.6(a) is only a limitation on the use of Korean and bucket traps, not a limitation on the type of gear that may be used to take hagfish. Current regulation provides that all escapement holes, except for the entrance funnel, must have a minimum diameter of 9/16 inch [Section 180.6, Title 14, California Code of Regulations (CCR)] to minimize take of immature hagfish.

Proposed Regulation

The proposed changes to Section 180.6, Title 14, CCR, will allow hagfish to be taken in 40-gallon barrel traps and will allow the use of up to two ground lines and up to 25 barrel traps per vessel. The proposed regulation specifies that if using barrel traps, no other trap type may be used or possessed aboard the vessel, and popups are not authorized for use with buoy lines attached to barrel traps.

BENEFITS OF THE PROPOSED REGULATIONS

The proposed regulations could reduce or eliminate negative interactions with cetaceans and other fishing gear, and lost fishing gear, particularly in areas utilized by multiple fisheries. The larger capacity of this trap type could reduce stress or mortality of captured hagfish due to crowding.

Adoption of sustainable fishing regulations including gear type provides for the maintenance of sufficient fish populations and ensures their continued existence.

EVALUATION OF INCOMPATIBILITY WITH EXISTING REGULATIONS:

Section 20, Article IV, of the State Constitution specifies that the Legislature may delegate to the Fish and Game Commission such powers relating to the protection and propagation of fish and game as the Legislature sees fit. The Legislature has delegated to the Commission the power to regulate the commercial take of finfish using traps (Sections 8403 and 9022, Fish and Game Code). No other State agency has the authority to promulgate commercial fishing regulations. The proposed regulations are compatible with Sections 180, 180.2, 180.4 and 180.5, Title 14, CCR, which address other aspects of commercial take of finfish using traps. The Commission has searched the CCR for any regulations regarding the use of traps for the commercial take of hagfish and has found no such regulation; therefore the Commission has concluded that

the proposed regulations are neither inconsistent nor incompatible with existing State regulations.

REGULATORY TEXT

Section 180.6, Title 14, CCR, is amended to read:

(a) All openings in traps used to take hagfish, excluding the entrance funnel, shall have a minimum diameter of 9/16 inch in any dimension.

(b) Hagfish may be taken in 40-gallon barrel traps, if attached to a central ground line. No more than a total of 25 barrel traps may be possessed aboard a vessel or in the water or combination thereof. Barrels may be attached to a maximum of two ground lines. If using barrel traps, no other trap type may be used or possessed aboard the vessel. Popups shall not be used on buoy lines attached to barrel traps.

Note: Authority cited: Sections 8403 and 9022, Fish and Game Code. Reference: Sections 8403, 9022, 9001.6 and 9001.7, Fish and Game Code.

From:	Martz, Craig@Wildlife
To:	Mastrup, Sonke@FGC
Cc:	Miller-Henson, Melissa@FGC; Fonbuena, Sherrie@FGC; Tiemann, Sheri@FGC; Snellstrom, Jon@FGC; Woodson, Caren@FGC; Ashcraft, Susan@FGC; Shuman, Craig@Wildlife; Tanaka, Travis@Wildlife; Randall, Mike@Wildlife; Alminas, Ona@Wildlife; Barrow, Scott@Wildlife; Duncan, Margaret@Wildlife; Reilly, Paul@Wildlife; Yparraguirre, Dan@Wildlife
Subject:	180.6 Commercial Hagfish Pre-Adoption Statement
Date:	Monday, September 14, 2015 12:28:51 PM

Sonke,

The Department of Fish and Wildlife (Department) has received no comments in opposition to the proposed regulation authorizing 40-gallon barrel traps for the commercial take of hagfish, Section 180.6, Title 14, California Code of Regulations. Additionally, the Department is recommending no changes to the proposed regulatory text, economic impact assessment, or documents supporting the regulatory change.

The Department recommends that the Fish and Game Commission adopt the regulations as originally proposed. Per our recent discussions, this email is being sent in lieu of a formal pre-adoption statement. Please contact
Craig Shuman or Paul Reilly if you have questions regarding this rulemaking.

Thanks,

Craig

Craig P. Martz
Regulations Unit Manager
Department of Fish and Wildlife
1416 Ninth Street, Room 1208
Sacramento, CA 95814

(916) 653-4674 Office
(916) 838-5739 Mobile

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Proposed Hagfish Regulations to Authorize 40-Gallon Barrel Traps

Fish and Game Commission Meeting

October 7, 2015, Los Angeles

Travis H. Tanaka
Marine Region

Presentation Overview

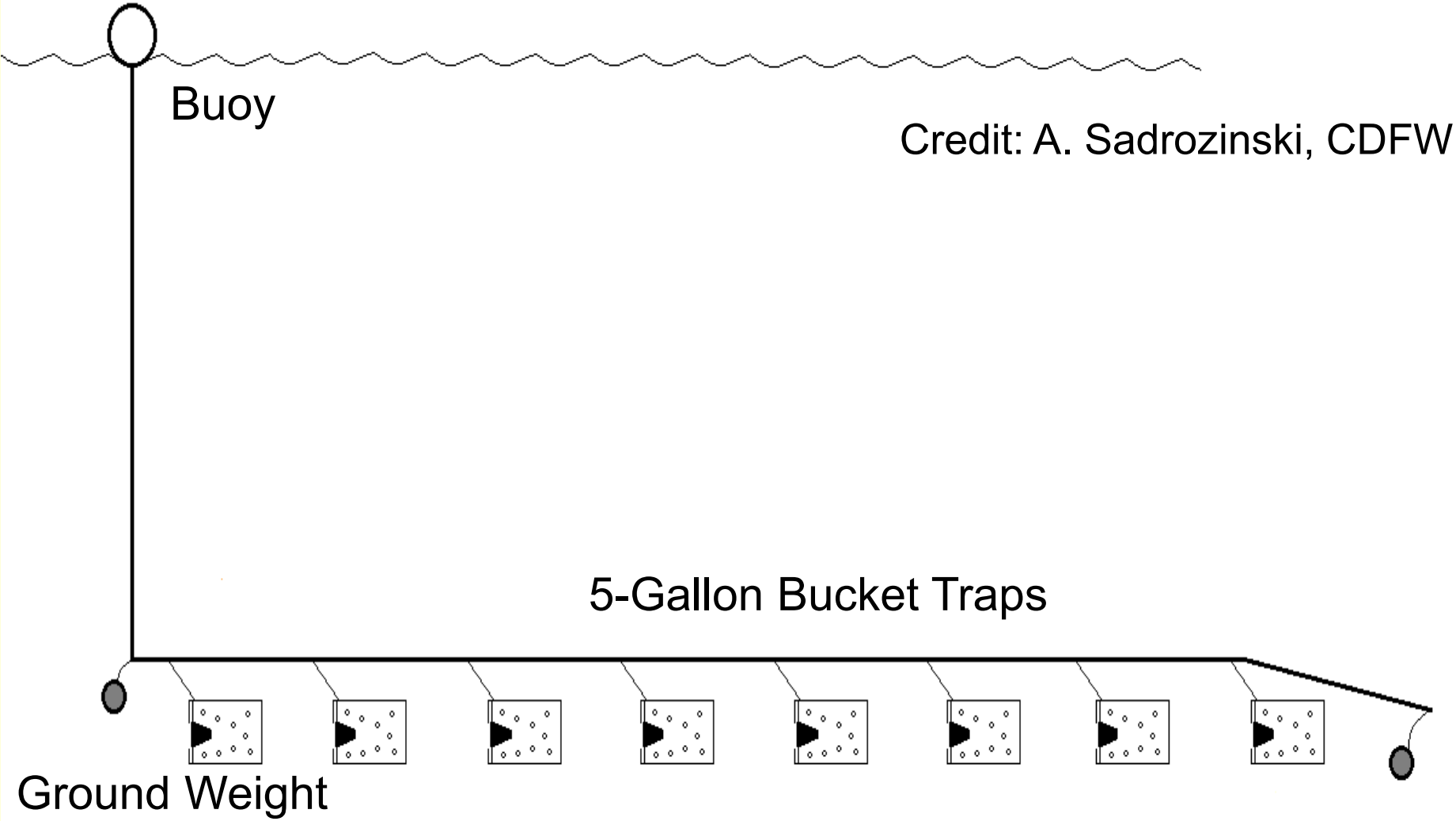
- Hagfish trap regulations
- Experimental gear evaluation
- Proposed regulation and updates

Hagfish Trap Regulations

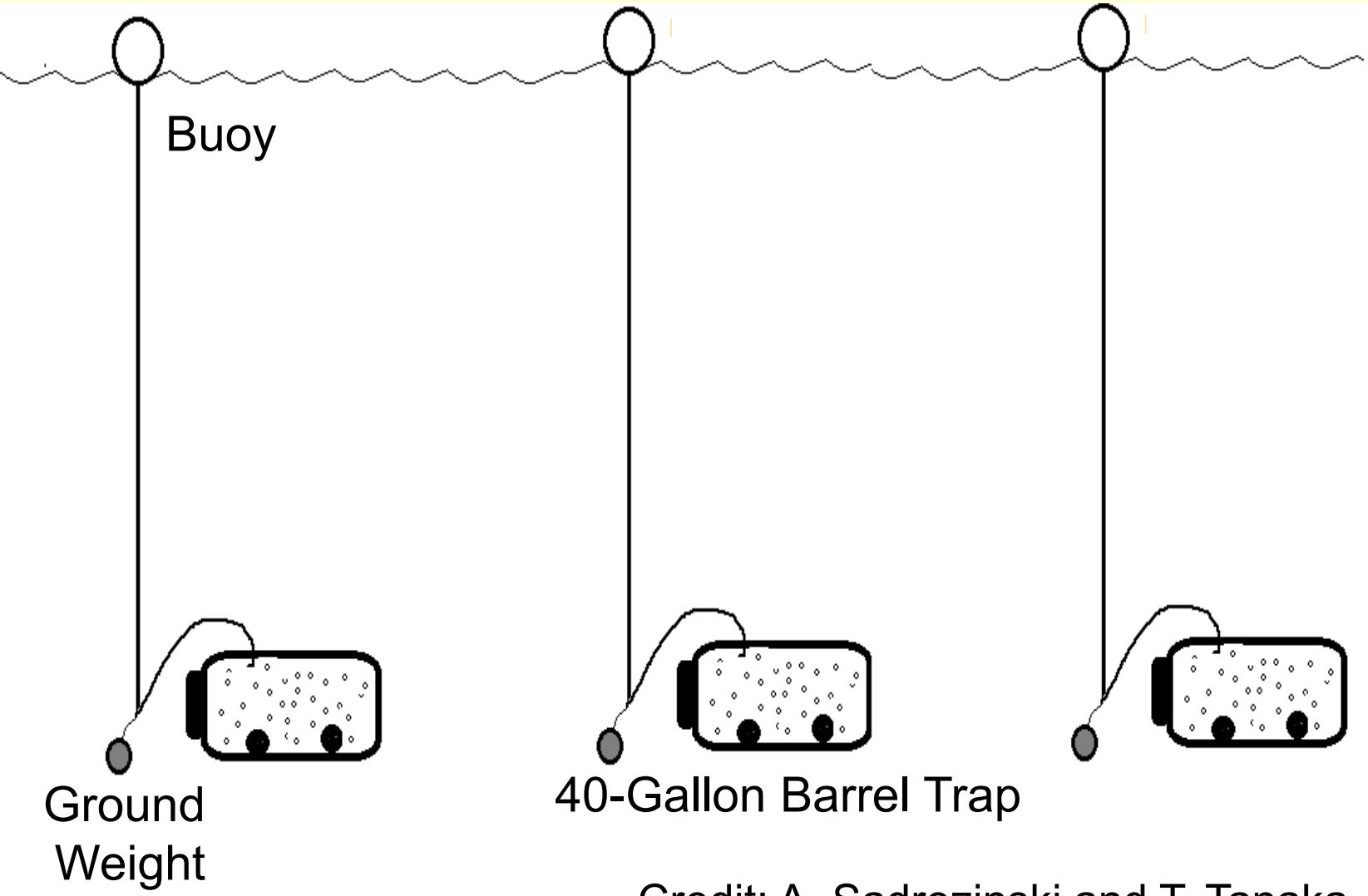
- General trap permit
- 200 bucket traps <u>or</u> 500 Korean-style traps
- Destruct device
- 9/16th inch minimum hole diameter
- No restriction regarding the number of ground lines or traps per line

Credit: T. Tanaka, CDFW

Bucket Trap String



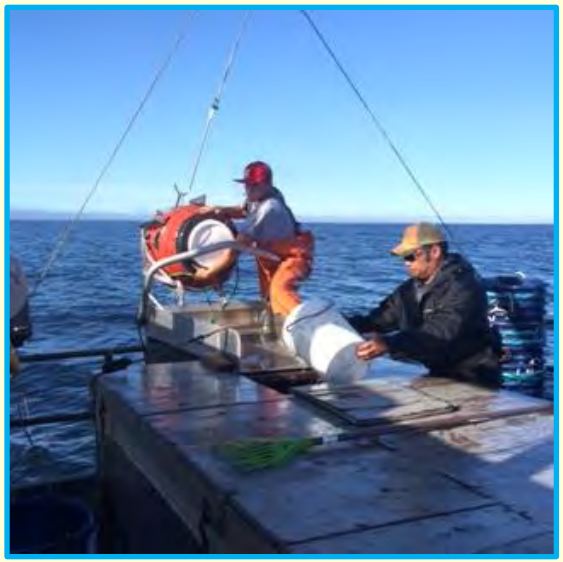
Experimental Gear



Credit: A. Sadrozinski and T. Tanaka, CDFW

Gear Evaluation

- Onboard observation
  - Gear conflicts
  - Incidental catch
  - Dead loss quantity
  - Average CPP retained
- Logbooks
  - Catch per trap
  - Gear interactions and incidental catch
  - Catch quality and dead loss
- Laboratory dissection



Credit: K. Lesyna, CDFW

Evaluation Results

- Onboard observation
  - Avg. CPP equivalent to bucket traps
  - No increase in incidental catch
  - No negative gear interactions
  - High catch quality; no dead loss

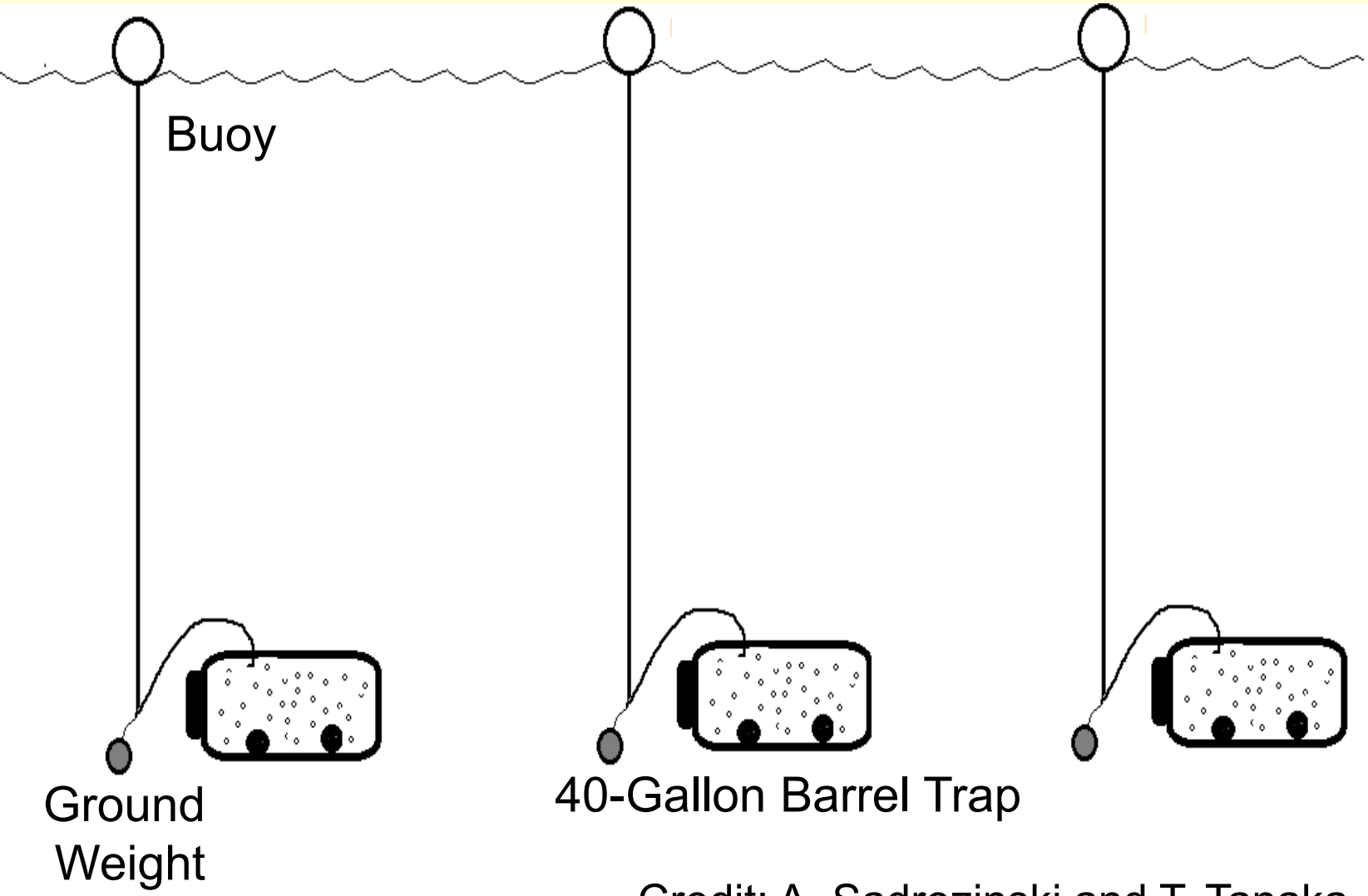
Credit: K. Lesyna, CDFW

Evaluation Results, cont.

- Logbooks
  - Matched onboard observations
  - One trap reported lost
- Laboratory
  - Barrel-caught hagfish were longer and heavier on average

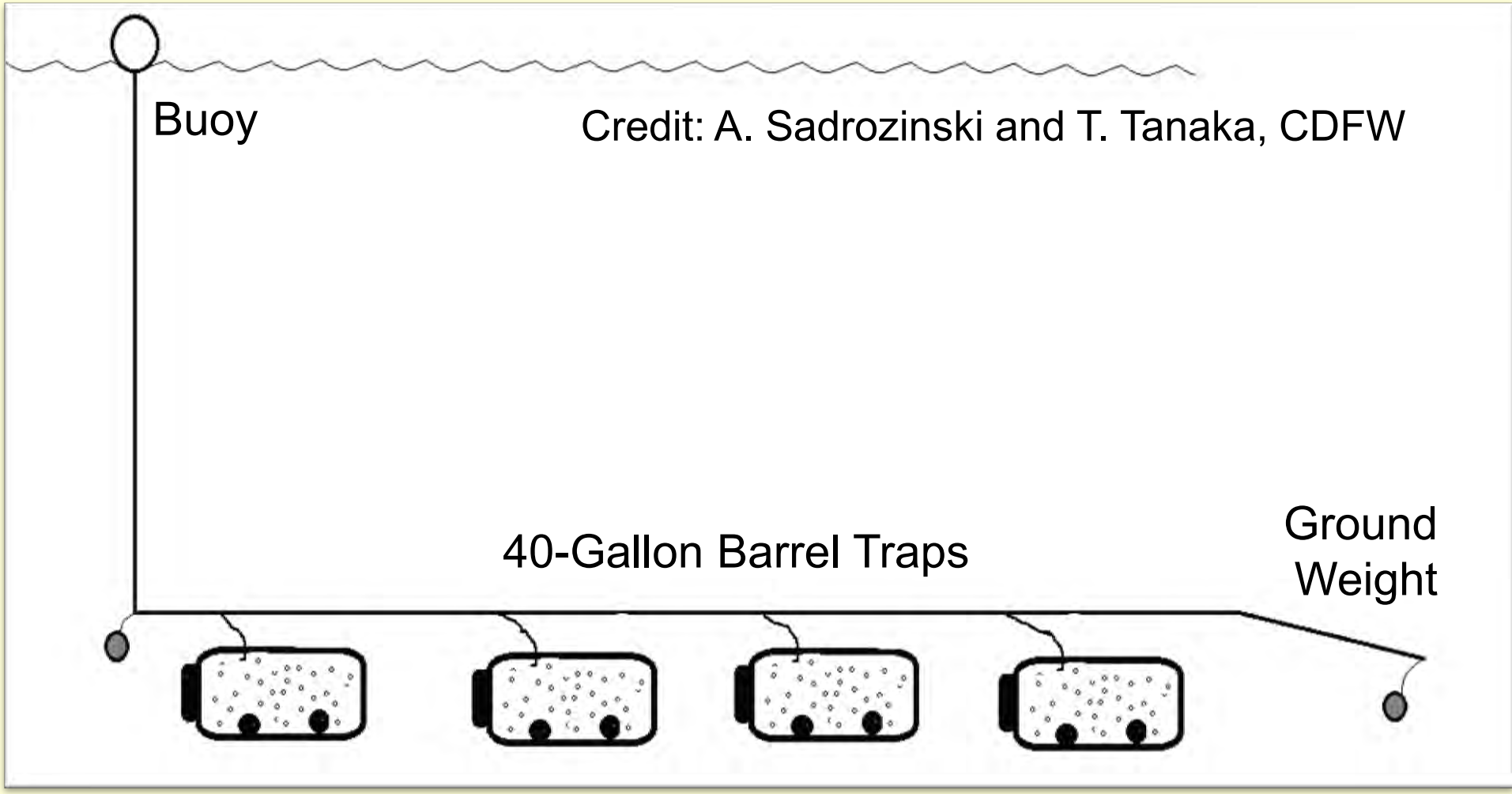
- Results indicate viable gear alternative

Experimental Gear



Credit: A. Sadrozinski and T. Tanaka, CDFW

Proposed Gear



Proposed Gear Regulations

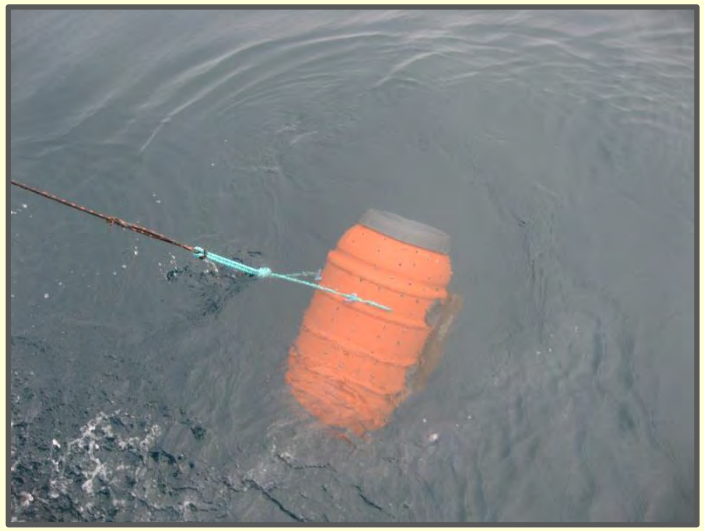
- Authorize 40-gallon barrel traps for hagfish
- No more that 25 barrel traps attached to no more than <u>two</u> ground lines
- Fishermen must choose <u>one</u> gear type
- All other regulations for this fishery still apply
- *No changes to proposed language and no comments received in opposition*

Rulemaking Schedule

Aug 4, 2015: Request for authorization to publish Notice

Oct 7, 2015: Discussion/Adoption

Jan, 2016: Regulation effective



Credit: K. Lesyna, CDFW

Credit: C. Thomsson

Questions ◈ Thank You

Credit: K. Lesyna, CDFW

Travis H. Tanaka
Environmental Scientist
831-649-2881
Travis.Tanaka@wildlife.ca.gov

FGC

From: rachel Thomsson [redacted] >
Sent: Sunday, September 13, 2015 8:02 PM
To: FGC
Cc: Craig
Subject: Comments Submitted Regarding August 4th DFG Meeting: Request to Amend Commercial Hagfish Regulations
Attachments: Scan_Doc0007.pdf

Dear Department of Fish & Game Commission:

This memo is in regards to Agenda Item #6; "Request to Amend Commercial Hagfish Regulations" which was discussed at the recent August 4th meeting in Fortuna, California.

Attached for your consideration are signed letters of support for the adoption of 40 gallon barrel traps from fellow commercial fisherman and/or processors of Hagfish in our local area. Those who have signed the letters agree that using the 40 gallon barrel traps vs. the current methods for catching Hagfish are more beneficial for all parties involved.

Thank you in advance for reviewing these additional letters of support. We respectfully request they be considered as you finalize your decision regarding approval of the 40 gallon traps moving forward.

In the meantime, if a member of your office would kindly confirm receipt of this memo and the attachment we would greatly appreciate it. Should you have any questions about these letters of support, please do not hesitate to contact me.

Sincerely,

Craig Thomsson
Owner/Commercial Fisherman
Dandy Fish Company, Inc.
[redacted]

Sample: one of six received

MEMORANDUM

TO: Department of Fish & Game Commission

RE: Barrel traps for Hagfish Fishery

DATE: August, 2015 Agenda

To Whom It May Concern:

I am a commercial fisherman and/or processor for Hagfish. I support the adoption of the 40 gallon barrel traps for this fishery as outlined in the August, 2015 agenda.

Name (Signature): [signature]

Name (Print): Jason P Spurgeon

Fishing Vessel (if applicable): Ava Mae

Business Name (if applicable:) Jason Spurgeon Enterprises

Phone #: [redacted]

Fish & Game#: [redacted]

Port of Landing: Bodega Bay (Spud Point Marina)

Date Signed: 9-10-15

State of California
Department of Fish and Wildlife

Memorandum

Date: July 8, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Agenda Item for the August 4, 2015 Fish and Game Commission Meeting Request for Notice Authorization Re: Harvest of Herring and Harvesting of Herring Eggs**

The Department of Fish and Wildlife (Department) requests that the Fish and Game Commission (Commission) authorize publication of notice of its intent to amend the regulations for the 2015-16 commercial herring fishery. The attached Initial Statement of Reasons (ISOR) is provided in support of the proposed amendments to Sections 163 and 164, Title 14, California Code of Regulations.

As described in the 2015 Draft Supplemental Environmental Document (DSED) for Pacific herring, the Department is providing the Commission a quota option range for the 2015-16 season from zero to five percent of the 2014-15 San Francisco Bay spawning biomass estimate. The Department recommends a conservative harvest option of 834 tons for the 2015-16 season. This amount is equal to five percent of the 16,674 ton 2014-15 spawning biomass estimate in San Francisco Bay. The Department is also providing the Commission a quota option for the Herring-Eggs-On-Kelp (HEOK) fishery to increase the total quota allocation from 0.79 to 1.0 percent. This fishery is regulated with the gill net fishery and the quota will be allocated as a proportion of the overall quota set each season for San Francisco Bay.

In addition, the Department is recommending that the Commission adjust the permit renewal date for the HEOK fishery to align with the gill net fishery due date. This would move the current due date for HEOK permits from August 1 each year to, "on or before the first Friday of October each year." This change would allow greater efficiency and time savings during the annual permit renewal process by the Department's License and Revenue Branch.

Should you have further questions or need additional information, please contact Dr. Craig Shuman, Regional Manager of the Department's Marine Region at (805) 568-0216. The public notice for this rulemaking should identify Environmental Scientist, Ryan Bartling as the Department's point of contact. Mr. Bartling can be reached at (707) 576-2877 or Ryan.Bartling@wildlife.ca.gov.

Attachments

ISOR Amend Sections 163 and 164

Std. 399 Economic and Fiscal Impact Statement
Revised FG 143 HR (Rev. 4/15) HEOK Landings and Royalty Report
FG 143 HR (Rev. 2/14) with change highlighted
Herring Interested and Affected Parties List

ec: Dan Yparraguirre, Deputy Director
Wildlife and Fisheries Division
Dan.yparraguirre@wildlife.ca.gov

Craig Shuman, D. Env., Regional Manager
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Craig.Shuman@wildlife.ca.gov

Tom Barnes, Environmental Program Manager
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Craig Martz, Manager
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Ryan Bartling, Environmental Scientist
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Mike Randall, Analyst
Regulations Unit
Wildlife and Fisheries Division
Mike.Randall@wildlife.ca.gov

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Sections 163 and 164
Title 14, California Code of Regulations
Re: Harvest of Herring and Harvesting of Herring Eggs

I. Date of Initial Statement of Reasons: June 15, 2015

II. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: August 4, 2015
Location: Fortuna, CA

(b) Discussion and Adoption Hearing: Date: October 7, 2015
Location: Los Angeles, CA

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

The purpose of these regulations is to update the annual quota for the commercial herring fishery taking into account changes to the Pacific herring population (referred to as the "biomass"). The Fish and Game Commission (Commission) and the Department of Fish and Wildlife (Department) are responsible for safeguarding Pacific herring as an important forage species (food source) on which other species depend in marine and estuarine ecosystems. Moreover, the adaptive regulations also help ensure that the fishery is sustainable through the use of precautionary management principles which identify problems and opportunities when setting harvest targets in the commercial fishery. Annual regulation updates are necessary to this fishery as the biomass fluctuates significantly year to year and is key to sustaining the ecosystem, managing the fishing industry, and providing benefits to the people of California through the orderly conduct of commercial fishing activity.

Under existing law, herring (Section 163) and herring eggs (Section 164) may be taken for commercial purposes only under a revocable permit, subject to regulations prescribed by the Commission. Current regulations specify: permittee qualifications, permit application procedures and requirements, permit limitations, permit areas, vessel identification requirements, fishing quotas, seasons, gear restrictions, landing and monitoring requirements, permit categories and conditions, royalty fees,

permit performance deposit requirements, fishing and harvesting restrictions, processing requirements, and permit suspension conditions and procedures.

The Department is proposing regulations that would establish the 2015-16 season quotas for fishing operations in San Francisco Bay and make a minor change to the permit renewal date in the Herring-Eggs-On-Kelp (HEOK) fishery. These changes are necessary to incorporate the most recent biological condition data into herring management and increase the efficiency of herring permitting.

Management recommendations are solicited annually from the Director's Herring Advisory Committee (DHAC) and from interested individuals during public meetings and comment periods. The proposed amendments to sections 163 and 164 reflect Department recommendations based on additional input from the public and support of DHAC representatives. No changes or recommendations are being proposed for fishing areas outside San Francisco Bay.

Environmental Report

Pursuant to the requirements of the California Environmental Quality Act, the Department has prepared a 2015 Draft Supplemental Environmental Document (DSED) to the 1998 Final Environmental Document for Pacific Herring. The Department relied upon the DSED for biological analysis and to make recommendations for regulatory change. The DSED is currently available for public comment and can be found on the Department's Marine Region Website: http://www.dfg.ca.gov/marine/herring/.

Certification of the 2015 Final Supplemental Environmental Document is scheduled to occur at the October 7, 2015, Commission meeting in Los Angeles.

Overview of Herring Management and Environmental Document Summary

As with most coastal pelagic species, herring populations fluctuate depending on a variety of factors, including: food availability, spawning conditions, competition, predation, and fishing pressure. Pacific herring gill net fisheries are regulated in four spawning areas: Tomales Bay, Humboldt Bay, Crescent City area, and in San Francisco Bay, which is the primary fishing area. The HEOK fishery is only allowed in San Francisco Bay. Tomales Bay, Humboldt Bay, and Crescent City area have not been subjected to any fishing pressure for a number of seasons due to poor market conditions and unique site constraints at each location. No changes to quotas are proposed for these three fishing areas for the 2015-16 season. The Department manages the populations in the four spawning areas as

separate stocks. The commercial herring fisheries on these stocks are regulated through a catch quota system to provide for adequate protection and utilization of the herring resource. In San Francisco Bay, the Department conducts annual assessments of the herring spawning population size (spawning biomass). In addition to the assessment of spawning biomass, the Department examines the age composition of the spawning population, growth and general condition, biological aspects of the catch, and environmental conditions. These data serve as the basis for establishing fishing quotas for the next season. Department fishery managers are then able to set appropriate harvest targets, providing a sustainable fishery and ensuring a forage base for other species that depend on herring as a food source.

Annual fishing quotas are necessary to provide for a sustainable fishery and have historically been limited to a total commercial take not to exceed 20 percent (harvest percentage) of the previous season's estimated spawning biomass. This harvest percentage is based upon the results of a peer reviewed model that assumes stable environmental and biological conditions. Quotas are the principal regulatory tool to establish adequate protection for the herring resource and provide for the long-term sustainable yield of the fishery. Each year, the Department recommends a harvest percentage that is not determined by a fixed mathematical formula; rather, the recommendation is based upon the modeling results and takes into account additional data collected each season, including: ocean productivity and estuarine conditions, growth rates of herring, strength of individual year-classes, and predicted size of incoming year-classes (i.e., recruitment). In response to poor recruitment or indication of population stress and/or unfavorable oceanographic conditions, harvest percentages for the past ten years have been set at or below ten percent in San Francisco Bay. The ten year average exploitation rate has been less than four percent. Over the past five years, the Department has recommended even more precautionary harvest percentages which have been less than or equal to five percent of the previous season's estimated spawning biomass. Actual exploitation rates during that five year period have averaged approximately three percent of the total spawning biomass.

Fishing effort and participation has also declined over the ten year period due to a reduction in herring value and lower demand on international markets. The traditional product from this fishery, *kazunoko*, is the sac roe (eggs) removed from the females, which is processed and exported primarily for sale in Japan.

The Department's proposal to make a minor change in HEOK effectively reduces the total herring catch because a larger proportion of the overall quota will be allocated as HEOK. This is beneficial because the HEOK fishery only harvests herring eggs, allowing adult herring to escape, thus

safeguarding a larger portion of the population as an important forage source. This recommendation is also supported by DHAC and members of the conservation community. This allocation is further described in the 2015 DSED, Chapter 2.2, and in Section 163 of these regulations.

The spawning biomass estimate for the 2014-15 season was 16,674 tons, which fell below the historical average (1979-80 season to present) of 51,300 tons. This was a significant decrease in spawning biomass from the previous season's estimate of 60,600 tons, and is the fourth-lowest estimated biomass on record. Accordingly, the Department will continue to recommend a precautionary harvest level for the 2015-16 season to safeguard the herring fishery and protect its role as a key forage species.

Department Recommendations for the San Francisco Bay Herring Fishery

The Department is providing the Commission a quota option range for the 2015-16 season from zero (0) to five percent of the 2014-15 San Francisco Bay spawning biomass estimate of 16,674 tons as described in the 2015 DSED. The Department is recommending a five percent quota equal to 834 tons of Pacific herring.

Department Recommendations for the Herring Eggs on Kelp Fishery

The Department is providing the Commission a quota option for the HEOK fishery to increase the total quota allocation from 0.79 to 1.0 percent. This fishery is regulated with the gill net fishery and the quota will be allocated as a proportion of the overall quota set each season for San Francisco Bay.

The Department is providing the Commission a recommendation to adjust the permit renewal date for the HEOK fishery to align with the gill net fishery due date. This would move the current due date for HEOK permits from August 1 each year to, "on or before the first Friday of October each year". This minor change would allow greater efficiency and time savings during the annual permit renewal process by the Department's License and Revenue Branch.

Recommended Amendments to Section 163

- Subsection 163(g)(4) is amended by deleting the current quota of "2,500" tons and replacing it with a quota selected by the Commission based on a range from zero (0) to five percent of the preceding year's spawning biomass estimate; and deleting "2014-2015". The Department is recommending a five percent quota equal to 834 tons.

Recommended Amendments to Section 164

- Subsection 164(g)(3) is amended by changing the form FG 143 HR (Rev. 2/14) to DFW 143 HR (REV. 06/04/15). The revision is necessary to conform to Department standards and to create a form without the need for an annual update. The old and revised forms are attached to this rulemaking.

- Subsection 164(h)(2) is amended to change the application deadline for renewal of all HEOK permits to be received by the Department, or if mailed, postmarked, on or before the first Friday of October each year. This change in the deadline will align the renewal dates for all other herring permits and be less confusing for the herring permit holders.
- Subsection 164(j)(4) is amended by increasing the quota allocation for HEOK permits from 0.79 to 1.0 percent of the overall quota as specified in Section 163 for harvest of herring.

(b) Authority and Reference Sections from the Fish and Game Code for Regulation:

Section 163:

Authority cited: Sections 1050, 5510, 8550, 8552.1, 8553 and 8555, Fish and Game Code.

Reference: Sections 713, 1050, 7852.2, 8043, 8550, 8552, 8552.6, 8553, 8554, 8555, 8556, 8557 and 8559, Fish and Game Code.

Section 164:

Authority cited: Sections 1050, 5510, 8389, 8552.1, 8553 and 8555, Fish and Game Code.

Reference: Sections 713, 1050, 7850, 7850.5, 7852.2, 7881, 8043, 8053, 8389, 8550, 8550.5, 8552.1, 8552.2, 8552.3, 8552.4, 8552.5, 8552.6, 8552.7, 8552.8, 8553, 8554, 8555, and 8556, Fish and Game Code.

(c) Specific Technology or Equipment Required by Regulatory Change:

None

(d) Identification of Reports or Documents Supporting Regulation Change:

2015 Draft Supplemental Environmental Document for Pacific Herring

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

Director's Herring Advisory Committee Meeting, April 1, 2015, Sausalito, California.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

No alternatives were identified.

(b) No Change Alternative:

A no-change alternative would not provide a quota or season for the 2015-16 commercial herring fishery. Current regulations specify a quota of 2,500 tons for the 2014-15 season and these regulations cannot apply to subsequent seasons.

A no-change alternative would not increase quota allocation for the HEOK fishery or amend current permit renewal dates.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the proposed regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

V. Mitigation Measures Required by Regulatory Action:

The 2015 Draft Supplemental Environmental Document has been prepared to review and analyze the proposed regulations for the commercial harvest of Pacific herring throughout the State's estuarine waters. Other than a recommendation for a new quota for the 2015-16 season, no mitigation measures are necessary.

VI. Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

Herring roe prices are set on the international market and not directly impacted by California regulations and quotas. Recently, herring roe has declined in value due to a market oversupply and a decline in overall demand. As a result, no adverse incremental economic impact to businesses, including the ability of California businesses to compete with businesses in other states, is anticipated to occur with a quota allocation of 50 tons or more However, a zero ton quota would eliminate any revenues

from the California herring fishery. This impact could be mitigated to the extent that fishermen can pursue other species; the total economic impact should not be significant.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California.

Due to poor market conditions and low participation by the herring fleet during the 2014-15 season, any quota option over 50 tons will likely result in positive incremental contributions to employment for the State: for example, an increase of about 71 jobs for a quota of 834 tons (see section VII). Conversely, a zero (0) ton quota could adversely impact about four jobs in the fishing industry and related industries. This is based on an employment multiplier of 27 jobs per each million dollar change in direct output from commercial herring fishing activities.

Most commercial herring industry participants are small businesses (as defined under California Government Code Section 11342.610), which may incur a detriment under a quota option less than 50 tons for San Francisco Bay. The total harvest of Pacific herring landed during the 2014-2015 season was 46 tons, though the allowable quota was 2,500 tons. This low exploitation rate and participation level by the herring fleet was driven by poor international market conditions. Due to the small scale and seasonality of the California herring fishery it is unlikely that any of the proposed quota options alone would cause the elimination of existing businesses in the State.

(c) Cost Impacts on a Representative Private Person or Business:

The Department is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action. There are no new fees or reporting requirements stipulated under the proposed regulations.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State: None

(e) Nondiscretionary Costs/Savings to Local Agencies: None.

(f) Programs Mandated on Local Agencies or School Districts: None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4: None.

(h) Effect on Housing Costs: None.

VII. Economic Impact Assessment:

Due to the small scale and seasonality of the California herring fishery, the overall economic impact on California business is not anticipated to be significant. Depending on which option is selected by the Commission, the proposed regulations are not anticipated to have significant adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. For illustration, the following table (California Herring Fishery 2015-16) provides an overview of two quota options with analyses of the projected economic impacts to the State relative to 2014-15 season catch of 46 tons.

California Herring Fishery 2015-16				
(Based on average biomass estimate of 16,674 tons)	No Change	Opt1 5%*	Opt2 0%*	2014-15 Actual Catch
Proposed 2015-2016 Quota in Tons	2,500	834	-	46
Ex-Vessel Revenue Potential (for allowable harvest quota)	$ 1,035,000	$ 345,000	$ -	$ 19,000
Total Economic Output Contribution	$ 1,837,000	$ 612,000	$ -	$ 28,000
Total Earnings (Labor Wages) Contribution	$ 365,000	$ 122,000	$ -	$ 5,100
Total Jobs (Employment) Contribution	97	75	-	4
Total Value-Added Contribution	$ 705,000	$ 235,000	$ -	$ 10,200
Total State & Local Tax Contribution	$ 347,000	$ 31,000	$ -	$ 1,400
Landings Tax Revenue Contribution to CDFW ($.0013/lb)	$ 6,500	$ 2,168	$ -	$ 120
Incremental Impact of Proposed Regulations Relative To Last Season's Allowable Harvest Quota of 2,500 tons				
	No Change	Opt1 5%*	Opt2 0%*	Opt 1 change from Actual Catch
Change in Tons	-	(1,666)	(2,500)	788
Direct Impact to Fishermen Ex-Vessel Revenue	$ -	$ (690,000)	$ (1,035,000)	$ 326,000
Total Economic Output Impact	$ -	$ (1,005,000)	$ (1,837,000)	$ 584,000
Total Earnings (Labor Wages) Impact	$ -	$ (186,000)	$ (365,000)	$ 117,000
Total Jobs (Employment) Impact	-	(21)	(97)	71
Total Value-Added Impact	$ -	$ (370,000)	$ (705,000)	$ 225,000
State & Local Taxes Impact	$ -	$ (51,000)	$ (347,000)	$ 29,600
Landings Tax Revenue to CDFW ($.0013/lb)	$ -	$ (4,300)	$ (6,500)	$ 2,050
** % of biomass (16,674 tons).*				

The projected economic impacts and the incremental economic impacts under each option, relative to the last season's allowable harvest of 2,500 tons of Pacific herring in San Francisco Bay along with the impacts of the actual catch taken over the 2014-15 season are estimated. The proposed Option 1 for five percent of the 16,674 ton biomass estimate (an 834 ton allowable quota) represents a quota reduction of 1,666 tons from the 2014-15 quota.

If the total allowable harvest quota had been met over the 2014-15 season, the Option 1 quota could result in drops in total economic output as shown in the incremental impact portion of the California Herring Fishery 2015-2016 table. However, over the 2014-15 season, the actual landings recorded were 46 tons, substantially below the allowable harvest quota. Compared to the actual catch, the proposed Option 1 quota of 834 tons could result in an increase in total economic output should the catch exceed 46 tons.

The 2015-16 quota options for San Francisco Bay range from zero (0) to five percent of the 2014-15 spawning biomass estimate of 16,674 tons. The potential incremental changes to total State economic output for these three options: no change; five percent of the biomass (834 tons); or zero percent of the biomass estimate (0 tons) are: none, $(1,005,000), or $(1,837,000) respectively, relative to 2014-15 season's 2,500 ton allowable quota and the ex-vessel price per ton.

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State:

Any quota option over 50 tons has the potential to result in positive incremental contributions to employment for the State. The proposed Option 1 quota of 834 tons could result in about 71 additional jobs. The proposed Option 2 quota of zero tons could adversely impact approximately four jobs in the fishing industry and related industries. This is based on an employment multiplier of 27 jobs per each million dollar change in direct output from commercial herring fishing activities. In addition, under a zero ton quota, the existing 190 herring permittees would be unable to fish for herring. The extent to which these fishermen may be able to fish for other species during the herring season is unknown.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State:

It is unlikely that any of the proposed quota options shown above would alone cause the elimination of existing businesses in the State.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State:

It is unlikely that any of the proposed quota options shown above would alone cause the expansion of existing businesses in the State.

(d) Benefits of the Regulation to the Health and Welfare of California Residents:

The proposed action(s) recommended by the Department are to ensure the sustained availability of Pacific herring resources, in support of goals and benefits set forth in the California Fish and Game Code.

(e) Benefits of the Regulation to Worker Safety:

The proposed regulations do not affect worker safety because they only set fishing quotas.

(f) Benefits of the Regulation to the State's Environment:

The expected benefits to the environment take the form of sustainable herring fisheries, and benefits to persons, businesses, and species dependent upon a healthy herring resource.

(g) Other Benefits of the Regulation:

The proposed changes to the regulations support the Marine Life Management Act (MLMA) [MLMA, Statutes 1999 Chapter 483], which declares that “conservation and management programs prevent overfishing, rebuild depressed stocks, ensure conservation, facilitate long term protection and, where feasible, restore marine fishery habitats".

INFORMATIVE DIGEST\POLICY STATEMENT OVERVIEW

Sections 163 and 164, Title 14, California Code of Regulations, specify that herring may be taken for commercial purposes only under a revocable permit, subject to such regulations as the Fish and Game Commission shall prescribe. Current regulations specify: permittee qualifications, permit application procedures and requirements, permit limitations, permit areas, vessel identification requirements, fishing quotas, seasons, gear restrictions, and landing and monitoring requirements.

Annual fishing quotas are necessary to provide for a sustainable fishery. The proposed regulatory changes in Section 163 will establish the fishing quota for the 2015-16 season in San Francisco Bay:

- Set the San Francisco Bay quota for the 2015-16 season from zero (0) to five percent of the 2014-15 San Francisco Bay spawning biomass estimate for Pacific herring as provided in the 2015 Draft Supplemental Environmental Document. The Department is recommending a quota of five percent or 834 tons.

The proposed regulatory changes in Section 164 will establish the HEOK fishing quota and amend the permit renewal date and form for the San Francisco Bay fishery:

- A minor editorial change will be made to Section 164 indicating a change in the revision date (Rev. 2/14) to (Rev. 06/04/15) on the HEOK Royalty Report Form.

- A minor change will be made to Section 164 indicating that renewal of all HEOK permits are to be received by the Department, or if mailed, postmarked, on or before the first Friday of October each year. The revision is necessary to update the “permit application date” and align with the renewals dates for all other herring permits.

- Increase the San Francisco Bay HEOK quota allocation for individual HEOK permits from 0.79 to 1.0 percent of the overall quota as specified in Section 163 for harvest of herring.

<u>Benefits of the Regulation</u>

The Commission anticipates benefits to the State’s environment and the health and welfare of California residents. The proposed regulation changes are intended to set annual harvest quotas within a range that will maintain sustainable herring populations for their ecological values and commercial use. Maintaining a sustainable herring fishery also encourages consumption of local seafood.

The Commission does not anticipate any non-monetary benefits to worker safety as a result of the proposed regulation.

Consistency with State or Federal Regulations

The proposed regulations are neither inconsistent nor incompatible with existing state regulations. Section 20, Article IV, of the State Constitution specifies that the Legislature may delegate to the Fish and Game Commission such powers relating to the protection and propagation of fish and game as the Legislature sees fit. The Legislature has delegated to the Commission the power to regulate the commercial take of herring (sections 8550 and 8553, Fish and Game Code). The Commission has reviewed its own regulations and finds that the proposed regulations are neither inconsistent nor incompatible with existing state regulations. The Commission has searched the California Code of Regulations and finds no other state agency regulations pertaining to the commercial take of herring. There are no comparable federal regulations for the commercial harvest of herring.

REGULATORY LANGUAGE

Section 163, Title 14, CCR, is amended to read:

§ 163. Harvest of Herring.

. . . [No changes to subsections (a) through (f)]

(g) Quotas.
(1) Crescent City Area: The total take of herring in the Crescent City area for commercial purposes by use of gill net only shall not exceed 30 tons per season.
(2) Humboldt Bay: The total take of herring in Humboldt Bay for commercial purposes by use of gill net only shall not exceed 60 tons per season.
(3) Tomales Bay: The total take of herring for commercial purposes by use of gill net only shall not exceed 350 tons per season.
(4) San Francisco Bay: The total take of herring in San Francisco Bay for commercial purposes shall not exceed ~~2,500~~ [quota to be set between zero (0) and five percent of the preceding year's spawning biomass estimate] tons ~~for the~~ ~~2014-2015~~ per season. Tonnage shall be allocated on the following basis:
(A) Gill net permittees (including "CH" permittees): Tonnage shall be allocated to each fishing group (odd and even) in proportion to the number of permits that are assigned to each fishing group minus the number of permits in each platoon that are suspended for the entire season. Each gill net permittee (designated by the department in writing) participating in research sponsored by the department shall be assigned an individual quota equal to 0.5 percent of the season gill net quota per assigned platoon.

. . . [No changes to subsections (h) through (j)]

Note: Authority cited: Sections 1050, 5510, 8550, 8552.1, 8553 and 8555, Fish and Game Code. Reference: Sections 713, 1050, 7852.2, 8043, 8550, 8552, 8552.6, 8553, 8554, 8555, 8556, 8557 and 8559, Fish and Game Code.

REGULATORY LANGUAGE

Section 164, Title 14, CCR, is amended to read:

§164. Harvesting of Herring Eggs.

[No changes to subsections (a) through (f)]

(g) Permit conditions: Every person operating under a permit to harvest herring eggs shall:
(1) Forfeit his or her herring fishing privileges authorized pursuant to Section 163 of these regulations during the same season.
(2) In addition to any license fees required by the Fish and Game Code, pay a royalty of $500 per ton of herring eggs on kelp taken. (The royalty fee shall include the landing tax imposed pursuant to Article 7.5, (commencing with Section 8040) Chapter 1, Part 3, Division 6, of the Fish and Game Code, and the royalty fee required for the harvesting of kelp pursuant to Section 165, Title 14 CCR).
(3) Submit a Herring-Eggs-on-Kelp Monthly Landings and Royalty Report ~~(FG 143 HR (Rev. 2/14),~~ (DFW 143 HR (REV. 06/04/15), which is incorporated by reference herein (available at the department's License and Revenue Branch, Sacramento), with payment due to the department's License and Revenue Branch, Sacramento for each month of the season, within 60 days after the close of the month for which it is due.
(h) Permit applications. Each applicant for a herring eggs on kelp permit shall:
(1) Submit the completed application as specified in Section 705, Title 14, CCR, to the address listed on the application for the season to which the application applies. No person shall submit more than one application per season. Applications shall include a performance deposit as specified in subsection (i).
(2) Permit Renewal. Applications for renewal of all Herring-Eggs-on-Kelp permits shall be received by the department, or if mailed, postmarked, on or before ~~August 1~~ the first Friday of October each year. Late fees, late fee deadlines, and late renewal appeal provisions are specified in Fish and Game Code Section 7852.2.
(3) Have submitted all fees from prior seasons.

. . . [No changes to subsection (i)]

(j) Method of Take. Herring eggs may only be taken by harvesting giant kelp (*Macrocystis* sp.), with spawn (i.e., eggs) attached, which has been artificially suspended using the following two methods: rafts and/or lines, a technique commonly known as the “open pond” method. For the purpose of this Section, a raft is defined as a temporary, mobile structure with a metal, wood or plastic frame. The total surface area of each raft is not to exceed 2,500 square feet. Rafts used by a licensed herring eggs on kelp permittee, prior to the 1995-96 season, are exempt from these size specifications. Such rafts may not be modified to exceed 2,500 square feet total surface area. Any new raft built after the 1995-96 herring eggs on kelp season must meet the specified dimensions. A line is defined as a piece of line of no more than 1,200 feet in overall length that is suspended under a suitable permanent structure (e.g., pier or

dock), or between two permanent structures (e.g., piers or docks). Kelp lines shall have floats or cork over the entire length of line. Each end of the line must be attached to a permanent structure. Kelp lines suspended from a permanent structure (e.g., pier or dock) shall not be placed as to hinder navigation. If kelp lines are suspended under a permanent structure (e.g., pier or dock), or if a raft is tied up to a permanent structure (e.g., pier, dock or rock wall, natural stationary shoreline structures), the permittee shall obtain prior written approval from the appropriate owners or controlling agency (e.g., wharfinger, Coast Guard, Navy or private owner). Buoys are not permanent structures.

(1) Not more than two rafts and/or two lines may be used per permit. Two permits may be simultaneously fished on the same raft if each line on the raft is clearly identified with the permit number of the owner. Each raft shall have a light at each corner that may be seen for at least a distance of 100 yards. Each raft shall be further identified with the herring eggs on kelp permit number in 14-inch high, 2-inch wide black Roman alphabet letters and Arabic numerals painted on a white background permanently affixed to the raft. Lines shall be marked at the beginning and the end with a light that may be seen for at least a distance of 100 yards. Each line shall be further identified with the herring eggs on kelp permit number in 14-inch high, 2-inch wide black Roman alphabet letters and Arabic numerals painted on a white background, permanently affixed to the line.

(2) Not more than 10 sets of test kelp may be used per permit. Test kelp is defined as one stipe with blades, attached to a length of line for the purpose of testing for spawning activity. A set is defined as one length of line with test kelp attached. Each set must be attached to a permanent structure (e.g., pier, dock) and marked with the herring eggs on kelp permit number, in Roman alphabet letters and Arabic numerals at least 3 inches high, at a point above the waterline. No herring eggs on kelp shall be retained from test kelp sets for testing purposes that have not been weighed and recorded, pursuant to subsection 164(k).

(3) Rafts and/or lines may not be placed in any waters or areas otherwise closed or restricted to the use of herring gill nets operating pursuant to Section 163 of these regulations, except where written approval is granted by the owners or controlling agency (e.g., Navy, Coast Guard). Rafts and/or lines may be placed in Belvedere Cove or Richardson Bay, only if permittees tie their rafts and/or lines to a permanent structure (e.g., pier, dock or rock wall, natural stationary shoreline structures), and obtain prior written approval. Buoys are not permanent structures.

(4) The total amount of herring eggs on kelp that may be harvested by each permittee shall be based on the previous season's spawning population assessment of herring in San Francisco Bay, as determined by the department. This assessment is used to establish the overall herring fishing quotas pursuant to Section 163 of these regulations. Each herring eggs on kelp permittee is allocated a quota equal to approximately ~~0.79 percent~~ 1.0 percent of the quota.

(5) Each vessel operating under or assisting in fishing operations under a permit issued pursuant to these regulations shall have a current Fish and Wildlife commercial boat registration and be further identified with the permittee's herring eggs on kelp permit number in 14-inch high, 2-inch wide black Roman alphabet letters and Arabic numerals painted on a white background permanently affixed to each side of the vessel. If a herring eggs on kelp vessel is also used as an assist vessel in another permittee's fishing operation, it must be identified with the number of the permit it is assisting.

(6) The permittee shall notify the department's License and Revenue Branch, Sacramento in writing with the name and department registration number issued pursuant to Section 7881 of the Fish and Game Code of any vessel that will be used for harvesting, processing or transporting herring eggs under the authority of the permit. The permittee shall receive written approval from the department before using a vessel for harvesting, processing or transporting herring eggs.
(7) Permittee shall notify the department's Santa Rosa Marine Region office at the telephone number designated on the herring eggs on kelp permit within a 4-hour period prior to the suspension of kelp on a raft and/or lines and supply the following information:
(A) Where the kelp suspension will take place; and
(B) Where the permittee plans to fish the rafts and/or lines; and
(C) A local fax number or mailing address where confirmation of kelp suspension notification can be sent.

. . . [No changes to subsections (k) through (n)]

Note: Authority cited: Sections 1050, 5510, 8389, 8552.1, 8553 and 8555, Fish and Game Code. Reference: Sections 713, 1050, 7850, 7850.5, 7852.2, 7881, 8043, 8053, 8389, 8550, 8550.5, 8552.1, 8552.2, 8552.3, 8552.4, 8552.5, 8552.6, 8552.7, 8552.8, 8553, 8554, 8555 and 8556, Fish and Game Code.

DEPARTMENT OF FISH AND WILDLIFE

HERRING EGGS ON KELP MONTHLY LANDINGS AND ROYALTY REPORT

DFW 143 HR (REV. 06/04/15) Previously FG 143 HR

This report is required in accordance with the provisions established in Title 14, Section 164, California Code of Regulations, and Fish and Game Code, Section 8389. (**PLEASE READ THE INSTRUCTIONS ON THE REVERSE SIDE OF THIS FORM**)

FIRST NAME	M.I.	LAST NAME	GO ID#
MAILING ADDRESS			DAY TELEPHONE *(OPTIONAL)*
CITY	STATE	ZIP CODE	E-MAIL ADDRESS *(OPTIONAL)*

SECTION I		
REPORTING MONTH:	YEAR:	PERMIT#

SECTION II
Check if "NO" herring eggs were harvested during the month: ❑ (Note: This report **MUST** be returned to Department of Fish and Wildlife whether herrings eggs were harvested or not)

SECTION III			
	Pounds Harvested During Month	Royalty Rate Per lb.	Amount
LINE 1. Performance Deposit Credit (50% due with Herring-Eggs-On-Kelp Permit Application)	N/A	N/A	$
LINE 2. Credit Balance on file with Department as of _____. [DEC: The amount in this column is the total of LINES 1 AND 2. JAN-MARCH: Amount brought forward from LINE 4 (credit balance).]	N/A	N/A	$
LINE 3. Pounds Harvested, "Royalty" due:		**$.25**	$
LINE 4. Ending Balance. Money remains in your royalty account if the balance is "negative".			$

NOTE:

The Department will provide each permittee with their beginning balance of "Herring Eggs-on-Kelp" royalty monies on account as of December 1 of the current season. The "Ending Balance" (LINE 4) is to be carried forward to LINE 2, "Credit Balance on file with Department", on your next month's Royalty Report. The Department will then be able to reduce your existing credit balance in a systematic method. Please use ( ) for "negative" balances. A negative balance indicates the amount of money remaining in your account.

CERTIFICATION: I certify that all statements on this report are made in good faith, and all figures are to the best of my knowledge a true and correct report of herring eggs harvested.	
SIGNATURE **X**	**DATE:** *(month/day/year)*

DEPARTMENT OF FISH AND WILDLIFE
HERRING EGGS ON KELP MONTHLY LANDINGS AND ROYALTY REPORT
DFW 143 HR (REV. 06/04/15) Previously FG 143 HR

INSTRUCTIONS

GENERAL INFORMATION:
As of December 1, 1999 ALL permittees had a credit balance on account with the Department. Permittees are required to report their landings by month and either reduce their royalty balance by the amount due or remit the amount indicated on LINE 4 of the report.

If the balance on LINE 4 of the report is "positive" (no brackets), please submit check or money order in the amount indicated. The check should be made payable to "Department of Fish and Wildlife". DO NOT SEND CASH. Send the report and attached remittance to the address indicated below:

California Department of Fish and Wildlife
License and Revenue Branch
1740 N. Market Blvd.
Sacramento, CA 95834

This report must be submitted on a monthly basis, no later than 60 days after close of the month in which the herring eggs were harvested (Section 164(g)(1), Title 14 of the CCR). Failure to submit the report and remittance, if applicable, could result in legal and/or, administrative action against your company.

If you have any questions regarding this report, please contact Department's License and Revenue Branch at (916) 928-5822, or e-mail LRB@wildlife.ca.gov.

INSTRUCTIONS ON PREPARING THE REPORT:
SECTION I: Fill in the month and year for which the report is submitted and permit number.

SECTION II: Check if you did not harvest/receive any herring eggs on kelp during the month.

SECTION III:
LINE 1. This is the amount remaining of the current season's performance deposit (50% of quota) submitted with the Herring-Eggs-On-Kelp Permit Application on or before the first Friday of October each year. At the beginning of the season, this amount will be added to any credit balance from LINE 2.

LINE 2. The Department will fill in this line on your report. The amount in this column is the total of LINES 1 and 2. Each subsequent month, YOU are required to fill in the "month" and the "Amount" columns. The ending balance (LINE 4) of each previous month's report should be inserted in the "Amount" column (LINE 2). As a note, if your credit balance was depleted at the end of the previous month, the amount inserted on this line should be zero (0).

LINE 3. Report the "Pounds harvested during the month". Multiply the pounds by $.25 per pound and fill in the "Amount" column. Note: If herring eggs were harvested during the month, the "Amount" column will NEVER indicate a negative amount.

LINE 4. Subtract LINE 3 "Amount" column from LINE 2 "Amount" column.

EXAMPLE: If you have a ($1,000) balance indicated on LINE 2 under the column "Amount" and you harvested 1,000 pounds of roe on kelp during the month, you would:

Record 1,000 pounds on LINE 3 under the column identified as "Pounds harvested during the month". Then multiply 1,000 pounds by $.25. The result should be $250. Indicate $250 on LINE 3 under the column identified as "Amount". Subtract LINE 3 "Amount" column from LINE 2 "Amount" column. The result on LINE 4 should be a seven hundred and fifty dollar credit. Credit amounts are to be bracketed ($750). This ($750) credit will be recorded on LINE 2 of your next month's report.

California Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE

DEPARTMENT OF FISH AND WILDLIFE HERRING-EGGS-ON-KELP MONTHLY LANDINGS AND ROYALTY REPORT

This report is required in accordance with the provisions established in Title 14, Section 164, California Code of Regulations, and Fish and Game Code, Section 8389. (**PLEASE READ THE INSTRUCTIONS ON THE REVERSE SIDE OF THIS FORM**)

FIRST NAME	M.I.	LAST NAME		GO ID#
MAILING ADDRESS				DAY TELEPHONE *(VOLUNTARY)*
CITY		STATE	ZIP CODE	E-MAIL ADDRESS *(VOLUNTARY)*

SECTION I:

REPORTING MONTH:	YEAR:	PERMIT#

SECTION II:

Check if "NO" herring eggs were harvested during the month: ☐
(Note: This report **MUST** be returned to Department of Fish and Wildlife whether herrings eggs were harvested or not)

SECTION III:

	Pounds Harvested During Month	Royalty Rate Per lb.	Amount
LINE 1. Performance Deposit Credit (50% due with Herring-Eggs-On-Kelp Permit Application)	N/A	N/A	$
LINE 2. Credit Balance on file with Department as of _____. [DEC: The amount in this column is the total of LINES 1 AND 2. JAN-MARCH: Amount brought forward from LINE 4 (credit balance).]	N/A	N/A	$
LINE 3. Pounds Harvested, "Royalty" due:		**$.25**	$
LINE 4. Ending Balance. Money remains in your royalty account if the balance is "negative".			$

NOTE:
The Department will provide each permittee with their beginning balance of "Herring Eggs-on-Kelp" royalty monies on account as of December 1 of the current season. The "Ending Balance" (LINE 4) is to be carried forward to LINE 2, "Credit Balance on file with Department", on your next month's Royalty Report. The Department will then be able to reduce your existing credit balance in a systematic method. Please use ( ) for "negative" balances. A negative balance indicates the amount of money remaining in your account.

CERTIFICATION: I certify that all statements on this report are made in good faith, and all figures are to the best of my knowledge a true and correct report of herring eggs harvested.

SIGNATURE: X	DATE: *(month/day/year)*

INSTRUCTIONS FOR COMPLETING HERRING-EGGS-ON-KELP MONTHLY LANDINGS AND ROYALTY REPORT

GENERAL INFORMATION:
As of December 1, 1999 ALL permittees had a credit balance on account with the Department. Permittees are required to report their landings by month and either reduce their royalty balance by the amount due or remit the amount indicated on LINE 4 of the report.

If the balance on LINE 4 of the report is "positive" (no brackets), please submit check or money order in the amount indicated. The check should be made payable to "Department of Fish and Wildlife". DO NOT SEND CASH.
Send the report and attached remittance to the address indicated below:

California Department of Fish and Wildlife
License and Revenue Branch
1740 N. Market Blvd.
Sacramento, CA 95834

This report must be submitted on a monthly basis, no later than 60 days after close of the month in which the herring eggs were harvested (Section 164(g)(1), Title 14 of the CCR). Failure to submit the report and remittance, if applicable, could result in legal and/or, administrative action against your company.

If you have any questions regarding this report, please contact Department's License and Revenue Branch at (916) 928-5822, or e-mail LRB@wildlife.ca.gov.

INSTRUCTIONS ON PREPARING THE REPORT:
SECTION I: Fill in the month and year for which the report is submitted and permit number.

SECTION II: Check if you did not harvest/receive any herring eggs on kelp during the month.

SECTION III: LINE 1. This is the amount remaining of the current season's performance deposit (50% of quota) submitted with the Herring-Eggs-On-Kelp Permit Application on August 1st each year. At the beginning of the season, this amount will be added to any credit balance from LINE 2.

LINE 2. The Department will fill in this line on your report. The amount in this column is the total of LINES 1 and 2. Each subsequent month, YOU are required to fill in the "month" and the "Amount" columns. The ending balance (LINE 4) of each previous month's report should be inserted in the "Amount" column (LINE 2). As a note, if your credit balance was depleted at the end of the previous month, the amount inserted on this line should be zero (0).

LINE 3. Report the "Pounds harvested during the month". Multiply the pounds by $.25 per pound and fill in the "Amount" column. Note: If herring eggs were harvested during the month, the "Amount" column will NEVER indicate a negative amount.

LINE 4. Subtract LINE 3 "Amount" column from LINE 2 "Amount" column.

EXAMPLE: If you have a ($1,000) balance indicated on LINE 2 under the column "Amount" and you harvested 1,000 pounds of roe on kelp during the month, you would:

Record 1,000 pounds on LINE 3 under the column identified as "Pounds Harvested During the Month". Then multiply 1,000 pounds by $.25. The result should be $250. Indicate $250 on LINE 3 under the column identified as "Amount". Subtract LINE 3 "Amount" column from LINE 2 "Amount" column. The result on LINE 4 should be a seven hundred and fifty dollar credit. Credit amounts are to be bracketed ($750). This ($750) credit will be recorded on LINE 2 of your next month's report.

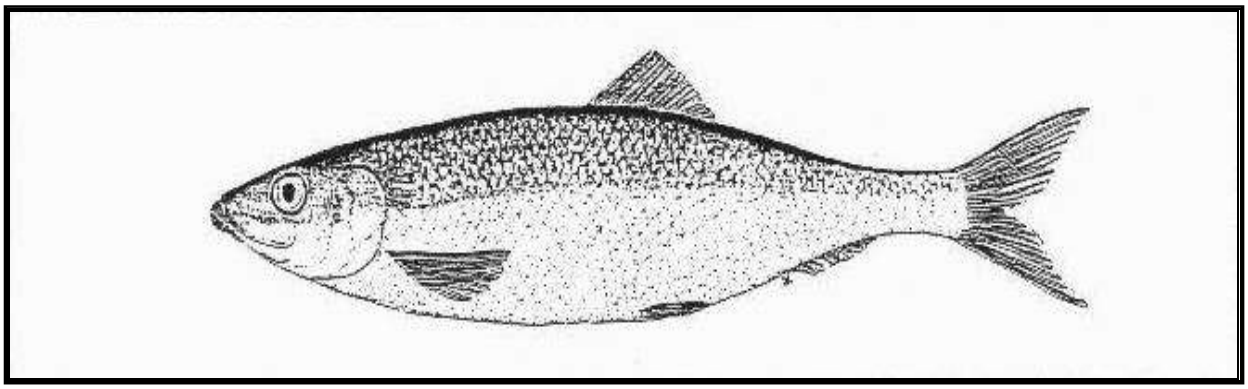
SCH No. 98052052

Final

SUPPLEMENTAL ENVIRONMENTAL DOCUMENT

PACIFIC HERRING
COMMERCIAL FISHING REGULATIONS

(Sections 163 and 164, Title 14, California Code of Regulations)



2015
STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
DEPARTMENT OF FISH AND WILDLIFE

FINAL SUPPLEMENTAL ENVIROMENTAL DOCUMENT
PACIFIC HERRING COMMERCIAL FISHING REGULATIONS

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SUMMARY

S.1 Introduction

This Final Supplemental Environmental Document (FSED) to the Final Environmental Document (FED), Pacific Herring Commercial Fishing Regulations, 1998, provides review and analysis as required by the California Environmental Quality Act (CEQA) Guidelines (Section 15000 et seq., Title 14, California Code of Regulations [CCR]). This review and analysis will assist the California Fish and Game Commission (Commission) in regulating the commercial harvest of herring throughout the State's ocean and estuarine waters. Specifically, the FSED reviews and evaluates proposed regulatory changes for the 2015-16 fishing season, supplementing, and in some cases replacing, aspects of the proposed project described in the 1998 FED and the Final Supplemental Environmental Documents (FSED) of 1999, 2000, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, and 2014. A Notice of Preparation (NOP) notified and provided opportunity for the public, resource and regulatory agencies, and the fishing industry to offer input on the scope of the environmental document.

The FSED includes seven chapters. Chapter 1 discusses the authorities and responsibilities under which the FSED was developed and describes its intended use. Chapter 2 describes the proposed project and alternatives, as well as options for regulating the commercial harvest of herring. Chapter 3 describes the existing environment where the California Pacific herring (herring), *Clupea pallasii,* fisheries occur. Chapter 4 addresses the impacts of the proposed project and cumulative effects. Chapter 5 describes the impacts of the alternatives to the proposed project. Chapter 6 identifies consultations with other agencies, professionals, and the public and Chapter 7 responds to public comments regarding the proposed project.

The proposed project has been selected as the preferred alternative based on the analysis in this FSED. The proposed project is identified as the preferred alternative because it provides a set of regulations most likely to achieve the CEQA requirements with respect to the conservation, sustainability, maintenance, and utilization of the herring resource.

S.2 Proposed Project

The proposed project is a body of regulations governing the commercial harvest of herring for roe products, bait, as fresh fish, and the harvest of herring eggs on kelp. It also includes regulations from Section 163.1 (herring permit transfers) and 163.5 (penalties in lieu of suspension or revocation-herring permittees), Title 14, CCR that were adopted by the Commission on March 2006 and October 2002, respectively. The proposed project takes the form of recommendations for continuation, amendment, or change to an existing body of regulations in effect since October 13, 2014 (Sections 163, and 164, Title 14, CCR).

The proposed regulatory changes will establish season quotas for fishing operations in San Francisco Bay for the 2015-16 herring fishing season, based on the most recent assessments of the spawning population. The specific regulatory changes proposed for the 2015-16 season will provide the Commission a quota option range between zero (0) and five percent of the most recent San Francisco Bay, 2014-15, spawning biomass estimate. The Department of Fish and Wildlife's (Department) recommendation is a five percent harvest for the 2015-16 season in San Francisco Bay. Additionally in San Francisco Bay, the Department's recommendation is to increase the herring eggs on kelp (HEOK) quota allocation from 0.79 to 1.0 percent and change HEOK permit renewal dates to conform to gill net permit due dates. Previously established quotas for Tomales Bay, Humboldt Bay, and Crescent City area fisheries are not affected by these regulatory changes

S.3 Project Alternatives

Three alternatives to the proposed project are considered in this FSED. These alternatives include: (1) a no project alternative; (2) a no change alternative, which uses existing regulations; and (3) establishing individual vessel quotas for gill net vessels in the herring fishery. Refer to Section 2.4, Project Alternatives, Chapter 5 of this FSED, and Chapter 6 of the 1998 FED, Analysis of Alternatives, for a thorough description of alternatives and analysis of their impacts.

S.4 Existing Environment

The environment most likely to be affected by the regulatory revisions outlined in this FSED is San Francisco Bay. Although the proposed project consists primarily of regulatory changes for San Francisco Bay fisheries, the existing environment potentially affected by the proposed project and alternatives also includes the open ocean and other bays in which herring occur. Historically, herring fisheries have occurred in Tomales Bay, Humboldt Bay, and Crescent City area; however these fisheries are not currently active. Refer to Section 3.3 of the FED, Specific Biological and Environmental Descriptions, for a thorough description of these environments and Chapter 3 of this document for a description of the environmental setting for these areas.

S.5 Environmental Impacts

S.5.1 Proposed Project

An analysis of the potential impacts of the proposed project is described by this FSED. The FED identified the area with the highest potential for adverse impacts associated with the proposed regulatory changes as the San Francisco Bay area, which supports the largest herring fishery in the State. The following localized, short-term and less than significant impacts were identified in the FED for several areas of potential concern including: (1) boat and vehicle traffic circulation; (2) water and air quality; (3) housing and utilities; (4) geology, scenic quality, recreation; and (5) noise. The FED found biological impacts to have the greatest potential for significant environmental impact, but found these impacts to be localized, short-term, and less than significant, with mitigation provided by the current management strategy and herring population monitoring. Refer to Chapter 4 of the FED for a thorough environmental impact analysis of the proposed project. Any adverse impacts associated with the regulatory changes proposed by this FSED are addressed within this document.

S.5.2 Alternatives

Three alternatives to the proposed project are considered. These alternatives have been examined as they apply to this FSED. A thorough analysis of the impacts of these alternatives is provided in Chapter 6 of the FED. A summary of impacts associated with these alternatives is provided below.

S.5.2.1 Alternative 1 (no project)

Localized, short-term, and less-than-significant impacts to vessel and vehicle traffic circulation, water quality, air quality, housing and utilities, scenic quality, recreational opportunities, and noise levels identified for the proposed project would be eliminated or redistributed in an unpredictable manner.

S.5.2.2 Alternative 2 (existing regulations)

In most regards, the environmental impacts associated with this alternative would be comparable to those of the proposed project. This alternative allows for adjustment of the season year, but does not address certain fishery-related problems considered in amendments or changes to existing regulations. The existing regulation alternative would maintain the herring fishery regulations as amended through 2014 and would not provide for consistent adaptive management of the State's resources.

S.5.2.3 Alternative 3 (individual vessel quota)

As addressed in detail within the FED, individual vessel quotas, rather than the platoon-based quota system currently used in the herring gill net fishery, could potentially increase impacts due to an increase in the number of days fished. However, these impacts are still expected to be short-term, localized, and less than significant for most environmental categories.

Misuse of the resource could result from sorting catches to remove males from the catch or discarding unripe fish to achieve higher roe content, and therefore, higher ex-vessel prices. However, competition between permittees for a share of the quota is greatly lessened under an individual quota system, and may result in fewer nets likely to be lost, thus reducing impacts from "ghost" net fishing as explained in Section 4.2.6.1 of the FED.

S.5.3 Cumulative

An analysis of the cumulative impacts of the proposed project revealed no additional impacts to those addressed in the FED. The proposed regulatory changes addressed by this FSED are for an existing ongoing project. An analysis of cumulative impacts is provided in Chapter 5 of the FED.

A variety of factors have the capacity to influence the herring population status in California, in addition to the proposed project including: (1) biological events; (2) competitive interactions with other pelagic fish and fisheries; (3) oceanographic events; (4) habitat loss; and (5) water quality. However, as with potential impacts from the on-going commercial harvest of herring, continued monitoring of the herring resource and oceanographic conditions should help identify any trends that would signal that the stock's reproductive potential is in jeopardy.

S.6 Areas of Controversy

Status of the herring population in San Francisco Bay has been identified as the only area of controversy regarding commercial herring fishing and is addressed in Chapter 3 of this FSED.

S.7 Issues to be Resolved

At issue is whether or not to provide for commercial fishing as an element of herring management in California. If commercial herring fishing is authorized, decisions to specify the areas, seasons, fishing quotas and other appropriate special conditions under which fishing operations may be conducted are required. As discussed, one aspect of managing this and other fishery resources is the understanding that a no project alternative is considered a management tool. This document, the 1998 FED, the 1999 FSED, the 2000 FSED, the 2001 FSED, the 2002 FSED, the 2004 FSED, the 2005 FSED, the 2006 FSED, the 2007 FSED, the 2008 FSED, the 2009 FSED, the 2010 FSED, the 2011 FSED, the 2013 FSED, and the 2014 FSED include a review and discussion of the proposed project as well as alternatives.

Chapter 1. INTRODUCTION

1.1. Background

This Final Supplemental Environmental Document (FSED) presents the review and analysis necessary to assist the California Fish and Game Commission (Commission), the lead agency pursuant to the California Environmental Quality Act (CEQA), in taking action regarding the regulation of the commercial harvest of Pacific herring (herring), *Clupea pallasii,* in California. It was prepared by the Department of Fish and Wildlife (Department) for the Commission following CEQA Guidelines (Section 15000 et seq., Title 14, California Code of Regulations [CCR]). The project being considered consists of proposed changes to the regulations for the 2015-16 herring commercial fishing season.

This FSED was prepared as a supplement to: (1) Final Environmental Document (FED), Pacific Herring Commercial Fishing Regulations, certified by the Commission in August 1998; (2) the Final Supplemental Environmental Document (FSED), certified by the Commission in August 1999; (3) the FSED, certified by the Commission in August 2000; (4) the FSED, certified by the Commission in August 2001; (5) the FSED, certified by the Commission in August 2002; (6) the FSED, certified by the Commission in August 2004; (7) the FSED, certified by the Commission in September 2005; (8) the FSED certified by the Commission in October 2006; (9) the FSED certified by the Commission in October 2007; (10) the FSED certified by the Commission in September 2008; (11) the FSED certified by the Commission in September 2009, (12) the FSED certified by the Commission in September 2010; (13) the FSED certified by the Commission in September 2011, (14) the FSED certified by the Commission in August 2013, and (15) the FSED certified by the Commission in August 2014. The FED outlines the full proposed project consisting of the operation and management of California's herring commercial fisheries and can be found on the Department's website at: http://www.dfg.ca.gov/marine/herring/ceqa.asp.

The FSEDs of 1999, 2000, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, and 2014 provide for revisions of the proposed project contained in the FED and regulatory revisions necessary for the 1999-2000, 2000-01, 2001-02, 2002-03, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12,

2013-14, and 2014-15 herring commercial fishing seasons, respectively. Environmental documents (Draft Supplemental Environmental Document [DSED] and FSED) were not prepared in 2003 or 2012. This FSED supplements the existing certified environmental documents and provides revisions to the regulations for the 2015-16 herring commercial fishing season.

The Department and Commission hold the public trust for managing the State's fish and wildlife populations, including herring. That responsibility is fulfilled by a staff of experts in marine resource management and enforcement issues related to California's herring resource. The knowledge and training represented by that expertise qualifies them to perform the review and analysis of the proposed revisions of the commercial herring harvest regulations that are contained in this document.

1.2. The Functional Equivalent

CEQA requires all public agencies in the State to evaluate the environmental impacts of projects that they approve or carry out. Most agencies satisfy this requirement by preparing an Environmental Impact Report (EIR) if there are potentially significant environmental impacts. If no potentially significant impacts exist, a Negative Declaration (ND) is prepared. However, an alternative to the EIR/ND requirement exists for State agencies for activities that include protection of the environment as part of their regulatory program. Under this alternative, an agency may request certification of its regulatory program from the Secretary for Natural Resources. With certification, an agency may prepare functional equivalent environmental documents in lieu of EIRs or NDs.

The regulatory program of the Commission has been certified by the Secretary for Natural Resources. A functional equivalent, FED for Pacific Herring Commercial Fishing Regulations, was certified by the Commission on August 28, 1998. A new FED is required: (1) when subsequent changes are proposed in the project requiring important revisions of the previous FED due to new significant environmental impacts not considered in a previous FED; or (2) when new information of substantial importance to the project becomes available (Section 15162, Title 14, CCR and Public Resources Code (PRC) Section 21166).

The CEQA lead agency may choose to prepare a supplement to a FED instead of a new FED, if only minor additions or changes are necessary, to make the previous FED adequately apply to the project in the changed situation. The draft supplemental document is given the same notice and public review given to a draft environmental document, and may be circulated by itself without the previous FED. When deciding whether to approve the proposed project, the lead agency considers the previous FED as revised by the supplemental environmental document (Section 15163, Title 14, CCR). A Notice of Preparation (NOP) for the DSED was circulated to interested parties on March 27, 2015. Following the release of the NOP, the 30-day public comment period pursuant to CEQA for the proposed project ended April 27, 2015. Pursuant to CEQA regulations, a 45-day public comment period for reviewing the DSED was held from May 8, 2015, to June 22, 2015.

This is the fifteenth FSED to the FED prepared by the Department. The first FSED was certified by the Commission in August 1999; the second FSED was certified by the Commission in August 2000; the third FSED was certified by the Commission in August 2001; the fourth FSED was certified by the Commission in August 2002; the fifth was certified by the Commission in August 2004; the sixth was certified by the Commission in September 2005; the seventh was certified by the Commission in October 2006; the eighth was certified by the Commission in October 2007; the ninth was certified by the Commission in September 2008; the tenth was certified by the Commission in September 2009; the eleventh was certified by the Commission in September 2010; the twelfth was certified by the Commission in September 2011; the thirteenth was certified by the Commission in August 2013; and the fourteenth was certified by the Commission in August 2014. As provided for by CEQA, the Department will continue to use this method of revising Sections 163 and 164, Title 14, CCR, until the Department prepares a new environmental document or a Fishery Management Plan (FMP).

1.3. Scoping Process

Pursuant to CEQA, the Department distributed, for the Commission, a NOP to interested parties on March 27, 2015. In addition, the Department received input on the proposed project at a Director's Herring Advisory Committee (DHAC) meeting held on

April 1, 2015, in Sausalito, County of Marin. The DHAC consists of 26 representatives from the herring fishery, including buyers and fishermen. They are appointed by the Director and serve at his or her pleasure. In addition, members of the public, interested organizations and herring fishing industry members were in attendance at the DHAC meeting to provide input.

Historically, during the scoping process, several issues have been raised including: the need for determining unfished biomass, developing a harvest control rule, developing a simulation model for herring management, accounting for herrings importance as a forage species, genetic comparisons of the Tomales Bay and San Francisco Bay populations, the cost of managing the fishery, simplifying existing gill-net regulations, amending herring eggs on kelp regulations, permit stacking and establishing a limited voluntary individual quota herring fishery. A FMP would address all of these issues. FMPs are prescribed for all marine fisheries pursuant to the Marine Life Management Act. FMPs typically contain a comprehensive environmental and economic analysis of the fishery along with clear objectives and measures to ensure sustainability of that fishery. In addition to the primary requirements below, the Department seeks advice and assistance in developing FMPs from participants in the affected fishery, marine scientists, marine conservationists, and other interested parties. The primary requirements of an FMP pursuant to Fish and Game Code (FGC) Section 7072 are as follows:

- To the extent practical, each sport and commercial marine fishery under the jurisdiction of other states shall be managed under an FMP. FMPs will be developed in priority order.
- Each FMP shall be based on the best scientific information and other relevant information that is available, or that can be obtained, without substantially delaying the preparation of the plan.
- To the extent that conservation and management measures in an FMP provide guidelines for overall harvest, FMPs shall allocate those increases or restrictions of harvest fairly among sport and commercial fishing interests participating in the fishery.

Specifically, each FMP shall include:

- A summary of the fishery which includes historical data, economic and social information related to the fishery, habitat and ecosystem role of the species, natural history and population dynamics, number of participants, and a history of conservation and management measures affecting the fishery.
- A fishery research protocol that includes past and ongoing monitoring, essential fishery information, identification of additional information, resources and time needed, and procedures for monitoring the fishery and for obtaining essential fishery information.
- Measures necessary for the conservation and management of the fishery which includes limitations of the fishery, creation or modification of a restricted access program that contributes to a more orderly and sustainable fishery, procedures to establish, review and revise a catch quota, and requirements for permits.
- Measures to minimize adverse effects on habitat caused by fishing.
- Information and analysis of amount and type of bycatch if associated with the fishery and measures taken to minimize bycatch and mortality of discards.
- Criteria for identifying when the stock is overfished and measures to address overfishing, if occurring.
- A procedure for review and amendment of the plan.

When an FMP is completed, it is subject to CEQA and is considered functionally equivalent to an EIR. Until an FMP can be developed the 1998 FED and subsequent FSEDs will serve as the primary management tools for herring.

In the interim and to address some of the issues raised during the scoping period, the Department offers the following information. The Department is currently working with the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) to develop a stock assessment model for herring. This model is a critical step in the development of an FMP and will help address many of the concerns regarding biological reference points and harvest control rules, as well as providing a valuable tool for managing the herring fishery. CEFAS is experienced in using stock assessments in the development of fisheries management plans and has completed a stock assessment model on the Atlantic herring (*Clupea harengus*). Preliminary modeling results were provided to the Department in November 2013, and September 2014.

After completing an internal review, the Department plans to subject the model to an independent peer review prior to using it for management decisions. In addition, the Department, in partnership with several conservation organizations and the commercial fishing industry, is currently working to identify funds for development and implementation of an FMP.

Regarding herring as forage, it has been identified as a key forage species in the California Current Ecosystem. However, due to the complexity of this system and biological interactions, it is difficult to quantify all predator/prey relationships or to quantify all oceanic conditions and factors that affect herring recruitment and persistence in the spawning population. As a result, the Department manages for herring's importance as a forage species by recommending conservative harvest percentages. Since 2010, as a conservation safeguard, the Department has recommended harvest percentages for herring at or below five percent of the most current spawning biomass estimate. This precautionary management approach has allowed, on average, more than 95 percent of the spawning stock (which represents only the portion of the total stock that leaves oceanic waters to spawn during a given season) to go unfished and remain available as forage or to meet other ecosystem functions, including stock rebuilding.

1.4. Report Availability

This FSED is available at the Commission office and Department Marine Region offices. It will also be posted on the Department's website at: http://www.dfg.ca.gov/marine/herring/.

1.5. Authorities and Responsibilities

The California State Legislature formulates the laws and policies regulating the management of fish and wildlife in California. It is the policy of the State to ensure the conservation, sustainable use, and where feasible, the restoration of California's living marine resources for the benefit of all the citizens of the State (FGC Section 7050). It is also the State's policy to promote the development of local and distant-water fisheries based in California in harmony with international law respecting fishing and the conservation of the living resources of the oceans and other waters under the jurisdiction and influence of the State (FGC Section 1700, Appendix 1 of the FED).

The Legislature provides further policy direction regarding herring management in FGC Sections 8550 et seq. FGC Section 8553 delegates authority from the Legislature to the Commission, whose members are appointed by the Governor, to regulate the commercial harvest and possession of herring. The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. The Department, as trustee for fish and wildlife resources, provides requisite biological expertise to the Commission on impacts arising from regulating the commercial harvest of herring (FGC Section 1802). The remaining FGC sections related to herring provide for a limited entry fishery and require periodic review of regulations and policies.

The Commission holds public meetings at its discretion to consider and adopt revisions to these regulations. Recommendations and comments from the Department, other agencies, and the public are typically received at two public Commission meetings each year prior to the herring commercial fishing season. These meetings will be held for the 2015-16 season on August 4-5, 2015, in Fortuna, California, and on October 7-8, 2015, in Los Angeles, California. The authority to prepare a supplemental environmental document is given in PRC Section 21166.

Chapter 2. PROJECT DESCRIPTION

2.1. Project Objectives

The proposed project, as defined in the FED certified by the Commission on August 28, 1998, is the regulation of herring fisheries under the State's jurisdiction. The regulations are considered for inclusion in the CCR to implement the State's policies for managing the commercial use of herring (Sections 163 and 164, Title 14, CCR). The proposed project and alternatives addressed in this FSED take the form of recommendations for amendment or change to the existing body of regulations. The recommendations and alternatives are based on biological assessments of existing stock conditions and comments received from interested individuals, non-government organizations, commercial fishermen, and from the DHAC. The Commission has legislatively-delegated authority to act on these recommendations.

The project goal is to maintain healthy herring stocks in California. Objectives for achieving this goal include:

- Safeguard herring as an important forage species for all living resources of marine and estuarine ecosystems that utilize herring as a food source;
- Use precautionary principles in response to uncertainty when setting harvest targets;
- Manage the commercial harvest of herring to achieve a sustainable fishery;
- To the extent possible, maintain and/or restore healthy age structures to stocks;
- Avoid and/or minimize the harvest of two and three-year-old herring, many of which are first-time spawners;
- Set commercial harvest targets that conserve sufficient herring to support recreational take.

Under existing law, herring may be taken for commercial purposes only under a revocable permit, subject to such regulations, as the Commission shall prescribe (FGC Section 8550). Current regulations specify: permit qualifications, permit validation procedures and requirements, permit limitations, permit areas, vessel identification requirements, seasons, fishing quotas, gear restrictions, landing and monitoring requirements, permit categories and conditions, royalty fees, permit performance

deposit requirements, fishing and harvesting restrictions, processing requirements, and permit suspension conditions and procedures.

The proposed project addressed by this FSED consists of amendments and changes to existing regulations for the 2015-16 commercial herring fishing season. The proposed project would establish the season quotas for fishing operations in San Francisco Bay, would increase the herring eggs on kelp (HEOK) quota allocation from 0.79 to 1.0 percent, and make minor changes to permit due dates in the HEOK fishery. Quota recommendations for San Francisco Bay are primarily based on the most recent assessments by the Department of the estimated spawning population of herring in San Francisco Bay. The recommendation also takes into account additional data examined each season, including age structure, growth and general condition, predicted size of incoming year-classes (*i.e*., recruitment), biological aspects of the catch, and ocean and bay conditions.

2.2. Project Locations

Permits are issued for commercial herring fishing in four geographically distinct areas of estuarine waters under the jurisdiction of the State of California (Figure 2.1). Many of the regulations considered by this document are specific to an area and type of fishing operation. This section describes each area in which regulatory changes are proposed, including current commercial fisheries for herring, seasons, proposed quotas, and geographical restrictions for those fisheries. A complete description of commercial herring fishing areas is provided in Section 2.2 of the FED. The environmental setting for each geographical fishing area is detailed in Section 3.3 of the FED.

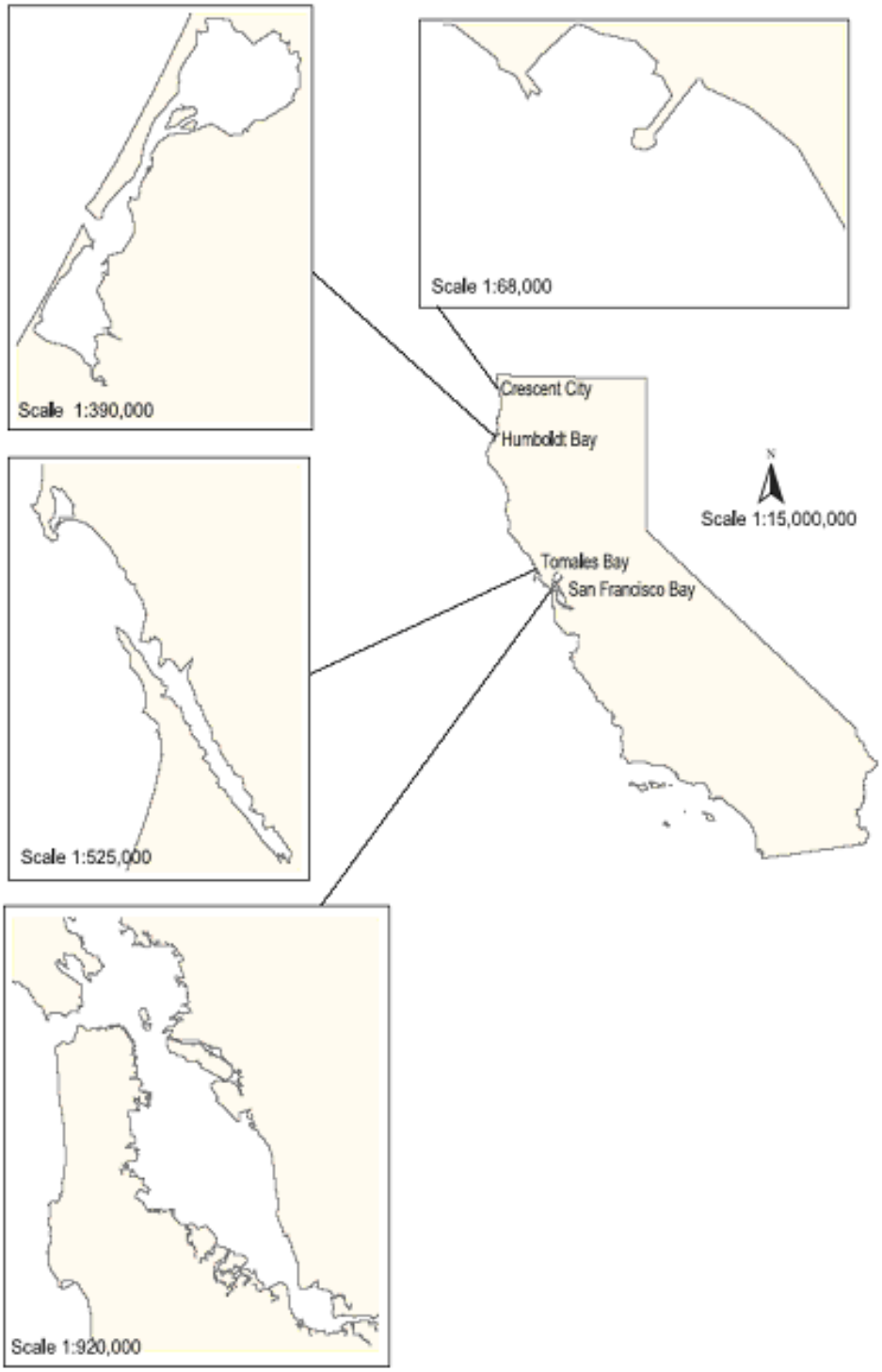

Figure 2.1 Locations of commercial Pacific herring fisheries.

2.2.1. San Francisco Bay

The proposed commercial herring fishing quotas for San Francisco Bay are as follows:

2.2.1.1. Herring Fishery

Season: 5:00pm on January 1, until noon on March 15. If January 1 falls on a Friday or Saturday, fishing shall commence on the first Sunday following that date at 5:00pm. If the closing date of the fishery falls on a Saturday or Sunday, fishing shall close on the Friday immediately preceding March 15 at noon.

Gill net permittees with odd numbered permits shall be permitted to fish first in odd numbered years and then alternating weeks with even numbered permits until the close of the season.

Gill net permittees with even numbered permits shall be permitted to fish first in even numbered years and then alternating weeks with odd numbered permits until the close of the season.

Note: Herring fishing is not permitted from noon on Friday through 5:00pm on Sunday (Section 163 (h)(5), Title 14, CCR).

Quota: The proposed total take of herring in San Francisco Bay for commercial purposes shall be set between zero and five percent of the most current biomass estimate for San Francisco Bay. The total take of herring in San Francisco Bay for commercial purposes shall not exceed 834 tons for the 2015-2016 season. <u>For the 2015-16 season the Department recommends a conservative harvest option of 834 tons or five percent of the 16,674 ton 2014-15 spawning biomass estimate.</u> This quota range is based on the determination of the Department's assessment of the stock status and utilizing the best science available. The best available science includes, but is not limited to, recent fishery-independent field surveys, commercial catch and age composition analysis, and environmental data.

Note: The quota for the herring gill net fishery will be reduced by an allocation to the herring eggs on kelp fishery quota (See Section 2.2.1.2).

Area: Waters of Districts 12 and 13 and that portion of District 11 lying south of a line extending from Peninsula Point (the most southerly extremity of Belvedere Island) to the easternmost point of the Sausalito ferry dock.

1) Regulations prohibit the setting or operating of nets within 300 feet of the following piers and recreation areas: Berkeley Pier, Paradise Pier, and San Francisco Municipal Pier (between the foot of Hyde Street and Van Ness Avenue), Pier 7 (San Francisco), Candlestick Point State Recreation Area, the jetties in Horseshoe Bay, and the fishing pier at Fort Baker. Regulations also prohibit the setting or operating of nets within 70 feet of Mission Rock Pier.

2) Regulations prohibit the setting or operating of nets in Belvedere Cove (north of a line drawn from the tip of Peninsula Point to the tip of Elephant Rock). Regulations also prohibit the setting or operating of gill nets from November 15 through March 17, in the area bounded by a line drawn from the middle anchorage of the western section of the Oakland Bay Bridge (Tower C) to the Lash Terminal buoy #5 to the easternmost point at Hunter's Point (Point Avisadero), from Point Avisadero to the Y "A" buoy to Alameda NAS entrance buoy #1 (entrance to Alameda Carrier Channel) to the Oakland Harbor Bar Channel buoy #1, and then from the first Bar Channel buoy to Tower C of the Bay Bridge.

3) Other closures affecting the fishery include United States Coast Guard enforced Homeland Security Zones: 25 yards around all Golden Gate and Bay Bridge abutments and piers; 100 yards around and under any High Interest Vessels; and Naval Vessel Protection Zones which extend 100 yards around all Naval Vessels at all times and a 500 yard slow zone surrounding all Naval Vessels. The United States Coast Guard will also enforce Rule 9 of the Code of Federal Regulations (CFR) regarding channel and harbor blockages.

2.2.1.2. Herring Eggs on Kelp (HEOK) Fishery

Season: December 1 to March 31

Quota: The total amount of HEOK that may be harvested by each permittee shall be based on the previous season's spawning population assessment of herring in San Francisco Bay, as determined by the Department. This assessment is used to establish the overall herring fishing quota. Each HEOK permittee is currently allocated a quota equal to approximately 0.79 percent of the quota. <u>For the 2015-16 season, the Department recommends increasing the HEOK permittee allocation from 0.79 to 1.0 percent of the overall San Francisco Bay quota.</u>

Area: Waters of Districts 11, 12, and 13, and that portion of District 2 known as Richardson Bay.

Note: The area open to the HEOK fishery is further restricted. Rafts and lines may not be placed in any waters or areas otherwise closed or restricted to the use of herring gill net operations, except the areas known as Belvedere Cove and Richardson Bay or except where written permission is granted by the owners or controlling agency (e.g., Navy, Coast Guard). When rafts or lines are placed in Belvedere Cove or Richardson Bay, they must be tied to a permanent structure (e.g., pier or dock).

2.2.2. Tomales Bay

There are no proposed changes to commercial herring fishing quotas for Tomales Bay.

2.2.3. Humboldt Bay

There are no proposed changes to commercial herring fishing quotas for Humboldt Bay:

2.2.4. Crescent City Area

There are no proposed changes to commercial herring fishing quotas for the Crescent City Area.

2.2.5. Open Ocean

As of January 1, 2010, all commercial fishing for herring in ocean waters is prohibited, except as specified in Section 163 (f)(1), Title 14, CCR. An incidental take of no more than 10 percent herring by weight of any landing composed primarily of other coastal pelagic fish species or market squid may be landed.

2.2.5.1. Open Waters Fishery (closed)

Area: Ocean waters are limited to the waters of Districts 6 (excluding the Crescent City area), 7, 10 (excluding Tomales Bay), 16, and 17.

2.3. Project Characteristics

The proposed project recommends continuation of the existing regulations as modified by changes discussed below for the San Francisco Bay fishery. These regulations, as amended, will assist in the control of the commercial harvest of herring at a level that meets the State's policy with respect to the use of aquatic resources. This section states the specific purpose of the regulations and summarizes the factual basis for the regulation.

The commercial herring fisheries are closely regulated through a catch-quota system to provide for adequate protection and utilization of the herring resource. The Department conducts annual assessments of the spawning herring population in San Francisco Bay as part of its ongoing monitoring and management of the fishery. The Department also examines age structure, growth and general condition, biological aspects of the catch, and environmental conditions (Section 3.2.2.1, FED). These data serve as the basis for establishing fishing quotas for the following season. The principal regulatory changes proposed for the 2015-16 season included: (1) provide the Commission a quota option range between zero (0) and five percent of the most recent San Francisco Bay, 2014-15 spawning biomass estimate; (2) increase the HEOK

permittee allocation from 0.79 to 1.0 percent of the overall San Francisco Bay quota; and (3) adjust the permit renewal date for the HEOK fishery to align with the gill net fishery due date.

Annual herring spawning population estimates from biomass surveys in San Francisco and Tomales bays have been conducted by the Department since 1973, but were discontinued in Tomales Bay after the 2005-06 season. Spawning ground surveys in Humboldt Bay were conducted during the 1974-75, 1975-76, 1990-91, and 2000-01 through 2006-07 seasons. Spawning ground surveys assess the total number of eggs spawned, and these data are used to calculate the parental population size (Section 3.2.2.1.1 of the FED). A general herring survey was completed in Humboldt Bay in early 2015 to identify spawning waves, spawn areas, length frequency composition and to update herring fecundity data, this effort did not however provide a biomass estimate.

Since the 1973-74 herring season, the Department has conducted annual spawning biomass estimates for San Francisco Bay using spawn deposition surveys. From 1990 through 2003, the Department derived the spawning biomass estimate in San Francisco Bay from a combination of the spawn deposition and hydroacoustic surveys. Beginning with the 2003-04 season, the Department reverted to spawn deposition surveys as the primary assessment tool to estimate the spawning biomass. This decision was based on a California Sea Grant peer review of the management of the commercial fishery that indicated the spawn deposition survey method tended to provide a better estimate of herring biomass. Currently, the spawn deposition survey is used in conjunction with trawl surveys to determine age and population structure of herring schools entering San Francisco Bay. Spawning biomass estimates for San Francisco Bay from the 1979-80 through the 2014-15 seasons are shown in Figure 2.2. As a result of state-wide reduced fishing effort as well as reduced staffing and budget constraints; the Department is not able to conduct spawning biomass surveys in Tomales Bay, Humboldt Bay, or the Crescent City area. It should also be noted that no commercial fishery has taken place in Tomales Bay since 2007, since 2005 in Humboldt Bay, and since 2002 in Crescent City.

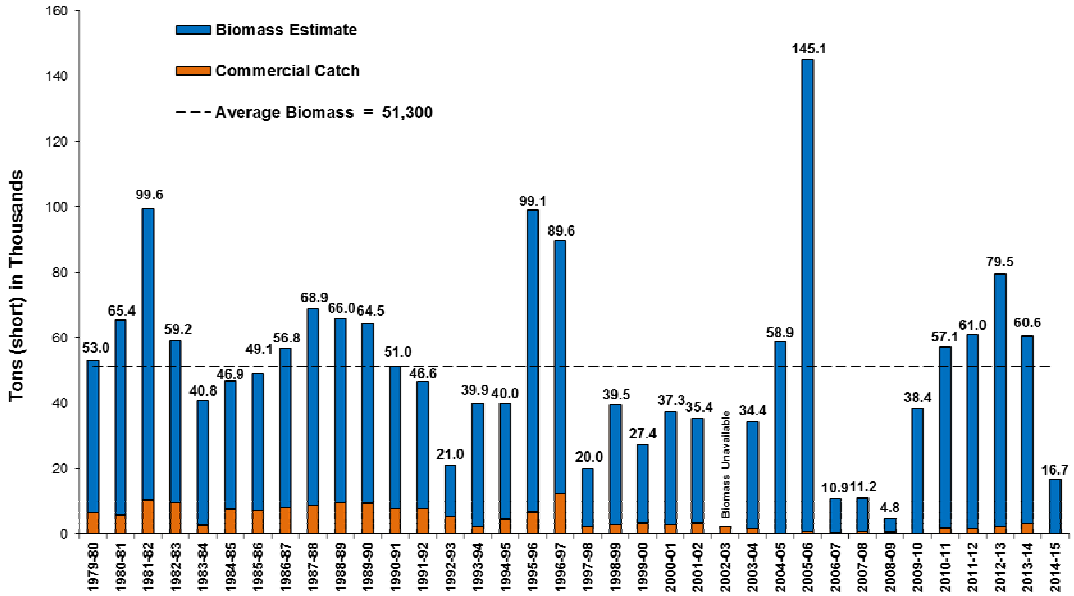

Figure 2.2 San Francisco Bay Pacific herring biomass estimates and commercial catch from the 1979-80 season to 2014-15 season.

Annual fishing quotas are intended to provide for a sustainable fishery and have historically been limited to a total catch not to exceed 20 percent (harvest percentage) of the previous season's estimated spawning biomass. This harvest percentage was selected, based upon model simulations, to help ensure adequate protection of the herring resource while taking into account accidental overages and other management uncertainties. This model, however, assumes stable environmental and biological conditions. In an attempt to account for potential season-to-season variability in these conditions, the Department has set even more conservative harvest percentages. In 2003, due to exploitation rate concerns, the Department requested a peer review of its fishery management activities. The Department worked with California Sea Grant to assemble a team of scientists with demonstrated expertise in modeling and fish population assessment. A key recommendation resulting from this peer review was that a harvest rate in the range of 10-15 percent would be sustainable and that a lower level would provide a desirable target for stock rebuilding (California Sea Grant Extension Program 2003). Based on this assessment, the Department has continued to recommend low harvest percentages to the Commission, and since the 2010-11

season, the Department has recommended quotas less than or equal to five percent of the previous season's estimated spawning biomass. Actual exploitation rates (catch percentages) by the commercial fishery have equaled an average of approximately four percent of the total spawning biomass since the 2003-04 season and have equaled an average of less than 10 percent of the spawning biomass since the 1979-80 season (Figure 2.2).

Quotas are the principal regulatory tool used to establish adequate protection of herring as an important forage species and to provide for the long-term yield of the commercial fishery. Each year, the Department recommends a harvest percentage that is not determined by a fixed mathematical formula; rather, the recommendation is based upon modeling results and takes into account additional data collected each season, such as ocean productivity and bay conditions, growth rates of herring, strength of individual year-classes, and predicted size of incoming year-classes (*i.e.*, recruitment). In response to poor recruitment, indication of population stress, and/or unfavorable oceanographic conditions, harvest percentages beginning in 2003 have been set at or below 10 percent. Since the 2003-04 season, harvest percentages on average have allowed over 90 percent of the spawning biomass to return to the ocean after spawning in the bay. The Department and DHAC recommended a no fishery option (zero ton quota) for the 2009-10 season, when the herring spawning biomass in 2008-09 fell to a new low of 4,833 tons. The Commission adopted this recommendation and the commercial fishery was closed in San Francisco Bay for the 2009-10 season. Since the re-opening of the fishery for the 2010-11 season, the Department has recommended harvest percentages at five percent or less of the spawning biomass. Based on accepted fishery management principles these harvest percentages are conservative and represent a precautionary approach to safeguard the population as forage and to provide a robust reproductive base to allow for stock rebuilding.

In addition to annual changes in quotas, management recommendations to improve or provide for the efficient harvest and orderly conduct of the herring fisheries are solicited from interested fishermen, individuals at public meetings, and DHAC. The proposed amendments to Sections 163 and 164, Title 14, CCR, addressed by this FSED, reflect both Department and the public recommendations.

2.3.1. Herring Fisheries

2.3.1.1. San Francisco Bay 2015-16 Quota

The spawning biomass estimate for the 2014-15 season was 16,674 tons, significantly below the historical average (1979-80 season to present) of 51,300 tons (Figure 2.2). This was also a substantial decrease in spawning biomass from the previous season's estimate of 60,600 tons, and is the fourth-lowest estimated biomass on record since the 1979-80 season. The population decline recorded during the 2014-15 season is likely attributable to poor oceanic and estuarine conditions which adversely affect herring survival as described in Chapter 3.3 of this FSED.

The Department is providing the Commission the option to consider a quota range between zero (0) and five percent of the 2014-15 spawning biomass estimate of 16,674 tons. The Department recommends a conservative quota option of 834 tons or five percent harvest rate for the 2015-16 season. Even with the lower than expected spawning biomass the Department does not consider a five percent harvest rate to be a risk to the sustainability of the fishery. The Department's recommendation would maintain fishing mortality at a comparatively low level, which will be beneficial for stock recovery. Additionally, a small fishery quota will ensure herring's role as an important forage species is protected while providing limited opportunity to the commercial fishery. This approach will help maintain a sustainable fishery while continuing to support herring's integral role in both ocean and bay ecosystems.

The Department considers that a conservative quota maintains sustainability while safeguarding sufficient numbers of herring for stock rebuilding. Additionally, fishing effort in the San Francisco Bay herring fishery has decreased significantly during the past several years. During the 1990s, the number of herring permits peaked at over 450 with over 120 vessels participating. In contrast, during the 2014-15 season there were only 171 herring permit renewals and only two vessels elected to participate in the gill net fishery.

From the total quota for San Francisco Bay, separate permit quotas are established for each gill net platoon (i.e., Odd and Even fishing groups). The overall quota is allocated among the platoons in proportion to the number of permits assigned to each platoon. Adjustments to quotas for each fishing platoon are calculated annually to offset permittee attrition and the use of herring permits in the HEOK fishery. HEOK fishing occurs only in San Francisco Bay, and the fishery is regulated under Section

164, Title 14, CCR. Individual HEOK quotas depend on the total herring fishery quota for San Francisco Bay established by the Commission under Section 163, Title 14, CCR. In 1994, the Commission provided HEOK permittees possessing “CH” permits with a HEOK quota equal to approximately 0.79 percent of the overall quota. The Department is recommending increasing the allocation from 0.79 to 1.0 percent for the 2015-16 season. All HEOK permittees must hold a herring permit. To fish HEOK, permittees must waive herring fishing privileges under Section 163 and “exchange” their “share” of the herring quota for an equivalent HEOK quota. The current factor used to convert an equivalent amount of whole fish to the herring eggs on kelp fishery is 0.2237. This factor was derived from the round haul to gillnet conversion ratio allotted during the 1988-89 season.

2.3.1.2. Tomales Bay, Humboldt Bay, and Crescent City Area 2015-16 Quotas

The quotas for Tomales Bay, Humboldt Bay, and Crescent City area are not to exceed 350 tons, 60 tons, and 30 tons, respectively. No changes are proposed for these fishing areas for the 2015-16 season. It should be noted that these areas have not been subjected to any fishing pressure for a number of seasons. No commercial fishing activity has taken place in Tomales Bay since 2007, in Humboldt Bay since 2005 and in the Crescent City area since 2002. For the 2014-15 season, Tomales Bay had nine permit renewals and Humboldt Bay and Crescent City had three renewals combined. Permit renewals have fallen over the past several years, reducing the fleet capacity in these areas. Poor market conditions and unique site constraints at each location further limit the viability of herring fisheries in the near term for these areas.

2.4. Project Alternatives

Three alternatives to the proposed project are considered and are examined as they apply to this FSED. Two of these alternatives take the form of additional changes to the existing regulations that could feasibly be joined. The third alternative is a no project (no fishery) alternative. In evaluating alternatives, the comparative merits and impacts of individual alternatives that could be logically and feasibly joined should be considered as so joined unless otherwise stated. The alternatives to be considered under this FSED are:

- Alternative 1 (no project, i.e. no fishery). Under this alternative, the commercial

harvest of herring would be prohibited.

- Alternative 2. The existing regulation alternative would maintain the herring fishery regulations as amended through 2014.
- Alternative 3 (individual vessel quota for gill net vessels in herring fishery). Under this alternative, the proposed regulations would be modified by establishing an individual vessel quota for all gill net vessels. The proposed individual gill net vessel quota would equal the overall gill net quota divided by the number of permittees using gill net gear.

The following section states the specific purpose of the alternatives and summarizes the factual basis for determining that the alternatives are reasonably necessary.

2.4.1. Alternative 1 (no project)

This is a CEQA required alternative. It provides a reference for comparison to the proposed project and alternatives 2 and 3.

2.4.2. Alternative 2 (existing regulations)

The existing regulation alternative would maintain the herring fishery regulations as amended through 2014 and would not provide for adaptive management of the State's resources. The only amendment or change suggested allows for updating the season year.

2.4.3. Alternative 3 (individual vessel quota)

This alternative would establish an individual herring quota for each San Francisco Bay gill net permittee. Under existing regulations [Section 163(g)(4)(C), Title 14, CCR] an overall herring quota is established for each of the three gill net groups (platoons) in San Francisco Bay, allowing individual permittees to take and land as much fish (tonnage) as they are capable of until the overall quota for their respective group is reached. However, there has never been a clear consensus of support among industry members about this issue. The Department is concerned about the level of enforcement effort that would be necessary to effectively monitor and enforce this alternative. See Section 2.4.3 of the FED for a full description of this alternative.

Chapter 3. ENVIRONMENTAL SETTING

3.1. General

Herring are found throughout the coastal zone from northern Baja California on the North American coast, around the rim of the North Pacific Basin and Korea on the Asian coast (Hart 1973). In California, herring are found offshore during the spring and summer months foraging in the open ocean. Beginning as early as October and continuing as late as April, schools of adult herring migrate inshore to bays and estuaries to spawn. Schools first appear in the deep water channels of bays to ripen (gonadal maturation) for up to two weeks, then gradually move into shallow areas to spawn. The largest spawning aggregations in California occur in San Francisco and Tomales bays. San Francisco Bay is also near the southern end of the range for herring spawning (Miller and Schmidtke 1956).

Herring are a food source for many species of birds, fish, invertebrates, and mammals. Predation is particularly high during spawning when adult fish and eggs are concentrated and available in shallow areas. Predation by birds and fish during the egg stage, when eggs are deposited in the intertidal and shallow subtidal zones, is a significant cause of natural mortality for herring.

Spawning occurs in the intertidal and shallow subtidal zones. Males release milt into the water column while females extrude adhesive eggs on a variety of surfaces including vegetation, rocks, and man-made structures such as pier pilings, boat bottoms, rock rip-rap, and breakwater structures. Embryos (fertilized eggs) typically hatch in about 10 days, determined mainly by water temperature. Larval herring metamorphose into juvenile herring in about 10 to 12 weeks. In San Francisco Bay, juvenile herring typically stay in the estuary through summer, and then migrate out to sea. Research conducted on herring in Straits of Georgia, British Columbia (BC) suggests that 1- and 2-year old herring occupy inshore waters and older herring occupy shelf waters (Haegele 1997). In BC waters, juvenile herring were found in shallow nearshore waters of less than 50 meters during the summer, in shoals of similar-sized individuals. Based on the life history data of herring in BC waters, there may be very little direct competition for food between age classes, and the first opportunity for direct

interaction may be when herring sexually mature and join the spawning stock (Hay 2002).

Most herring fisheries occur during the spawning season. The herring gill net fisheries catch herring as they move into the shallows to spawn. The traditional product from this fishery, *kazunoko*, is the sac roe (eggs) removed from the females, which is processed and exported for sale in Japan. California's roe herring fisheries have historically occurred in the Crescent City area, Humboldt Bay, Tomales Bay, and San Francisco Bay.

The San Francisco Bay HEOK fishery suspends giant kelp, *Macrocystis pyrifera*, from rafts for herring to spawn on in shallow water areas. The kelp is harvested near the Channel Islands and/or in Monterey Bay and then transported to San Francisco Bay. The product of this fishery is the egg-coated kelp blades that are processed and exported to Japan. This product, *komochi* or *kazunoko kombu*, is typically served as an appetizer during New Year's celebrations.

The herring fishery in California has been intensively regulated since its inception in 1973, at first by the California State Legislature, then by the Commission. Department estimates of the spawning population biomass have provided a critical source of information used for establishing fishery quotas to control the harvest of herring and provide for the long-term health of the herring resource. A thorough description of the environmental setting is provided in Chapter 3 of the 1998 FED, which includes herring life history, ecology, status of stocks and fisheries at that time, and biological and environmental descriptions of herring fishery locations (Crescent City area, Humboldt Bay, Tomales Bay, San Francisco Bay, and Monterey Bay).

3.2. Spawning Population Estimation Methods

During the 1973-74 through 1988-89 seasons, Department estimates of San Francisco Bay herring spawning biomass were made using spawn deposition surveys (refer to Sections 3.4 and 3.5 below). From the 1990-91 through 2001-02 seasons, the Department estimated San Francisco Bay spawning biomass using a combination of spawn deposition and hydroacoustic surveys. In 2002-03, the Department was unable to generate a spawning biomass due to a wide discrepancy between the two survey methods.

The Department assessed the two methods using the Coleraine Model and through an independent peer review conducted by California Sea Grant (California Sea Grant Extension Program 2003). The results indicated that the spawn deposition survey provided a better estimate of spawning biomass. Beginning with the 2003-04 season, the Department reverted to using the spawn deposition surveys alone for biomass estimation. In addition to the spawning biomass estimates, the Department collects fishery independent age composition data from the population and fishery dependent age composition data from the commercial catch. All of the information collected by the Department, including ocean conditions, is used in annual population assessments.

3.3. Status of the San Francisco Spawning Population

The spawning biomass estimate for the 2014-15 season was 16,674 tons. This estimate represents a decrease of 43,926 tons from the 2013-14 season estimate of 60,600 tons (Figure 2.2). The reduction in the spawning biomass is likely due to unfavorable environmental and biological conditions in the California Current Ecosystem during the summer and fall of 2014.

Variability in several oceanographic processes can affect coastal and nearshore productivity, and in turn the spawning population of herring in the San Francisco Bay. Coastal upwelling has been shown to affect recruitment in estuarine populations of forage fish including herring (Reum et al. 2011). During coastal upwelling deep, cold, nutrient-rich water is brought to the surface nearshore by Ekman transport resulting from predominantly north winds during spring and summer along the coast of California. The presence of this nutrient-laden water results in increased plankton which fuels production in coastal pelagic ecosystems (Rykaczewski and Checkley 2008). However, large-scale oceanographic processes in the Pacific Ocean such as the El Nino Southern Oscillation (ENSO) cycle and the Pacific Decadal Oscillation (PDO) can affect the strength of upwelling and the nutrient content of surface water, in turn affecting nearshore marine ecosystems (Chavez et al. 2002, Checkley and Barth 2009). The ENSO cycle, which is measured using various indices including the Multivariate ENSO Index (MEI), is the major mode of climate variability in the equatorial Pacific and can have strong impacts throughout the Pacific Basin and the California Current Ecosystem

(CCE). Positive MEI values are associated with El Nino conditions. The PDO reflects periodic changes in North Pacific sea surface temperature that occur at a longer temporal scale than the ENSO cycle. PDO values fluctuate between positive values, which indicate warmer, less productive conditions, and negative values, which indicate cooler, more productive conditions in the North Pacific.

Climate data reported in early 2015 indicate that multiple oceanographic processes in combination have resulted in unfavorable biological conditions in the CCE during the period of time herring spend feeding in the Pacific ocean (National Marine Fisheries Service 2015). Following a year of strong coastal upwelling in 2013, upwelling indices showed a return to average and below-average upwelling in 2014. Although MEI shows ENSO-neutral conditions as of December 2014, the PDO switched to a strongly positive (warm) phase, a reversal from the relatively high-productivity, cool regime that had dominated the region from mid-2010 through the end of 2013. Record-high sea surface temperatures that dominated the Gulf of Alaska spread south into the northern and central CCE during the fall of 2014. These conditions contributed to an overall reduction in productivity in the NE Pacific in the fall of 2014, which was reflected in a sharp decline of the lipid-rich, northern copepod species that are of high nutritional value to pelagic fish species. This overall reduced productivity in the NE Pacific, and CCE specifically, was likely a major contributing factor to the reduction in spawning herring biomass observed by the Department during the 2014-15 spawning season in San Francisco Bay.

Twelve spawning events were recorded during the 2014-15 season, primarily in the northern areas of San Francisco Bay and along the San Francisco waterfront (Table 3.1). Spawning events occurred as far north as Point San Pablo and south to Coyote Point (Figure 3.1). The first recorded spawn of the season occurred October 19-20, 2014, and the last recorded spawn occurred from February 25-March 1, 2015. There were several spawning events in Richardson Bay and smaller events to the east along the Marin county shore. The largest spawn event of the season was at Point Richmond with 6,716 tons of herring recorded. The second largest was the Richardson Bay to Point Diablo spawn with 3,947 tons, followed by the San Francisco waterfront spawn, estimated at 3,458 tons.

Table 3.1 2014-15 San Francisco Bay Pacific herring spawning biomass estimate by event with commercial catch totals.

#	Approximate Spawn/Catch Date	Location	Submerged Areas	Shore Areas	Spawn Total	Gill-Net	HEOK	Biomass Total
1	October 19-20, 2014	Richardson Bay	*Trace*					*Trace*
2	November 25-26, 2014	Richardson Bay	375		375			375
3	December 12-14, 2014	Richardson Bay	18		18			18
4	December 20-23, 2014	Richardson Bay	499	11	509			509
5	December 27-30, 2014	San Francisco Waterfront		3,458	3,458			3,458
6	January 3-4, 2015	Coyote Point		166	166			166
7	January 5-8, 2015	Richardson Bay	1,016		1,016			1,016
8	January 10-13, 2015	Paradise Cove-Belvedere Cove	163	197	360			360
9	January 19-21, 2015	Richardson Bay-Point Diablo	1,596	2,312	3,909	38.0		3,947
10	January 29-February 1, 2015	Point Richmond-Point San Pablo	4,206	2,502	6,708	7.6		6,716
11	February 1-2, 2015	Tiburon (Keil Cove-Belvedere Cove)	23	58	81			81
12	February 25-March 1, 2015	Richardson Bay	30		30			30
Spawn Events (n) = 12		**Totals in short tons**	**7,925**	**8,703**	**16,628**	**46**	**0**	**16,674**

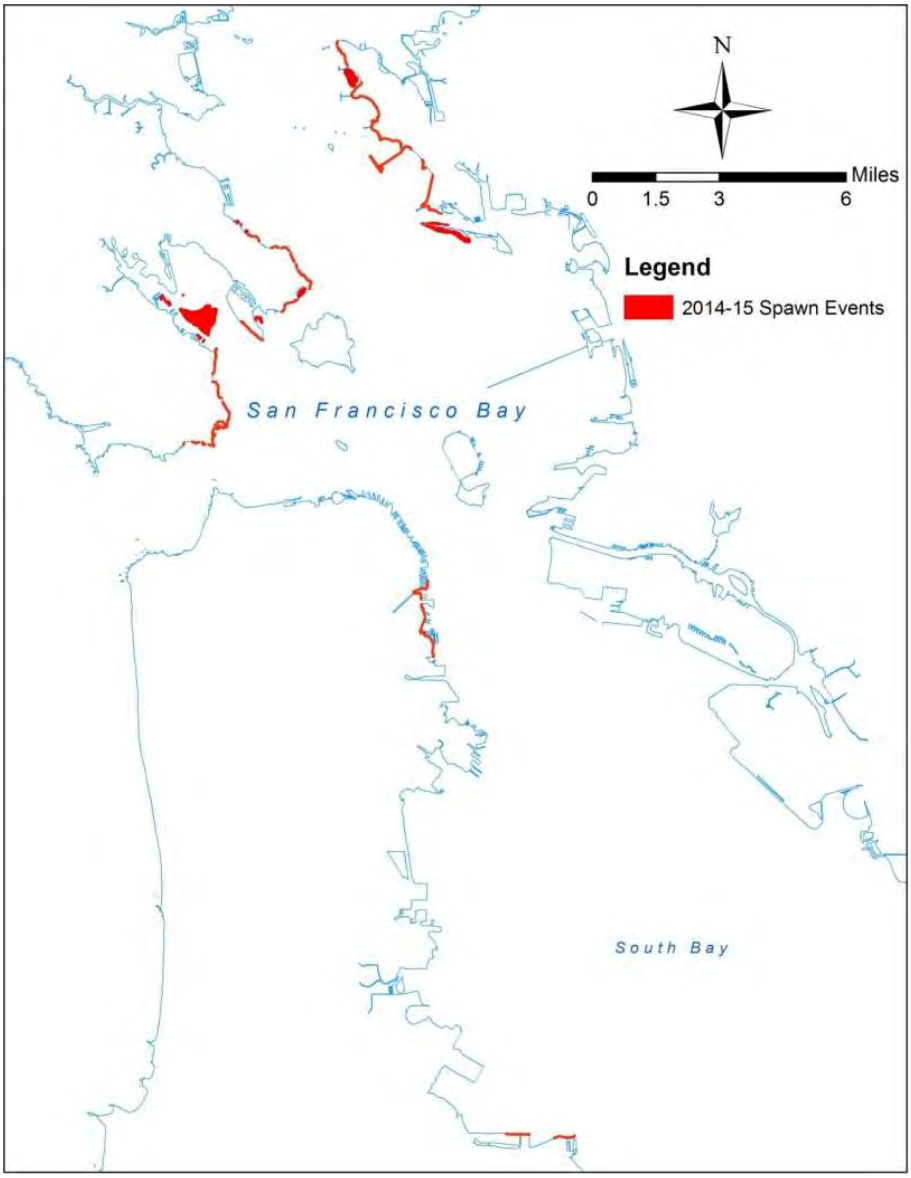

Figure 3.1 San Francisco Bay Pacific herring 2014-15 season spawn event map.

The Department uses the spawning stock biomass and age class structure to assess the spawning population and determine an appropriate harvest level from the available stock. Herring were captured with research nets to estimate the age class structure of the San Francisco Bay spawning population this season. Preliminary ages are assigned using a length-age key. Final age is determined from a surface reading of the otoliths (ear bones) of herring. Data are compiled into age classes (groups of fish the same age) for analysis. The age class composition is used to assess the cohorts

(year classes) of herring born in a given season which compose the spawning population.

Spawning population age composition for 2014-15 shows that individual year class biomass declined from the previous season for all age classes, except age 7 – year old herring (Figure 3.2). The spawning biomass of age 2- and 3-year old herring was the lowest since the 2008-09 season. Reduced numbers of young fish negatively affect recruitment to the San Francisco Bay fishery and they are typically the largest cohorts in the spawning population. The proportion of age 6 and older herring increased between 2013-14 and 2014-15; with age 7-year old herring collected in both research and commercial samples for the first time since 1998-99 (Figures 3.3 and 3.4). This is important as the commercial fishery is supported by a greater proportion of older fish from the spawning population. Increased biomass of older age classes may reduce the burden on younger cohorts to support the fishery. Maintaining a healthy age class structure, including a proportion of older age classes is a management goal of the Department.

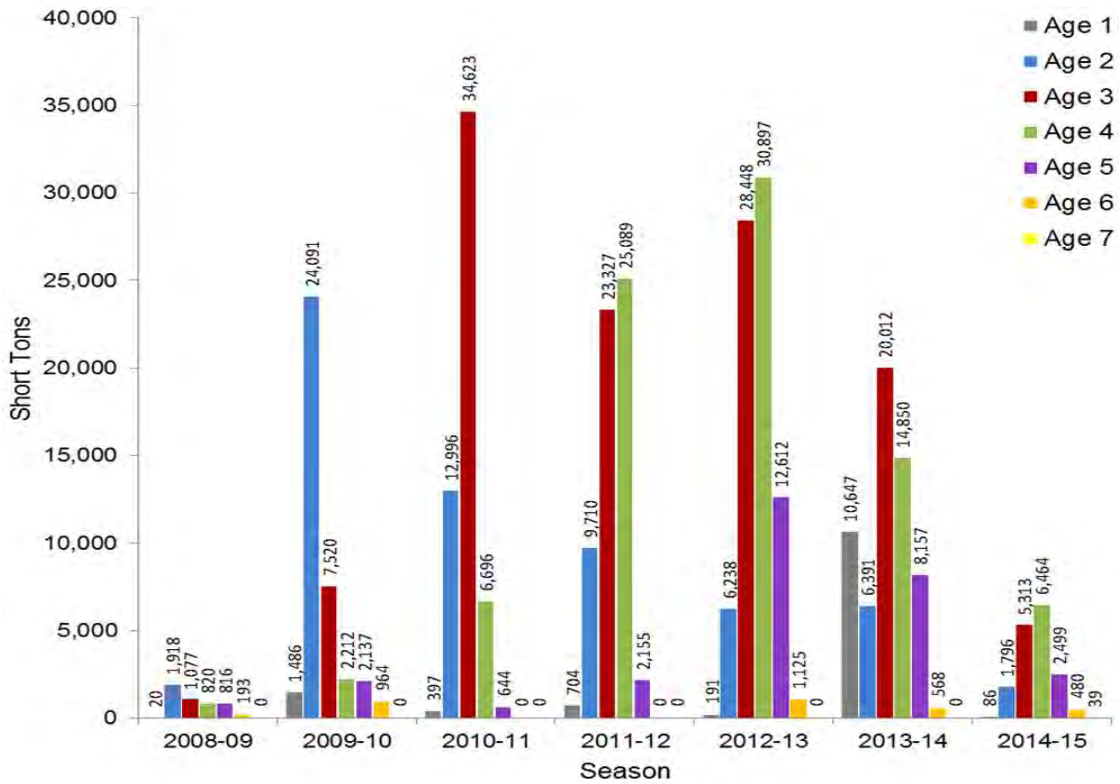

Figure 3.2 San Francisco Bay spawning biomass by age class for the 2008-09 to 2014-15 seasons based on research catch.

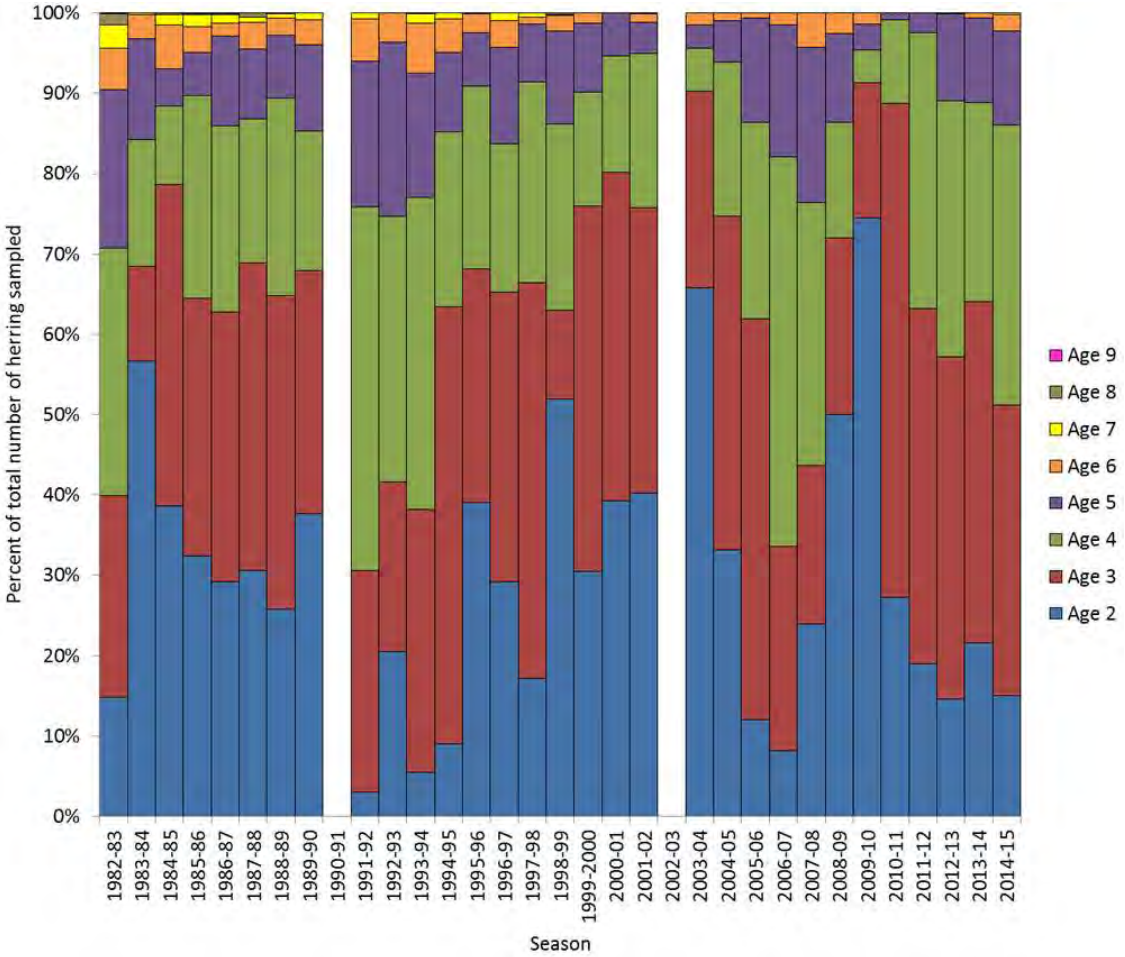

Figure 3.3 Age composition of the research catch (excluding age-1 fish) by number of ripe fish for the San Francisco Bay Pacific herring spawning biomass. Note: Data unavailable for the 1990-91 and 2002-03 seasons.

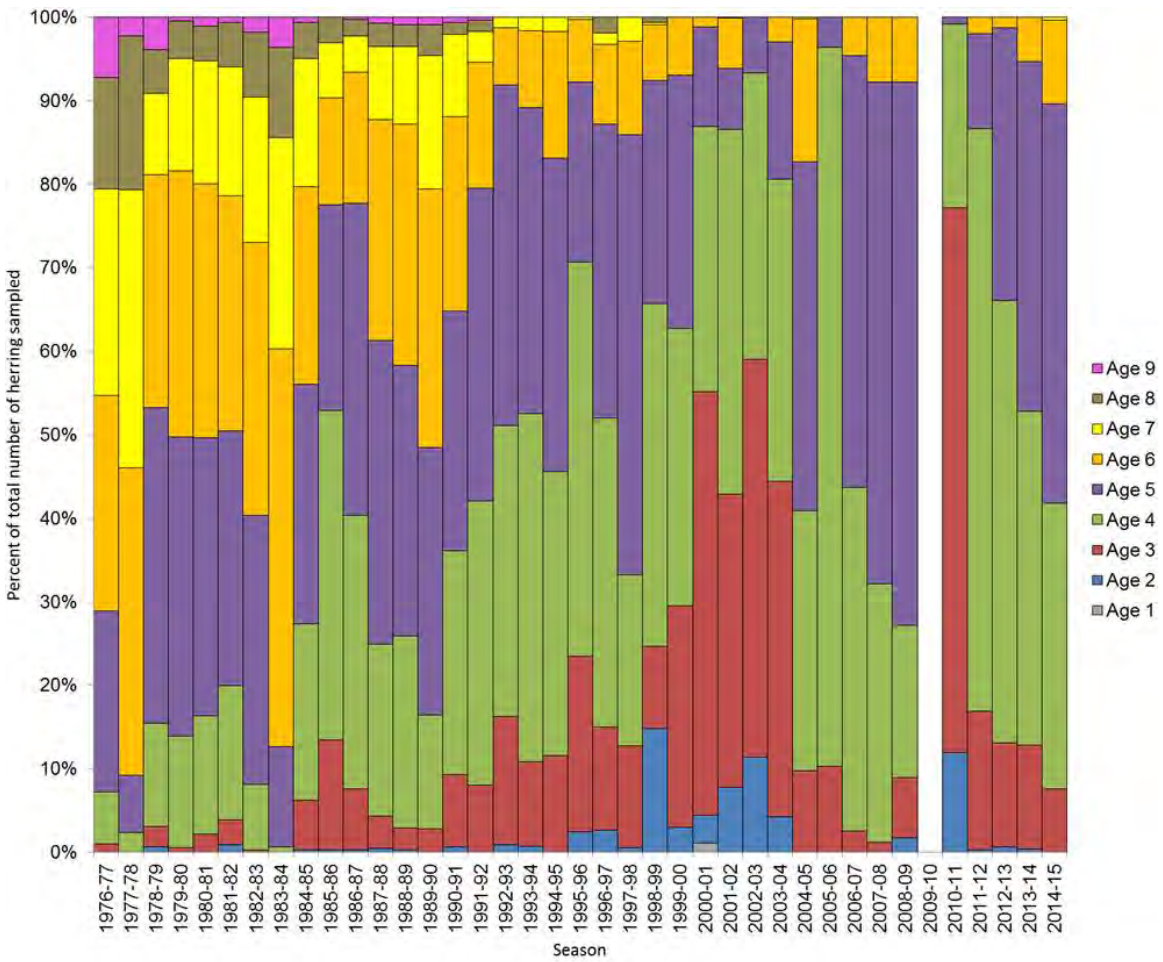

Figure 3.4 Age composition of the commercial gill net catch. Percent by number of fish for the San Francisco Bay Pacific herring fishery. Note: The fishery was closed during the 2009-10 season.

The length-weight relationships for herring in spawning condition are used to develop a condition factor index (CI), which is derived from a fish's weight divided by the cube of its length, and used to describe the general health of a population. The mean CI for mature 2014-15 San Francisco Bay herring was above average, showing a slightly improved condition relative to the 2013-14 season (Figure 3.5).

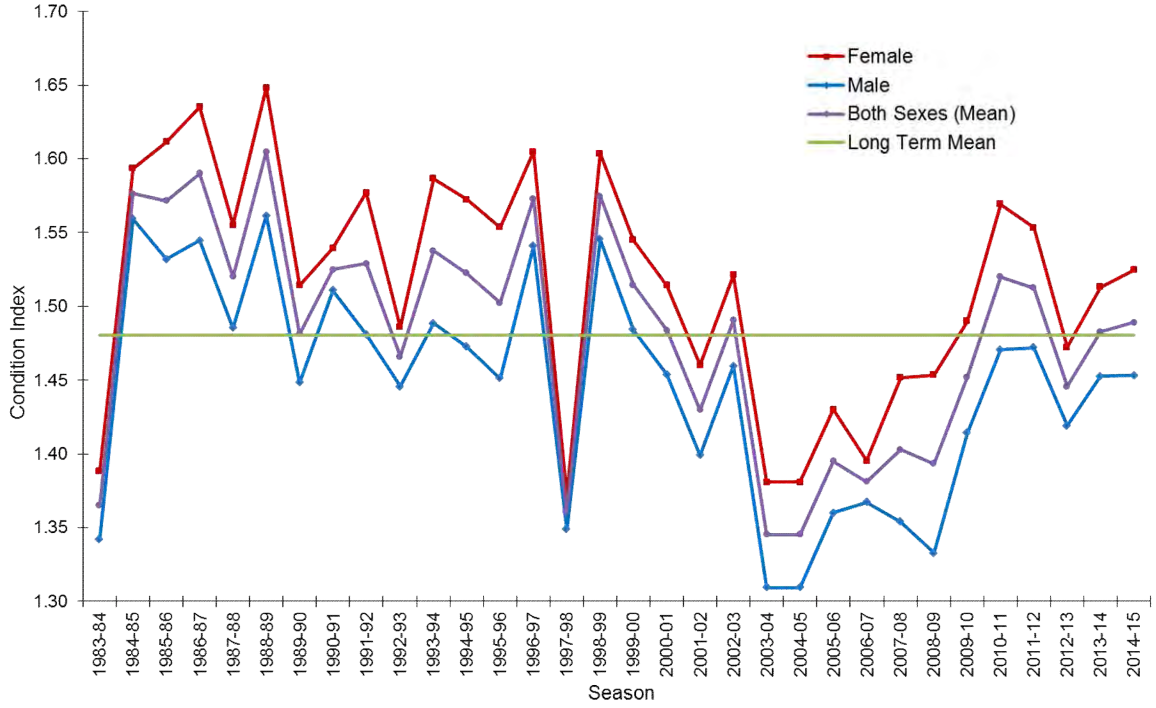

Figure 3.5 Average Condition Index (CI) and historical mean CI for ripe male and female fish from the Department's San Francisco Bay Pacific herring research catch.

In summary, the spawning biomass estimate for the 2014-15 season was 16,674 tons, well below the historical average (1979-80 season to present) of 51,300 tons. This spawning biomass estimate represents a substantial decrease from the previous season's estimate of 60,600 tons, and is the fourth-lowest estimate on record since the 1979-80 season. Spawning population age composition for 2014-15 shows that individual year class biomass declined from the previous season for all age classes, except age 7 herring. The decline recorded during the 2014-15 season is likely attributable to poor oceanic and estuarine conditions which adversely affect herring. Despite the observed reduction in spawning biomass, the Department considers precautionary harvest percentages (at or below five percent) of the previous season's spawning biomass as the primary means of assuring a sustainable fishery even in years of unfavorable ecological conditions. Continued monitoring of both the herring spawning population and commercial catch will ensure that the Department's management goals are achieved and younger fish are not harvested at unsustainable

levels. These management measures help to maintain herring's importance as a key forage species in the California Current Ecosystem.

3.3.1. San Francisco Bay Herring Young of the Year

Herring young-of-the-year (YOY) are collected by the Interagency Ecological Program for the San Francisco estuary by the Department's San Francisco Bay Study (SFBS) during the spring and summer of each year. The SFBS conducts surveys to determine the abundance and distribution of invertebrates and fishes in the San Francisco estuary from the western Sacramento-San Joaquin Delta to San Francisco Bay. Stations are sampled each month using a midwater trawl that is towed obliquely through the water column to capture species inhabiting varying depths. The catch from this net is used to calculate an index of abundance for YOY herring (Fleming 1999).

The herring YOY abundance index for 2014 was below average for the period of record (Figure 3.6). The abundance of YOY indicated less favorable environmental conditions for survival than the prior year within the San Francisco estuary (Hieb and Giannetta in preparation). However, recruitment to the spawning stock is affected by a number of factors during the first two to three years of life, including predation, food availability, competition, and environmental conditions. Drought conditions and related increases in salinity in the San Francisco estuary result in a variety of potential impacts on YOY herring, some negative (Jassby et al. 2003, Kimmerer 2002, Orsi 1999) and others positive (Gilbert et al. 2014).

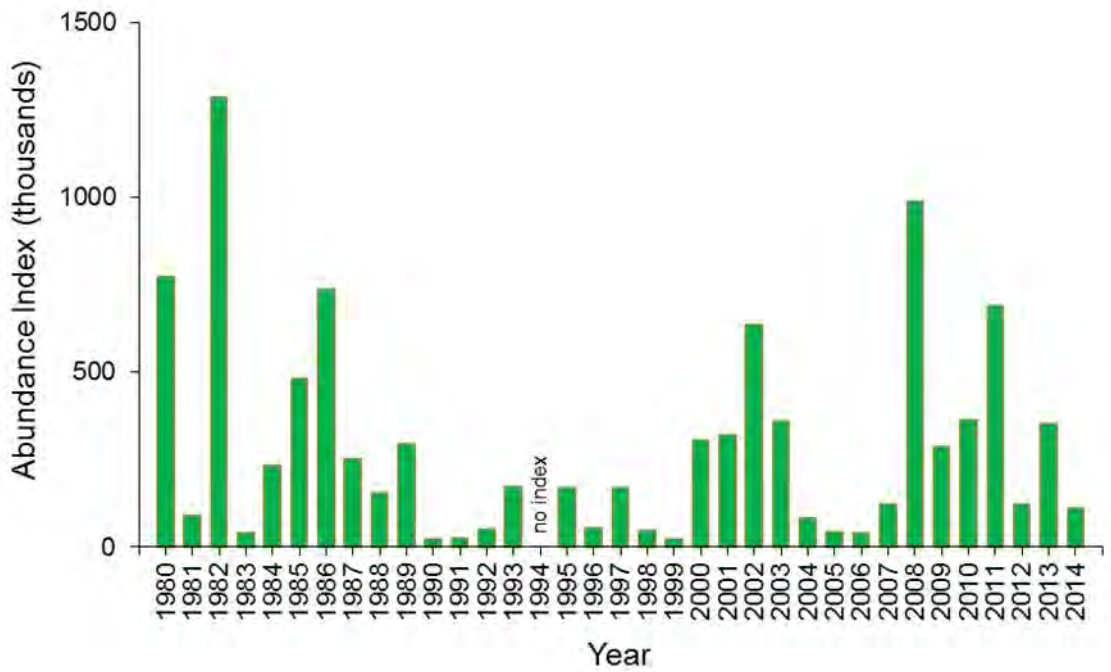

Figure 3.6 San Francisco Bay Pacific herring young-of-the-year abundance indices 1980-2014. Note: No index was calculated for 1994.

3.3.2. *Cosco Busan* Oil Spill and Potential Impacts to San Francisco Bay Herring

On November 7, 2007, the container ship, *Cosco Busan* spilled an estimated 58,000 gallons of bunker fuel (IFO 380) into San Francisco Bay. Due to the timing of the oil spill, herring resources were potentially impacted. Since the spill occurred prior to the majority of spawning schools entering the bay, the most likely impact would be to spawning habitat and egg and larval development in contaminated areas. Previous studies, conducted after the *Exxon Valdez* oil spill, on herring egg and larval development exposed to weathered oil and polycyclic aromatic hydrocarbons (PAH) indicate impacts range from increased egg mortality to larval developmental abnormalities resulting in poor survival. Significantly higher herring egg and larval mortality was found in oiled versus non-oiled areas, which supports the hypothesis that oil exposure decreases survival and hatching success in late stage embryos (McGurk and Brown 1996). Norcross et al (1996) found herring larvae from oiled areas had low growth rate and high proportions of deformities such as craniofacial defects. Larvae from un-oiled areas in Prince William Sound had less severe abnormalities due to oil exposure through the water column or contaminated prey. PAH compounds found in oil

selectively disrupt embryonic cardiac function and indirectly affect other tissues that are secondary to cardiovascular dysfunction (Incardona et al. 2004). Sublethal effects resulting from oil exposure, such as developmental abnormalities can become lethal at later stages and environmental variables can alter the baseline of sublethal indicators (Hose et al. 1996). Carls et al (2002) reviewed the toxicological impacts on herring from the *Exxon Valdez* oil spill found four to six percent of the spawn occurred within visibly oiled areas. However, elevated concentrations of biologically available oil were found in the water, providing evidence that the primary source of herring egg oil contamination was through the water. While crude oil and bunker fuel oil may have differing chemical properties, potential oil related impacts on herring are probably similar.

A Natural Resources Damage Assessment (NRDA) team conducted a study of egg and larval development in oiled and non-oiled areas in San Francisco Bay. The findings of the NRDA report assist in determining the immediate and long-term impacts to herring resources and direct management activities for San Francisco Bay herring (Cosco Busan Oil Spill Trustees 2012). Field observations by Department staff indicated that key spawning areas were oiled during the spill and impacts of oil exposure on herring may negatively affect year class strength. Herring have evolved reproductive strategies to withstand predation, environmental uncertainties, and stochastic events. The population appears to be recovering and the Department will continue to monitor the population and adapt its management strategies as appropriate.

3.3.3. Importance of Herring as a Forage Species

As described in Chapter 3, Section 3.2.1.8.1 of the FED, herring are an integral component to a healthy functioning marine ecosystem, making up a large portion of the diet of marine organisms from California to Alaska. Herring are a mid-trophic level species that play an important role linking the lower and higher trophic levels in the food web. Changes in abundance and age structure of a forage species such as herring, as well as variability in the size and timing of herring spawn events, can lead to changes in the abundances and behaviors of the variety of organisms that depend on herring and their eggs for food, including important recreational and commercial species as well as threatened and endangered fish, marine mammals, and sea birds. The Commission has adopted a policy that recognizes the importance of forage species to the marine

ecosystem off California's coast and intends to provide adequate protection for forage species through precautionary and informed management. It is the goal of the Department to provide the Commission with management recommendations for herring that take into account their role as an important forage species and are based on the best available science.

3.4. Status of the Humboldt Bay Population

No spawning biomass estimates have been conducted in Humboldt Bay since 2007. However, the herring population was surveyed in the 2014-15 season to achieve the following objectives: 1) identify spawn timing, 2) map spawning areas, and 3) update length, age, and fecundity information. These data were collected as part of a collaborative effort between the Department and the commercial fishing industry to explore the potential for collecting essential fisheries information. Collaboration with key partners is a potentially useful tool to provide information in areas where the Department lacks the resources to assess herring populations. Information from this study will form the basis for future biomass estimates and will also serve to inform the future development of a Fishery Management Plan that will include San Francisco Bay, Tomales Bay, Humboldt Bay, and the Crescent City area.

Chapter 4. ENVIRONMENTAL IMPACT ANALYSIS AND CUMULATIVE EFFECTS

This chapter addresses the impacts and cumulative effects of the proposed project (changes to the commercial herring fishing regulations) on the existing environment described in Chapter 3 of this document and Chapter 3 of the FED. The proposed project and two of the three alternatives will permit a continuation of the regulated commercial harvest of herring in California. An analysis of the impacts of the proposed project is discussed in this FSED.

Existing regulations permit the commercial harvest of herring in four geographical areas: San Francisco Bay, Tomales Bay, Humboldt Bay, and the Crescent City area. Chapter 4 of the FED examined the environmental sensitivity of each of these areas at existing harvest levels. Thirteen environmental categories were considered, including; land use, traffic circulation, water quality, air quality, housing, public utilities, geological, biological, archaeological, scenic, recreation, noise, and growth inducement. Three categories (land use, archaeology, and growth inducement) were considered to have no environmental sensitivity to commercial herring fishery activity in any of the four geographical areas and were not considered in the impact analysis. Potential impacts relative to the above categories are re-examined annually and addressed in the Supplemental Environmental Document (SED). The basis for this assessment is provided in detail in Section 4.1 of the FED.

Section 4.2 of the FED provided a detailed impact analysis for the ten categories found to have environmental sensitivity to commercial herring fishery activity. Potential impacts to traffic circulation, water quality, air quality, housing and utilities, geology, scenic quality, recreational opportunities, and noise levels that were identified as an aspect of herring fisheries varied in degree with geographic area, but all were considered to be localized, short-term, and less than significant. Some of these potential impacts are mitigated by various existing regulations.

Section 4.2.6 of the FED provided a detailed analysis of the potential environmental impacts to biological resources that exist from commercial herring fisheries. The proposed project adds no new impacts to be analyzed.

The FED divided potential impacts into two categories: (1) direct harvest impacts, and (2) trophic level impacts. Short and long-term potential adverse impacts

exist within each of these categories. Many of these potential impacts are mitigated by current management practices including annual spawning population estimates and regulations that control harvest and fishery impacts. Others are considered localized, short-term, and less than significant.

Chapter 5 of the FED provided a detailed analysis of the factors that have the capacity to influence future herring population status in California in addition to the existing herring fisheries or alternatives (cumulative effects). The proposed project introduces no new cumulative effects to those addressed by the FED. The FED discussed in detail the factors with greatest potential for cumulative effects, including continued commercial harvest of herring, unusual biological events, competitive interactions with other pelagic fish, unusual weather events, habitat loss, and water quality. Mitigation for these potential cumulative effects will be provided by annual stock assessments, annual changes in the level of harvest, or the selection of a no fishery alternative.

The Department identified and addressed impacts and cumulative effects of the proposed project on the existing environment described in Chapter 3 of the FED, subsequent FSEDs, and this FSED. No impacts were identified that were not already addressed in the FED or prior FSEDs. Other impacts identified were determined to be localized, short-term, and less than significant.

Chapter 5. ANALYSIS OF ALTERNATIVES

An analysis of the potential environmental impacts of the three alternatives described in Section 2.4 is provided in Chapter 6 of the FED. Three commercial harvest alternatives were selected for consideration by the Commission based on the Department's recommendation, public comment received during the normal review process, or in response to the NOP. These alternatives were selected to provide the Commission with a range of commercial harvest alternatives. The two commercial harvest alternatives contain common elements with only selected elements of the management framework considered as alternatives. A "no project" (no commercial harvest of herring within California state waters) alternative is also provided.

5.1. Alternative 1 (no project)

The "no project" alternative would eliminate the commercial harvest of herring resources within California waters. Selection of this alternative would be expected to: (1) reduce total mortality and allow herring stocks to increase to carrying capacity; (2) increase competition between species (e.g., sardines and anchovies) occupying the same ecological niche as herring and potentially reduce standing stocks of these species; (3) increase the availability of herring to predators by reducing search effort and increasing capture success; (4) eliminate the ethical concern of those opposed to the commercial harvest of herring and the scientific information on herring derived from sampling the commercial harvest; and (5) eliminate revenues to local and regional economies, and state and federal agencies derived from the commercial harvest of herring.

Localized, short-term, and less than significant impacts to traffic circulation, water quality, air quality, housing, utilities, scenic quality, recreational opportunities, and noise levels would also be eliminated under the no project alternative. Section 6.1 of the FED provides a full analysis of the potential impacts associated with this alternative.

5.2. Alternative 2 (existing regulations)

Existing regulations, adopted in 2014, were for the 2014-15 herring commercial fishing season. These regulations reflect the amendments as adopted by the Commission in August 2014. Under Alternative 2, the herring fishery regulations as

amended through 2014 would remain in place for the 2015-16 season. Under this alternative, existing regulations would be modified only by updating the season year. The environmental impacts of Alternative 2 would be similar to those of the proposed project, though there is potential to harvest herring above the recommended 2015-16 season quota. As a result Alternative 2 would not provide for consistent adaptive management of the State's resources.

5.3. Alternative 3 (individual vessel quota)

This alternative modifies proposed regulations by establishing individual boat quotas for the herring gill net fishery in San Francisco Bay. Localized, short-term, and less than significant impacts of this alternative to circulation of traffic, water quality, air quality, housing, utilities, scenic quality, recreational opportunities, and noise levels are expected to be comparable to the proposed project. However, fishing effort could extend further into the season since the economic incentive would direct effort toward higher roe counts rather than quantity resulting in high-grading or throwing back males. Without individual boat quotas, typically, overall quotas have been met or fishing effort ceases long before season closure. Having the latitude to strive for higher roe counts could add incrementally to the potential impacts associated with the fishery. Section 6.3 of the FED provides further analysis of the potential environmental impacts of this alternative.

Chapter 6. CONSULTATION

Chapter 6 of the FED explains the role that consultation with other agencies, professionals, and the public plays in the Department's marine resource management programs. Department staff involved in herring resource management are in contact with other agencies, biologists, and researchers involved in herring management on an ongoing basis. The U.S. Fish and Wildlife Service, NOAA-Fisheries Service, U.S. Environmental Protection Agency, and other state and federal agencies have received all environmental documents that have been prepared regarding herring. To date, the Department has not received comments from these agencies.

Prior to preparation of this FSED, the Department initiated a broader consultation by distributing a NOP that announced the intent to prepare the DSED dated March 27, 2015. In the NOP, the Department requested submission of views on the scope and content of the environmental information to be contained therein. The notice was distributed to members of the public, herring permittees, and interested organizations that had expressed prior interest in herring management. The NOP was also provided to the State Clearinghouse for distribution to appropriate responsible and trustee agencies.

Consultations occurred during the annual review of regulations guiding the commercial harvest of herring. The process began this year when the Department presented the results of its annual population assessment and discussed possible regulatory changes for the 2015-16 season to the DHAC, as well as interested organizations and individuals on April 1, 2015, in Sausalito, County of Marin.

Proposed changes to the regulations for the 2015-16 season will be modified, as necessary, based on comments from the public, other interested parties and DHAC. These recommendations will be presented to the Commission at their August 4-5, and October 7-8 2015, meetings.

Chapter 7. RESPONSES TO COMMENTS REGARDING THE PROPOSED PROJECT

Pursuant to Sections 2180.5 (d)(2)(vi) and 2180.5 (d)(3)(ii) of the Public Resources Code, a copy of the DSED was placed on file and made available for public review for a 45-day period. Notice was also given at the time of filing that any person interested in commenting on the DSED should do so, in writing, by June 22, 2015, to the Commission office in Sacramento.

7.1. Summary of Comments Received

One written comment was received by the Commission office from Mr. Huey Johnson in a letter dated April 24, 2015.

7.2. Department Responses to Comments

Comment 1

There needs to be a moratorium on herring fishery instead of a document to allow herring fishing. That is no herring fishing. The recent concern about forage fish rages. We face an empty sea and leaving herring along with some other forage fish as a food source is the only logical thing to do.

Response

It is the goal of the Department to provide the Commission with management recommendations for herring that take into account their role as an important forage species and are based on the best available science. The Department agrees that Pacific herring are an important forage species in the California Current Marine Ecosystem. That is why the Department is recommending a quota range of zero to five percent of the previous season spawning biomass. This conservative quota (harvest target) will help maintain a sustainable fishery and ensure herring's role as a critical forage species is maintained.

7.3. Copy of Written Comments Received

RESOURCE RENEWAL INSTITUTE
Innovations for a Sustainable Future

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MAY 04 2015
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Department of Fish and Wildlife
Marine Region
619 Second St.
Eureka CA 95501

Friday April 24, 2015

Attention of Kirsten Ramey

Dear Kirsten Ramey:

I respond to your notice of preparation of a draft supplemental environmental document for commercial herring Fishing in Ocean waters.

There needs to be a moratorium on herring fishery instead of a document to allow herring fishing. That is no herring fishing.

The recent concern about forage fish rages. We face an empty sea and leaving herring along with some other forage fish as a food source is the only logical thing to do.

Sincerely

Huey D. Johnson

187 East Blithedale Avenue, Mill Valley CA 94941 p 415-928-3774 f 415-373-6978 RRI.ORG

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REFERENCES AND LITERATURE CITED

California Department of Fish and Game. 1998. Final Environmental Document (FED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 1999. Final Supplemental Environmental Document, Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2000. Final Supplemental Environmental Document, Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2001. Final Supplemental Environmental Document, Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2002. Final Supplemental Environmental Document, Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2004. Final Supplemental Environmental Document, Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2005. Final Supplemental Environmental Document, Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2006. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2007. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2008. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2009. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2010. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Game. 2011. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Wildlife. 2013. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Department of Fish and Wildlife. 2014. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.

California Sea Grant Extension Program. 2003. Peer Review of the California Department of Fish and Game's Commercial Pacific Herring Fishery Management and Use of the Coleraine Fishery Model, California Sea Grant Extension Program, Davis.

Carls, M.G., Marty, G.D., and Hose, J.E. 2002. Synthesis of the toxicological impacts of the Exxon Valdez oil spill on Pacific herring (Clupea pallasi) in Prince William Sound, Alaska, U.S.A. Canadian Journal of Fisheries and Aquatic Sciences 59(1): 153-172.

Chavez, F.P., Pennington, J.T., Castro, C.G., Ryan, J.P., Michisaki, R.P., Schlining, B., Walz, P., Buck, K.R., McFadyen, A., and Collins, C.A. 2002. Biological and chemical consequences of the 1997-1998 El Nino in central California waters. Prog. Oceanogr. 54: 205-232.

Checkley, J.D.M., and Barth, J.A. 2009. Patterns and processes in the California Current System. Prog. Oceanogr. 83: 49-64.

Cosco Busan Oil Spill Trustees. 2012. *Cosco Busan* Oil Spill: Final Damage Assessment and Restoration Plan/Environmental Assessment, California Department of

Fish and Game, California State Lands Commission, National Oceanic and Atmospheric Administration, United States Fish and Wildlife Service, National Park Service, Bureau of Land Management.

Fleming, K. 1999. Clupidae. In: Report on the 1980-1995 fish, shrimp and crab sampling in the San Francisco Estuary, California. Technical Report 63, The Interagency Ecological Program for San Francisco Estuary.

Gilbert, P.M., Dugdale, R.C., Wilkerson, F., Parker, A.E., Alexander, J., Antell, E., Blaser, S., Johnson, A., Lee, J., Lee, T., Murasko, S., and Strong, S. 2014. Major - but rare - spring blooms in 2014 in San Francisco Bay Delta, California, a result of the long-term drought, increased residence time, and altered nutrient loads and forms. Journal of Experimental Marine Biology and Ecology 460(0): 8-18.

Haegele, C.W. 1997. The occurrence, abundance and food of juvenile herring and salmon in the Strait of Georgia, British Columbia in 1990 to 1994. Canadian Manuscript Report of Fisheries and Aquatic Sciences 2390, Fisheries and Oceans Canada.

Hart, J.L. 1973. Pacific fishes of Canada. Fisheries Research Board of Canada, Ottawa.

Hay, D.E. 2002. Reflections of factors affecting size-at-age and strong year classes of herring in the North Pacific. PICES-GLOBEC International Program on Climate Change and Carrying Capacity: Report of the 2001 BASS/MODEL, MONITOR and REX Workshops, and the 2002 MODEL/REX Workshop, p. 182.

Hieb, K., and Giannetta, J., . in preparation. Fishes Annual Status and Trends Report for the San Francisco Estuary.

Hose, J.E., McGurk, M.D., Marty, G.D., Hinton, D.E., Brown, E.D., and Baker, T.T. 1996. Sublethal effects of the Exxon Valdez oil spill on herring embryos and larvae morphological, cytogenetic, and histopathological assessments, 1989-1991. Canadian Journal of Fisheries and Aquatic Sciences 53(10): 2355-2365.

Incardona, J.P., Collier, T.K., and Scholtz, N.L. 2004. Defects in cardiac function precede morphological abnormalities in fish embryos exposed to polycyclic aromatic hydrocarbons. Toxicology and Applied Pharmacology 196: 191-205.

Jassby, A.D., Cloern, J.E., and Muller-Solger, A.B. 2003. Phytoplankton fuels Delta food web. California Agriculture 57(4).

Kimmerer, W.J. 2002. Physical, Biological, and Management Responses to Variable Freshwater Flow into the San Francisco Estuary. Estuaries 25(6B): 1275-1290.

McGurk, M.D., and Brown, E.D. 1996. Egg larval mortality of Pacific herring in Prince William Sound, Alaska, after the Exxon Valdez oil spill. Canadian Journal of Fisheries and Aquatic Sciences 53(10): 2343-2354.

Miller, D.J., and Schmidtke, J. 1956. Report on the distribution and abundance of Pacific herring (Clupea pallasi) along the coast of central and southern California. California Fish and Game 42: 163-187.

National Marine Fisheries Service. 2015. California Current Integreated Ecosystem Assessment (CCIEA) State of the California Current Report. A report of the CCIEA Team (NOAA Northwest, Southwest and Alaska Fisheries Science Centers) to the Pacific Fishery Management Council, California Current Integrated Ecosystem Assessment Team.

Norcross, B.L., Hose, J.E., Frandsen, M., and Brown, E.D. 1996. Distribution, abundance, morphological condition, and cytogenetic abnormalities of larval herring in Prince William Sound, Alaska, following the (Exxon Valdez) oil spill. Canadian Journal of Fisheries and Aquatic Sciences 53(10): 2376-2387.

Orsi, J. 1999. Report on the 1980-1995 Fish, Shrimp, and Crab Sampling in the San Francisco Estuary. IEP Technical Report, Interagency Ecological Program.

Reum, J.C.P., Esstington, T.E., Greene, C.M., Rice, C.A., and Fresh, K.L. 2011. Multiscale influence of climate on estuarine populations of forage fish: the role of coastal upwelling, freshwater flow and temperature. Marine Ecology Progress Series 425: 203-215.

Rykaczewski, R.R., and Checkley, D.M. 2008. Influence of ocean winds on the pelagic ecosystem in upwelling regions. Proceedings of the National Academy of Sciences 105(6): 1965-1970.

APPENDIX A

S.1 Summary of Changes

This appendix provides a summary of the changes made to the DSED based on updated information on age data for San Francisco Bay, and minor grammatical changes for clarity.

General changes throughout the document

- References to the DSED were changed to Final Supplemental Environmental Document (FSED), where applicable.
- Misspellings, grammatical errors, and graph labels were updated or corrected.

Table of Contents

- The Table of Contents was updated to match any page numbers that changed during the process of finalizing the FSED document.
- Chapter 7 Responses to Comments Regarding the Proposed Project was added.
- Appendix A and A.1 Summary of Changes was added.

Summary

- The following text was changed in S.1 Introduction, paragraph 2 to show the number of chapters in the FSED: The FSED includes seven chapters.
  The following text was added to S.1 Introduction, paragraph 2: Chapter 7 responds to public comments regarding the proposed project.

Chapter 2. Project Description

- Minor editorial changes were made to improve clarity.
- The following bullet point was revised in section 2.1, Project Objectives, to clarify the use of precaution: Use precautionary principles in response to uncertainty when setting harvest targets.
- The following sentences were revised in section 2.3.1.1, San Francisco Bay 2015-16 Quota, to reflect correct biomass data, paragraph 1: The spawning biomass estimate for the 2014-15 season was 16,674 tons, significantly below the historical average (1979-80 season to present) of 51,300 tons (Figure 2.2). This was also a substantial decrease in spawning biomass from the previous season's estimate of 60,600 tons, and is the fourth-lowest estimated biomass on record since the 1979-80 season. The population decline recorded during the 2014-15 season is likely attributable to poor oceanic and estuarine conditions which adversely affect herring survival as described in Chapter 3.3 of this FSED.
- The following sentences were revised in section 2.3.1.1, paragraph 2, to clarify Department recommendations: The Department recommends a conservative quota option of 834 tons or five percent harvest rate for the 2015-16 season. Even with the lower than expected spawning biomass the Department does not consider a five percent harvest rate to be a risk to the sustainability of the fishery. The Department's recommendation would maintain fishing mortality at a comparatively low level, which will be beneficial for stock recovery. Additionally, allowing a small fishery quota will ensure herring's role as an important forage

species is protected while providing a limited opportunity to the commercial fishery.

- The following sentence in section 2.3.1.1, paragraph 3, regarding preliminary age data was removed and data are summarized in Chapter 3.3: Preliminary age composition analysis, based on length frequencies for the 2014-15 season indicates that age 4- and 5-year old herring continued to persist in the population (Figure 3.2). This is important to a healthy age-class structure; for this reason, one of the Department's longstanding management objectives has been to reduce the harvest of 2- and 3-year old herring, many of which are first-time spawners.

Chapter 3. Environmental Setting

- Minor editorial changes were made to improve clarity.
- The following sentence was revised to improve clarity in 3.3 Status of the San Francisco Bay Spawning Population, paragraph 2: However, large-scale oceanographic processes in the Pacific Ocean such as the El Nino Southern Oscillation (ENSO) cycle and the Pacific Decadal Oscillation (PDO) can affect the strength of upwelling and the nutrient content of surface water, in turn affecting nearshore marine ecosystems (Chavez et al. 2002, Checkley and Barth 2009).
- The following sentence in 3.3, paragraph 2, was deleted for clarity: Strong El Nino conditions result in upwelled water that tends to be warmer and more nutrient-poor than water that is upwelled during ENSO-neutral and La Nina conditions.
- In section 3.3, paragraph 4 was revised for clarity: Twelve spawning events were recorded during the 2014-15 season, primarily in the northern areas of San Francisco Bay and along the San Francisco waterfront (Table 3.1). Spawning events occurred as far north as Point San Pablo and south to Coyote Point (Figure 3.1). The first recorded spawn of the season occurred October 19-20, 2014, and the last recorded spawn occurred from February 25-March 1, 2015. There were several spawning events in Richardson Bay and smaller events to the east along the Marin county shore. The largest spawn event of the season was at Point Richmond with 6,716 tons of herring recorded. The second largest was the Richardson Bay to Point Diablo spawn with 3,947 tons, followed by the San Francisco waterfront spawn, estimated at 3,458 tons.
- In section 3.3, paragraph 6 was revised for clarity and to reflect completed age composition data: Spawning population age composition for 2014-15 shows that individual year class biomass declined from the previous season for all age classes, except age 7 –year old herring (Figure 3.2). The spawning biomass of age 2- and 3-year old herring was the lowest since the 2008-09 season. Reduced numbers of young fish negatively affect recruitment to the San Francisco Bay fishery and they are typically the largest cohorts in the spawning population. The proportion of age 6 and older herring increased between 2013-14 and 2014-15; with age 7-year old herring collected in both research and commercial samples for the first time since 1998-99 (Figures 3.3 and 3.4). This is important as the commercial fishery is supported by a greater proportion of

older fish from the spawning population. Increased biomass of older age classes may reduce the burden on younger cohorts to support the fishery. Maintaining a healthy age class structure, including a proportion of older age classes is a management goal of the Department

- The preliminary age data found in Figure 3.2 of the DSED was updated using final age data.
- The preliminary age data found in Figure 3.3 of the DSED was updated using final age data.
- In section 3.3, paragraph 8 was revised for clarity and to reflect completed age composition data: In summary, the spawning biomass estimate for the 2014-15 season was 16,674 tons, well below the historical average (1979-80 season to present) of 51,300 tons. This spawning biomass estimate represents a substantial decrease from the previous season's estimate of 60,600 tons, and is the fourth-lowest estimate on record since the 1979-80 season. Spawning population age composition for 2014-15 shows that individual year class biomass declined from the previous season for all age classes, except age 7 herring. The decline recorded during the 2014-15 season is likely attributable to poor oceanic and estuarine conditions which adversely affect herring. Despite the observed reduction in spawning biomass, the Department considers precautionary harvest percentages (at or below five percent) of the previous season's spawning biomass as the primary means of assuring a sustainable fishery even in years of unfavorable ecological conditions. Continued monitoring of both the herring spawning population and commercial catch will ensure that the Department's management goals are achieved and younger fish are not harvested at unsustainable levels.
- The following sentences were revised Section 3.3.1 San Francisco Bay Herring Young of the Year (YOY), paragraph 2 to reflect updated YOY data: The herring YOY abundance index for 2014 was below average for the period of record (Figure 3.6). The abundance of YOY indicated less favorable environmental conditions for survival than the prior year within the San Francisco Estuary (Hieb and Giannetta in preparation).
- The Abundance Index data found in Figure 3.6 of the DSED was updated using the completed 2014 YOY index.

<u>Chapter 4. Environmental Impact Analysis and Cumulative Effects</u>

- Minor editorial changes were made to improve clarity

<u>Chapter 6. Consultation</u>

- The last sentence was revised in paragraph 4 to reflect the October Fish and Game Commission meeting for consultation of interested parties: These recommendations will be presented to the Commission at their August 4-5, and October 7-8 2015, meetings.

<u>Chapter 7. Response to Comments</u>

- This chapter was added to the FSED.
- One comment and responses have been included.

References and Literature Cited

- The following reference was added: California Department of Fish and Wildlife. 2014. Final Supplemental Environmental Document (FSED), Pacific Herring Commercial Fishing Regulations (Sections 163, 163.5, and 164, Title 14, California Code of Regulations). *Edited by* State of California. The Natural Resources Agency.
- The following reference was updated to reflect a new author: Hieb, K., and Giannetta, J., in preparation. Fishes Annual Status and Trends Report for the San Francisco Estuary.

Appendix A

- This section was added to the FSED

State of California
Department of Fish and Wildlife

Memorandum

Date: August 31, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Craig Shuman
Regional Manager, Marine Region

Subject: **Agenda Item for the October 7, 2015 Fish and Game Commission Meeting, Proposed Amendments to Sections 163 and 164, Title 14, California Code of Regulations, Harvest of Herring and Harvest of Herring Eggs**

To date the Department of Fish and Wildlife (Department) has received no comments in opposition to the proposed amendments to regulations for the harvest of herring and herring eggs, Sections 163 and 164, Title 14, California Code of Regulations. Additionally, no changes have been made to the proposed regulatory text in the Initial Statement of Reasons (ISOR).

As described in the ISOR and 2015 Final Supplemental Environmental Document for Pacific herring, the Department is providing the following recommendations to the Fish and Game Commission for consideration at the October meeting:

- San Francisco Bay quota option of zero to five percent of the previous season's (2014-15) herring spawning biomass. Five percent of 16,674 tons is recommended (834 ton quota) for the 2015-16 commercial herring season.

- Increase the Herring-Eggs-On-Kelp (HEOK) fishery quota allocation from 0.79 to 1.0 percent. The quota will be allocated as a proportion of the overall quota set each season for San Francisco Bay.

- Adjust the permit renewal date for the HEOK fishery to align with the gill net fishery due date. This would move the current due date for HEOK permits from August 1 each year to, "on or before the first Friday of October each year".

Should you have further questions or need additional information, please contact Dr. Craig Shuman, Regional Manager of the Department's Marine Region at (805) 568-0216. The public notice for this rulemaking should identify Environmental Scientist, Ryan Bartling as the Department's point of contact. Mr. Bartling can be reached at (707) 576-2877 or Ryan.Bartling@wildlife.ca.gov.

Attachments
ISOR Amend Sections 163 and 164
Final Supplemental Document for Pacific Herring

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Proposed Regulation Changes 2015-16 Pacific Herring Commercial Fishery

Fish and Game Commission Meeting
Los Angeles - October 7, 2015

Presented by:
Ryan Bartling
Department of Fish and Wildlife
Marine Region

Overview

- Herring management summary
- Commercial herring fishery and spawning population status
- Proposed amendments 163 & 164, Title 14 CCR

Herring Management

Herring Management

Commercial Herring Fishery
2014-15 Summary

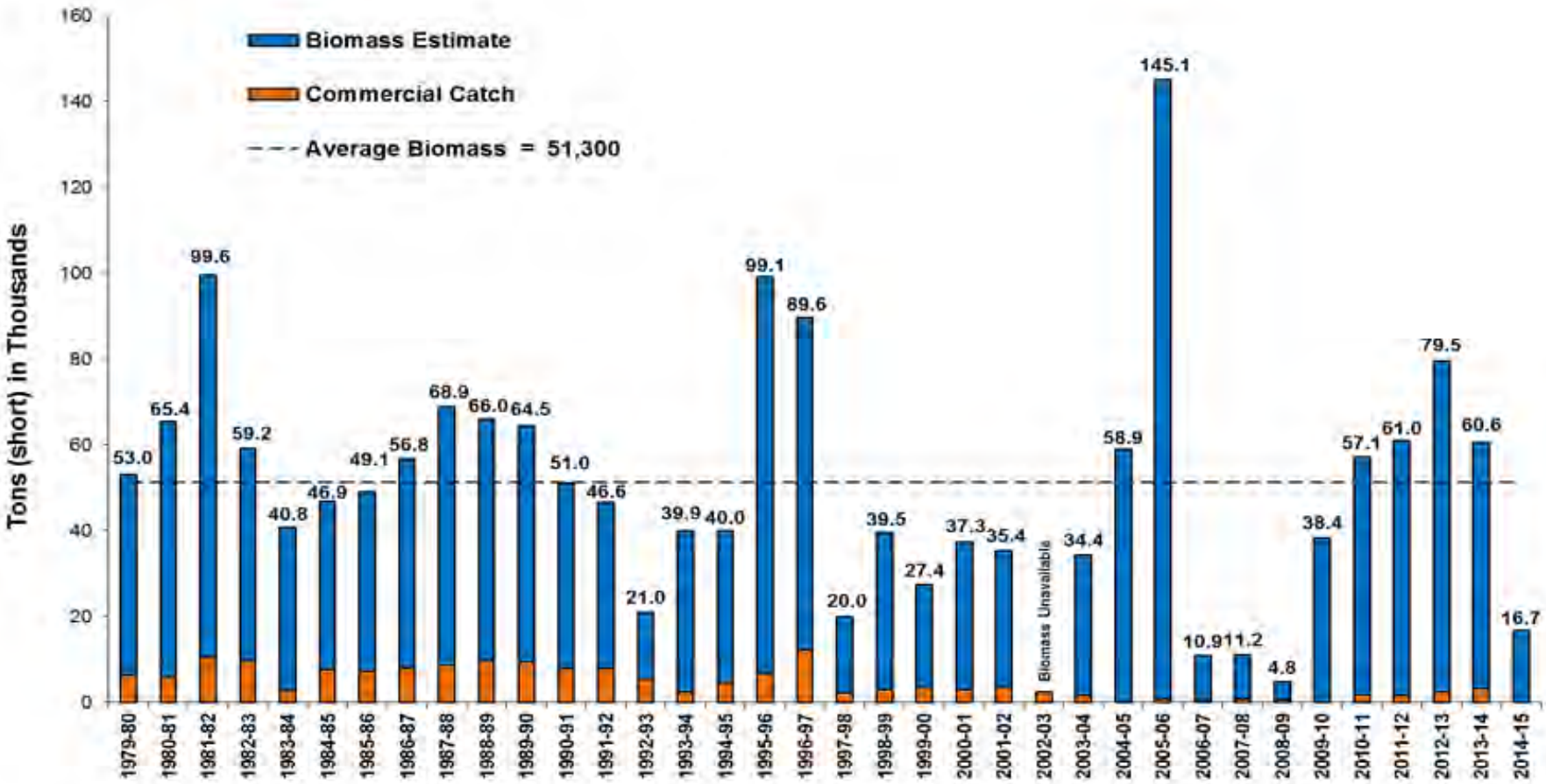
- San Francisco fleet caught 46 tons of 2,500 ton quota
- Herring eggs on kelp (HEOK) made no landings
- Tomales Bay, Humboldt Bay and Crescent City fisheries- inactive

Herring Population Status
San Francisco Bay

- 2014-15 biomass estimate = 16,700 tons
- Previous season biomass = 60,600 tons
- Decrease - low ocean productivity associated with high sea surface temps
- Continued recruitment of older age classes

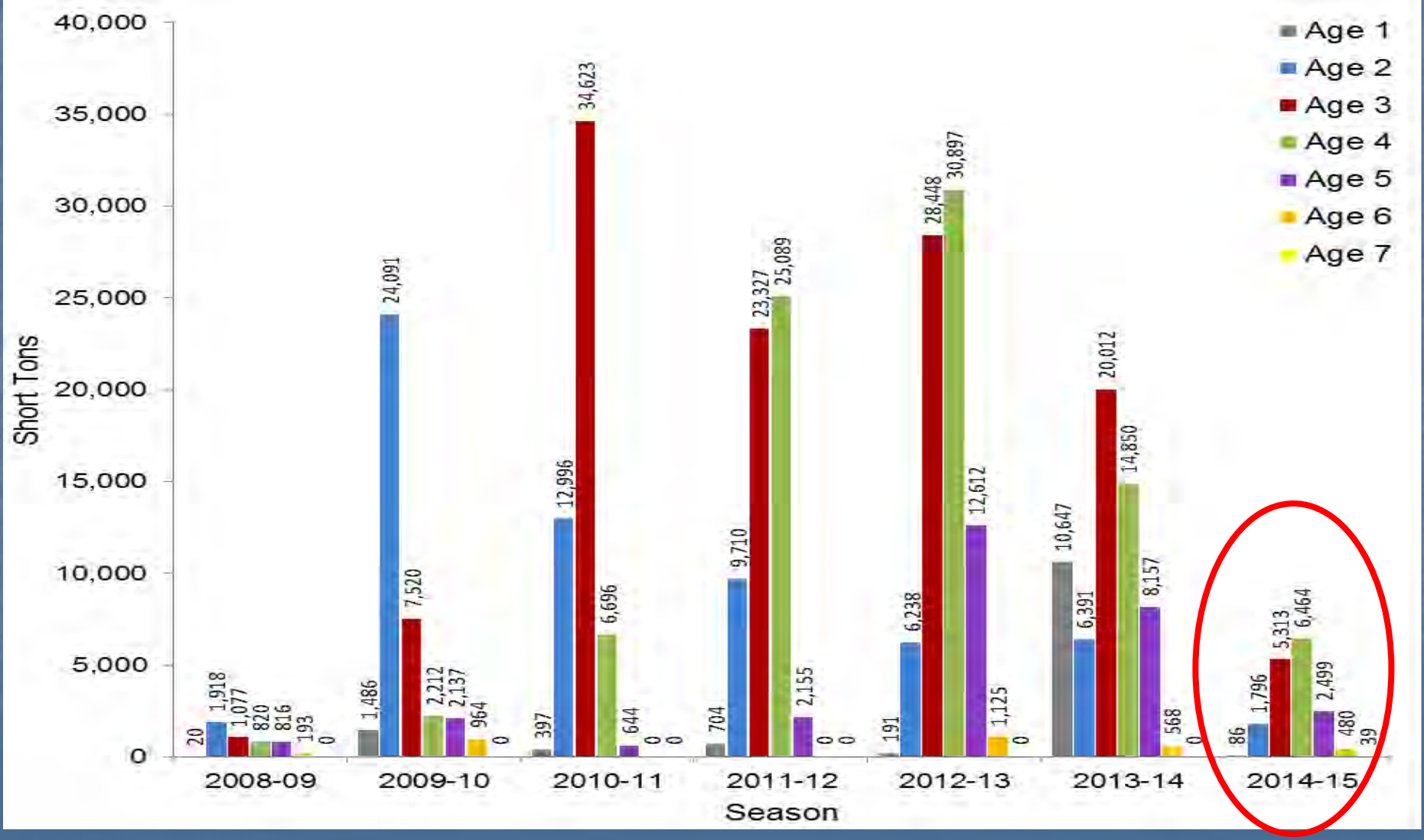
Status of the Herring Population

SF Bay Spawning Biomass 1979-2015



Status of the Herring Population

SF Bay Herring Age Class Summary 2008-2015



Proposed Regulations
2015-16 Commercial Fishery

- Set San Francisco Bay quota between 0 and 5% of the 2014-15 spawning biomass

  (recommend 5% = 834 tons)

- Increase HEOK quota allocation from 0.79% to 1.0% of the overall quota

- Minor form change for the HEOK fishery and amend permit due date

Summary

Population Status and Commercial Fishery

- Low commercial fishery activity
- SF Bay biomass = 16,700 tons
- Significant decrease in spawning biomass
- Low harvest targets ~ forage reserve

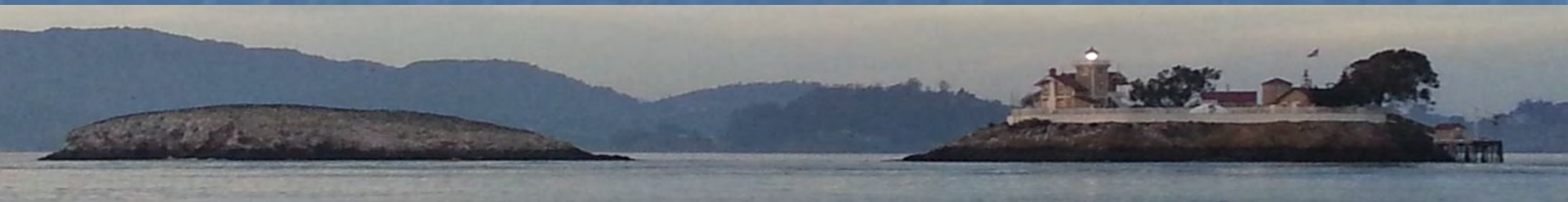
Proposed Regulations

- Set SF Bay quota between 0 and 5%
  - 5% recommended = 834 tons
- Increase HEOK allocation from 0.79% to 1.0%
- Minor HEOK form and permit due date changes

More Information:

CDFW Herring Web Page
dfg.ca.gov/marine/herring

Herring "Blog"
cdfwherring.wordpress.com



Thank you

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(707) 576-2877

State of California
Department of Fish and Wildlife

Memorandum

Date: July 6, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director
Department of Fish and Wildlife

Subject: **Agenda Item for August 4-5, 2015, Fish and Game Commission Meeting Request for Notice Authorization Re: Recreational Dungeness Crab and Crab Traps Regulations**

The Department of Fish and Wildlife (Department) requests that the Fish and Game Commission (Commission) authorize publication of notice of its intent to consider amending subsections (c) and (e) of Section 29.80 and subsections (a)(3) and (a)(7) of Section 29.85 Title 14, California Code of Regulations (CCR).

Changes since April:

1. A discussion meeting between Department staff and CPFV operators who fish in the affected central California coastal counties was held in May 2015 to assess support for the proposal of uniform size and bag limits. Only nine of the 42 active operators that were solicited, based on landings recorded in the previous year from their daily fishing logs, chose to attend the meeting. On this particular issue overall support was mixed, with five that supported the proposal and four who did not. In addition, two operators expressed support and one did not, via email. Nine recreational anglers contacted the Department in May 2015 and most expressed support for uniform limits. In accordance with the original request from members of the sport fishing community, the Department recommends that the CPFV regulations requiring different bag and size limits in the central California coastal counties be eliminated from Section 29.85, Title 14, CCR, so that these limits are uniform throughout the state.
2. The phrase "owner" in the text and regulations was changed to "operator" to improve regulatory clarity.

Original Proposal:
The proposed regulatory changes include modifications to the regulatory text to make bag and size limits uniform statewide for California Commercial Passenger Fishing Vessels (CPFVs). Additional proposed amendments would require that sport crab traps contain a destruct device to prevent 'ghost fishing' by lost traps and that trap buoys display information identifying the crab trap owner to deter theft of crabs from traps.

The Department is also recommending a seven day waiting period prior to the start of the Dungeness crab recreational season for deploying crab traps. This would prevent crab traps, as specified in subsection (c) of Section 29.80, Title 14, CCR, from occupying fishing grounds for Dungeness crab under the guise of rock crab fishing before the season starts.

Lastly, the Department is proposing to clarify language in subsection (e) of Section 29.80, Title 14, CCR specifying that Point Arguello is located in Santa Barbara County.

If you have any questions or need additional information, please contact Dr. Craig Shuman, Regional Manager of the Marine Region, by telephone at (805) 568-0216. The public notice should identify Environmental Scientist, Christy Juhasz as the Department's point of contact for this rulemaking. She can be reached at (707) 576-2887 or by email at Christy.Juhasz@wildlife.ca.gov.

Attachment(s)

ec: Dan Yparraguirre, Deputy Director
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STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend subsections (c) and (e) of Section 29.80, and
subsections (a)(3) and (a)(7) of Section 29.85
Title 14, California Code of Regulations
Re: Recreational Dungeness Crab and Crab Trap Regulations

I. Date of Initial Statement of Reasons: June 26, 2015

II. Dates and Locations of Scheduled Hearings:

(a)	Original Notice Hearing	Date: April 8, 2015 Location: Santa Rosa
(b)	Notice Hearing:	Date: August 4, 2015 Location: Fortuna
(c)	Discussion/Adoption Hearing:	Date: October 7, 2015 Location: Los Angeles

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

Under existing law, crab, including Dungeness crab, may be taken for recreational purposes with a sport fishing license subject to regulations prescribed by the Fish and Game Commission (Commission). Current regulations for rock crab and Dungeness crab specify seasons, size limits, bag and possession limits, closed fishing areas, and gear restrictions. Changes to size and bag limits, traps and buoys, and trap deployment prior to the season are proposed as described below.

<u>Size and bag limits (Section 29.85)</u>:
Current regulations for Dungeness crab specify a minimum size of 5.75 inches carapace width and a daily bag limit of ten, unless aboard a commercial passenger fishing vessel (CPFV) in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz and Monterey counties (Central California coastal counties), where a larger minimum size of 6 inches carapace width, and a lower daily bag limit of six apply. The proposed regulation would create a more uniform and orderly Dungeness crab recreational fishery.

The proposed regulation is necessary to remove the differential size and bag limit for Dungeness crab taken aboard CPFVs in Central California coastal counties, to align size and bag limits statewide. Recreational fishing groups and constituents, including the Coastside Fishing Club, the Golden Gate Fishermen's Association, and one CPFV Captain, requested in December 2013 that differential limits be made uniform in order to eliminate unfairness to fishers aboard CPFVs in Central California coastal counties. The Commission directed these requests to be presented to the Dungeness Crab Task Force (DCTF) at its April 2014 meeting, in accordance with Fish and Game Code (FGC) subsection (c)(2) of Section 8276.4. The DCTF agreed that there should be uniform bag limits and minimum size limits for the recreational fishery throughout California, but deferred the decision on these specific limits to the Commission with input from the Department of Fish and Wildlife (Department) and the recreational constituency. At the direction of the Commission, the Department prepared draft proposed regulations that align CPFV size and bag limits in Central California coastal counties with the remainder of the recreational fishery.

The different regulations for the taking of Dungeness crab from CPFVs from Central California coastal counties originated in the early 1990s, based on commercial fishing interests concerned with what they thought was unfair competition from CPFVs employing fishing methods that closely resemble those methods employed by the commercial fishing fleet (i.e., crewmembers set and pull the traps, whose catch is then distributed to passengers aboard). While there is no catch allocation between sectors, fishing interests in the area negotiated a compromise to allow CPFVs to continue to catch Dungeness crab under a lower daily bag limit and higher minimum size limit. There was no biological rationale driving this difference, since the fishery was and is considered to be sustainable under the current management scheme with no set annual limits, quotas, or caps on catch.

The Department reviewed landings data for the commercial fleet in this region since the change was adopted, and reviewed recent recreational catch estimates (See Attachment A). Despite wide cyclical fluctuations in catch, the data indicate that recent recreational catch from Sonoma County south accounts for a very small percentage (~2-3%) of total recreational and commercial catch in the same area, and CPFV take represents an even smaller percent (~1%). In addition, average recent commercial catch from the past ten years in the same area has substantially increased over historic patterns from the previous ten years. While there is no resource allocation between sectors, the Department's analysis suggests that the increase in CPFV bag limit and decrease in minimum size limit would not significantly alter use patterns between sectors. That said, support amongst CPFV operators in the affected counties for the proposal for uniform bag and size limits appears to be mixed, based on a meeting hosted by Department staff in May 2015, although only nine of the 42 invited CPFV operators (identified

as active based on daily fishing logs) attended (See Attachment B). Nonetheless, based on the Department's analysis, and the lack of biological concern, the Department concurs with the recreational stakeholder groups that there is no justification to maintain different bag and minimum size limits for different sectors of the recreational fishery.

Crab trap destruct device (Section 29.80):
Existing regulations prescribe that crabs may be taken with crab traps north of Point Arguello; traps must possess at least two circular openings of 4.25 inches in diameter, to allow smaller crabs and organisms to escape. While current commercial fishing regulations require a destruct device on commercial crab traps, recreational crab trap regulations do not.

The proposed regulation is necessary to add a requirement that every crab trap shall include one destruct device. The Coastside Fishing Club requested that a destruct device be required on recreational crab traps to prevent 'ghost fishing' by lost traps.

The Department proposes that each trap possess a destruct device similar to commercial crab traps. Traps used by recreational crabbers are very similar in style to commercial crab traps but are not required to have a destruct device to prevent 'ghost fishing'. The requirement that commercial traps used to take finfish, mollusks or crustaceans be equipped with at least one trap destruct device is described in Section 9003, FGC, and Section 180.2, Title 14, CCR. The device on commercial crab traps must be made of cotton twine, No. 120 or less, used to replace several meshes in the trap. If the trap is lost at sea, the cotton will decompose, and any marine life trapped inside can escape out of the opening created. Adding this requirement to recreational fished crab traps would ensure that all traps used to fish crabs in California ocean waters would be equipped with a destruct device.

Marking of crab trap buoys (Section 29.80):
Existing regulations require that traps and buoys used by commercial fishermen and CPFVs targeting Dungeness crab are required to be labeled as prescribed (subsection (b) of Section 9006, FGC, Section 132.1, Title 14, CCR, and subsection (a)(5) of Section 29.85, Title 14, CCR). Recreational crab trap regulations do not include such a requirement.

The proposed regulation is necessary to add a requirement that every crab trap shall be affixed to a buoy that is legibly marked to identify the operator by a unique identification number, specifically the operator's GO ID (i.e., the "Get Outdoors Identification number", a unique number issued by the Automatic License Data System (ALDS) that is permanently tied to an individual and located on their sport fishing license). The Coastside Fishing Club requested that trap buoys be required to display the contact

information of the crab trap operator to deter theft of crabs from traps.

Traps used by commercial fishermen are required to be labeled appropriately according to the type of trap being used. Trap buoys in the Dungeness crab commercial fishery are labelled with the commercial fisher's license or L number as stated in subsection (b) of Section 9006, FGC. In addition, regulations provide for unique identification on buoy trap tags (Section 132.1, Title 14, CCR). Regulations also require CPFVs to label their crab traps and buoys used for taking Dungeness crab with their commercial boat registration number (subsection (a)(5) of Section 29.85, Title 14, CCR). These requirements are in place to not only identify the operator of the trap for enforcement purposes, since it is unlawful to disturb traps that belong to another person, but to potentially contact the operator if the trap becomes abandoned or derelict and is later recovered. A similar requirement for recreational crab trap buoys to contain the operator's GO ID number as listed on his/her sport fishing license would also serve the same purpose.

<u>Trap deployment prior to season (Section 29.80):</u>
Existing regulations provide for a crab season that is year-round, except for Dungeness crab, which may only be taken during an open season starting the first Saturday in November and extending through July 30 in Del Norte, Humboldt and Mendocino counties, and through June 30 in all other counties. Existing regulations specify that crab traps may only be used north of Point Arguello, in Santa Barbara County.

The proposed regulation is necessary to establish a seven day waiting period prior to the opening date of the Dungeness crab season, during which crab traps cannot be deployed or used. This would prevent crab traps under subsection (c) of Section 29.80, Title 14, CCR, from occupying fishing grounds for Dungeness crab before the season starts.

This seven-day suspension of trap deployment would eliminate the potential for covert fishing of Dungeness crab under the guise of rock crab fishing before the start of the season. In the week prior to the recreational Dungeness crab opener, there is a large influx of traps placed by some individuals in ocean waters that are allegedly targeting rock crab, which have a year round open season of take. However, most of these traps are actually being used to take and hold Dungeness crab before the season opens since they are placed in Dungeness crab habitat and not in areas where rock crab catch would be expected. These traps are typically not serviced by their operators until after the season starts and are effectively fishing for Dungeness crabs in the meantime. When the traps are pulled and inspected by enforcement prior to the season opener, they are mainly occupied by Dungeness crab and very rarely by rock crab. Imposing a seven day waiting period where crab traps cannot be deployed or used prior

to the opening date of the Dungeness crab season would prohibit this illegal fishing behavior and create a more fair and orderly fishery, whereby crab traps targeting Dungeness crab cannot be deployed until the first Saturday of November. Since recreational crab traps can only be deployed north of Point Arguello, Santa Barbara County, *ipso facto* this regulation would apply to all areas of the California coast north of this landmark.

The Department evaluated the potential effect this may have on the rock crab fishery, and has concluded this will not impact the fishery. This seven-day moratorium of using crab traps would not prevent rock crab fishing using hoop nets or crab loop traps, also known as snares. In addition, the timing of the proposed waiting period, to occur in late October or early November, is not considered an optimal fishing time for rock crab. The rock crab recreational fishery is open year-round and there are many other opportunities to fish using crab traps the other 51 weeks of the year, especially during the summertime.

<u>Change for clarity</u>
Subsection (e) of Section 29.80, Title 14, CCR, identifies Point Arguello, but does not specify the county in which it is located. The proposed regulation would add Santa Barbara County as the county in which Point Arguello is located, for purposes of public understanding and clarity, and for consistency with its inclusion in subsection (b) of Section 29.80 regarding hoop net use.

<u>Effective dates for proposed regulations:</u>
The following Title 14, CCR, regulation changes are proposed to become effective prior to the start of the 2015-16 Dungeness crab season (i.e., November 7, 2015, the first Saturday in November):

- Remove bag and minimum size exception language in subsections (a)(3) and (a)(7) of Section 29.85 that currently limits CPFVs in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties to the take of six Dungeness crab that are 6 inches in carapace width or greater.

- Add Santa Barbara County as the location of Point Arguello under subsection (e) of Section 29.80.
  Rationale: The Department intends to request an expedited review in order for CPFV regulation changes to become effective by start of the 2015-16 Dungeness crab season. The Department will inform the CPFV operators (numbering <50) in the Central California coastal counties directly regarding the effective date once determined.

The following Title 14, CCR, regulation changes would specify an effective date of August 1, 2016, which immediately follows the close of the 2015-16

Dungeness crab season:

- Add language to subsection (c) of Section 29.80 that requires, as of August 1, 2016, crab traps to have one destruct device of a single strand of untreated cotton twine size No. 120 or less that creates an unobstructed escape opening in the top or upper half of the trap of at least five inches in diameter when the destruct attachment material corrodes or fails.

- Add language to subsection (c) of Section 29.80 that requires, as of August 1, 2016, every crab trap to be marked with a buoy and that each buoy shall be legibly marked to identify the operator's GO ID number as found on his/her sport fishing license.

- Add language to subsection (c) of Section 29.80 that prohibits, as of August 1, 2016, crab traps from being deployed in ocean waters seven days prior to the opening of the Dungeness crab season.

  Rationale: A later effective date of August 1, 2016, following the close of the 2015-16 Dungeness crab season, is proposed in order to provide adequate notice to affected recreational crab fishermen, as these changes affect a larger constituency, are more restrictive than CPFV changes, and require action on the part of fishermen. Notification and public awareness would be supported by inclusion of the changes and their effective dates in the recreational fishing regulations booklet prior to implementation.

Benefits of the Regulation

The Commission anticipates benefits to the State's environment and the health and welfare of California residents. The proposed regulation changes are intended to provide increased fishing opportunity, reduce incidences of derelict trap gear continuing to fish, deter crab theft and promote a more orderly fishery by eliminating the potential for covert fishing of Dungeness crab under the guise of rock crab fishing before the start of the season. The Commission anticipates benefits to the environment by the sustainable management of California's Dungeness crab resources.

(b) Authority and Reference Sections from Fish and Game Code for Regulation:

Authority: Sections 200, 202, 205, 215, & 220, Fish and Game Code.
Reference: Sections 200, 202, 205, 206, 215, & 220, Fish and Game Code.

(c) Specific Technology or Equipment Required by Regulatory Change:

None.

(d) Identification of Reports or Documents Supporting Regulation Change:

Attachment A. Department of Fish and Wildlife Review of Commercial Dungeness Crab Landings Trends and Recent Recreational Catch Trends in Central California Coastal Counties (July 2015)

(e) Public Discussions of Proposed Regulations Prior to Notice publication:

April 22-23, 2014 Dungeness Crab Task Force (DCTF) meeting: The DCTF discussed the Coastside Fishing Club proposals at the request of the Commission, and in accordance with subsection (c)(2) of Section 8276.4, FGC. The final meeting summary can be accessed at this link, starting on page 11:
http://www.opc.ca.gov/webmaster/_media_library/2009/04/DCTF_FINAL_SummaryApr22-23Meeting_06162014.pdf

August 6, 2014 Commission meeting: The Commission and public discussed the proposal submitted by the Coastside Fishing Club and reviewed by the DCTF recommendations concerning the proposal. Video tape of this discussion can be accessed at
http://www.cal-span.org/cgi-bin/archive.php?owner=CFG&date=2014-08-06&player=silverlight.

April 8-9, 2015 Commission meeting: A public discussion regarding the proposed regulations was held at the Commission's April 2015 meeting in Santa Rosa. Video tape of this discussion can be accessed at
http://www.cal-span.org/cgi-bin/archive.php?owner=CFG&date=2015-04-08&player=silverlight.

May 19, 2015 Department meeting with CPFV operators: Additional discussions were held between the Department and CPFV operators in the affected coastal counties. See Attachment B.

June 10-11, 2015 Commission meeting: A brief update and Commission direction regarding the rulemaking schedule was provided at the June 2015 Commission meeting in Mammoth Lakes. Video tape of this discussion can be accessed at
http://www.cal-span.org/cgi-bin/archive.php?owner=CFG&date=2015-06-10&player=jwplayer&captions=(Agenda Item 16D).

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

1. Size limit. This proposal would increase the minimum size limit for recreational Dungeness crab to 6.25 inches to match the commercial size limit. The arguments in favor of this change centered on a desire for consistent regulations between the commercial and sport fisheries and a concern that the current sport size limit of 5.75 inches is too low to maintain the resource. The minimum size limit for both fisheries was the same, at 6.25 inches, until 1990 when the lower sport fishery size limit of 5.75 inches was adopted. This regulation provided increased fishing opportunity for recreational crab anglers, especially with the increased effort on fishing grounds following the start of the commercial season while still excluding a portion of the reproductive resource of Dungeness crab that are between this size limit and 4 inches, the approximate minimum size at maturity.

   This proposal was rejected primarily because reasons for adopting the lower sport size limit in 1990 are still valid: 1) It provides added opportunity for sport fishers to catch and retain crab that have not yet recruited to the more efficient and extensive commercial fishery; 2) The sport minimum size limit is greater than the size at reproductive maturity and there is no biological or fishery need to increase the size limit; and 3) The sport fishery catch is minimal compared to catch overall, estimated to be about 2-3% of the total crab catch, based on preliminary CRFS sampling data.

2. Pre-season trap deployment. This proposal would allow CPFVs to set their traps prior to the start of the season. The arguments in favor center on consistency with commercial regulations and safety. Commercial fishermen have a 64 hour pre-set in northern California (north of the Sonoma/Mendocino county line) and an 18 hour pre-set in central California. Some CPFV operators like to set traps in advance of the opening day so that their first trip on opening day with passengers allows them to pull fished traps. Currently, under existing regulations, CPFVs either set gear on opening day at or after 12:01 AM, then return to pick up passengers at daybreak, or alternatively, take gear and passengers out at the same time. There are safety concerns that setting gear in the night time hours during late-fall ocean conditions is hazardous and having crab gear on board with passengers may reach overcapacity limits on vessels.

   This proposal was rejected because of fairness and consistency issues it would generate, by only CPFVs being allowed while private sport boats would not be allowed to pre-set. Either way, the alternative would be undermining the Department proposal to remove all trap gear from the water seven days prior to opening day to avoid fishing prior to the opener, and would undermine the intent of the current Dungeness crab fishing season set to begin the first Saturday of November. The setting

of baited gear is considered fishing prior to the opening day, which would be inconsistent with other sport fisheries and confusing to the public.

Six of the nine central California CPFV operators at the May 19, 2015 discussion meeting (see Appendix A) voted for a 42 hour pre-set, which is much longer than the 18 hour pre-set for commercial fishermen in central California. Furthermore, in light of the significant increase in whale entanglement events in crab trap gear over recent years, the Department, NOAA and the commercial crab industry have initiated discussions on how to reduce encounters in the future. A regulation that increases the length of trap deployment in any of our fisheries at this time is not considered a prudent approach to abating this issue while options are being explored. Regarding the safety argument, it has been and continues to be the responsibility of the CPFV operators to conduct their operations safely and follow United States Coast Guard safety and capacity regulations.

3. Opening day start time. This proposal by some CPFV operators would change the start time from 12:01 AM to 12:00 PM on opening day. The discussion focused on safety and operating during daylight hours.

   This proposal was rejected because the traditional 12:01 AM opening allows more flexibility for a start time any time after, including the ability to wait until 12:00 PM to operate. It would also unfairly impact private boat and shore based fishermen who currently enjoy the earlier opening time.

4. CPFV trap limit. This proposal would increase the CPFV trap limit above the current limit of 60 traps. The argument originating from CPFV operators is that if the current proposal to increase the CPFV individual bag limit from six to ten is accepted, then more traps will be needed to catch the new bag limit for customers.

   The trap limit was discussed at a May 19, 2015 meeting with CPFV operators (see Appendix A). No mutually acceptable limit was identified, but all in attendance were in support of removing the regulation in subsection (a)(4) of Section 29.85, Title 14, CCR, that caps the maximum number of traps a CPFV can use to take Dungeness crab at 60. This proposal was rejected, in light of the significant increase in whale entanglement events in crab trap gear over recent years, which are currently under discussion between the Department, NOAA and the commercial crab industry. Discussions are focusing on how to reduce encounters in the future; and a regulation that increases the number of traps in any of our fisheries at this time is not considered a prudent approach to abating this issue while solutions are being explored.

However, the need for this alternative can be tracked if the new bag limit is adopted; if it appears that more traps are needed by a significant number of CPFV operators, the Department can reconsider the issue.

(b) No Change Alternative:

1. Recreational fishers aboard CPFVs from Sonoma, Marin, San Francisco, San Mateo, Santa Cruz and Monterey counties will continue to be limited to take only six Dungeness crab that are 6 inches or greater in carapace width unlike other fishers on CPFVs in other counties or not on board CPFVs in the same counties, who enjoy a larger bag limit and lower size limit.

2. Crab traps used in the recreational fishery that are derelict will continue to fish for crabs and other organisms that will become trapped inside with no means to escape.

3. There will continue to be no means to enforce subsection (a)(3) of Section 29.80, Title 14, CCR, that states that it is unlawful to disturb, move or damage any trap that belongs to another person since no identification of the trap operator is required on traps or buoys used for the recreational take of Dungeness crab.

4. Crab traps illegally targeting Dungeness crab out of season will continue to be deployed sometimes up to a week before the recreational season begins, giving some fishers an unfair advantage before the start of the Dungeness crab season and creating a disorderly fishery opening.

5. The geographic location of Point Arguello, which is identified in subsection (e) of Section 29.80 regarding crab trap areas, will not be clarified as being located in Santa Barbara County, as it is identified under subsection (b) of Section 29.80 regarding hoop net use.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purposes for which the regulation is proposed or would be as effective as and less burdensome to the affected private persons than the proposed regulation.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action is expected to have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, including the Ability of California Businesses to Compete with Businesses in Other States:

Costs to comply with new trap and buoy requirements are anticipated to be nominal, and the proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. Costs to comply with new trap and buoy requirements are anticipated to be nominal, and the proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new business, the elimination of existing businesses or the expansion of businesses in California. The proposed regulation changes are intended to provide increased fishing opportunity and potential increase in business aboard CPFVs in affected county areas, reduce incidences of derelict trap gear continuing to fish, deter crab theft, and promote a more orderly fishery at the start of the Dungeness crab season.

The Commission anticipates benefits to the health and welfare of California residents. Providing opportunities for a Dungeness crab recreational fishery encourages consumption of a nutritious food.
The Commission anticipates benefits to the environment by the sustainable management of California's Dungeness crab resources.

The Commission does not anticipate any non-monetary benefits to worker safety.

(c) Cost Impacts on a Representative Private Person or Business:

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with

the proposed action.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

(e) Nondiscretionary Costs/Savings to Local Agencies:

None.

(f) Programs mandated on Local Agencies or School Districts:

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs:

None.

VII. Economic Impact Assessment:

The economic impact of the proposed regulatory changes for the Dungeness crab recreational fishery can be estimated by tracking any resulting changes in fishing effort, defined as trapping trips and length of stay in the coastal fishery areas. Direct expenditures ripple through the economy, as receiving businesses buy intermediate goods from suppliers who then spend that revenue again. Business spending on wages is received by workers who then spend that income, some of which goes to local businesses.

The proposed changes to the recreational Dungeness crab regulations are to make the current Dungeness crab daily bag limits and size limits uniform statewide; to require that recreational crab traps contain a destruct device to prevent ‘ghost fishing’ by lost traps; and that trap buoys have the contact information of the crab trap operator to assist enforcement when checking that anglers’ traps are in compliance and as a measure to deter theft of crabs from traps. Additionally, a seven day waiting period for deploying crab traps is proposed prior to the start of the Dungeness crab recreational season. These proposed regulatory changes are intended to provide increased fishing opportunity aboard CPFVs, less incidences of derelict trap gear continuing to fish, deter crab

theft and promote a more orderly fishery at the start of the Dungeness crab season.

These regulatory changes are not anticipated to directly affect the level of trapping activity and thus are anticipated to be economically neutral. The proposed changes are consistent with existing scientifically-based regulations related to minimum size and season length, which maintain sustainable populations of Dungeness crab to ensure their continued existence and future Dungeness crab recreational fishing opportunities. Sustainability of Dungeness crab resources will also benefit from the reduction in “ghost fishing” due to the proposed regulations. Providing for sustainable Dungeness crab fishing in turn supports businesses that contribute to the fishery economy, such as: recreational fishing business owners, boat owners, tackle store owners, boat manufacturers, vendors of food, bait, fuel and lodging, and others that provide goods or services to those that recreationally pursue Dungeness crab off California.

Effects of the Regulation on the Creation or Elimination of Jobs within the State

The cumulative effects of the changes statewide are estimated to be neutral to the creation or elimination of jobs in California. No significant changes in fishing effort and recreational fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses within the State

The cumulative effects of the changes statewide are expected to be neutral to the creation or elimination of businesses in California. No significant changes in fishing effort and recreational fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

Effects of the Regulation on the Expansion of Businesses Currently Doing Business within the State

The cumulative effects of the changes statewide are expected to be neutral to the expansion of businesses currently doing business in California. No significant changes in fishing effort and recreational fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

Benefits of the Regulation to the Health and Welfare of California Residents

Providing sustainable fishing bag limits that preserve ongoing opportunities for Dungeness crab trapping encourages recreation, which can have a positive impact on the health and welfare of California residents. Dungeness crab taken in the recreational fishery and later consumed may have positive human health benefits.

Benefits of the Regulation to Worker Safety

The proposed regulations are not anticipated to impact worker safety conditions.

Benefits of the Regulation to the State's Environment

It is the policy of this State to encourage the conservation, maintenance, and utilization of living marine resources under the jurisdiction and influence of the State for the benefit of all citizens (Section 1700, FGC). Benefits of the proposed management actions include increased fishing opportunity, along with the continuation of the reasonable and sustainable management of recreational Dungeness crab resources.

Informative Digest/Policy Statement Overview

Under existing law, Dungeness crab may be taken for recreational purposes with a sport fishing license subject to regulations prescribed by the Fish and Game Commission (Commission). Current regulations specify seasons, size limits, bag and possession limits, closed fishing areas, and gear restrictions.

Recreational fishing groups and constituents, including the Coastside Fishing Club, the Golden Gate Fishermen's Association, and one CPFV Captain, sent letters to the Department of Fish and Wildlife (Department) and the Commission requesting several changes to Dungeness crab recreational fishery regulations. They proposed making the current Dungeness crab daily bag limits and size limits uniform statewide at ten crab that are a minimum of 5.75 inches carapace width, in order to eliminate the unfairness to fishers aboard Commercial Passenger Fishing Vessels (CPFVs) in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties, who are only allowed to take six crab that are 6 inches or greater under current regulations. The Department has reviewed landings data for the commercial fleet in this region for the past ten seasons and recent recreational catch estimates. While there is no resource allocation between sectors, the data suggest that the increase in CPFV bag limit and decrease in minimum size limit would not significantly alter use patterns between sectors, and that maintaining different bag and size limit for CPFVs in these counties is not warranted. Therefore the Department is proposing that the separate CPFV regulatory language be removed.

The Coastside Fishing Club also requested that recreational crab traps be required to contain a destruct device to prevent 'ghost fishing' by lost traps, and that the trap buoys must contain the contact information of the crab trap operator to deter theft of crabs from traps. The Department is proposing that each crab trap possess a destruct device similar to commercial crab traps, and that each crab trap buoy must display the trap owner's GO ID number located on his/her sport fishing license.

Lastly, the Department proposes a seven day waiting period prior to the start of the Dungeness crab recreational season for deploying crab traps. This would prohibit the covert targeting of Dungeness crab under the guise of rock crab fishing before the start of the season.

In addition to these changes, the Department is proposing to add clarifying language to subsection (e) of Section 29.80, Title 14, CCR, specifying that Point Arguello is located in Santa Barbara County.

The following Title 14, CCR, regulation changes are proposed to become effective prior to the start of the 2015-16 Dungeness crab season (i.e., November 7, 2015, the first Saturday in November):

- Remove the bag and minimum size exception language in subsections (a)(3) and (a)(7) of Section 29.85 that limits CPFVs in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties to the take of six Dungeness crab that

are 6 inches in carapace width or greater.

- Add Santa Barbara County as the location of Point Arguello under subsection (e) of Section 29.80.

The following Title 14, CCR, regulation changes would specify an effective date of August 1, 2016, which immediately follows the close of the 2015-16 Dungeness crab season:

- Add language to subsection (c) of Section 29.80 that requires, as of August 1, 2016, crab traps to have one destruct device of a single strand of untreated cotton twine size No. 120 or less that creates an unobstructed escape opening in the top or upper half of the trap of at least five inches in diameter when the destruct attachment material corrodes or fails.

- Add language to subsection (c) of Section 29.80 that requires, as of August 1, 2016, every crab trap to be marked with a buoy and that each buoy shall be legibly marked to identify the operator's GO ID number as found on his/her sport fishing license.

- Add language to subsection (c) of Section 29.80 that prohibits, as of August 1, 2016, crab traps from being deployed in ocean waters seven days prior to the opening of the Dungeness crab season.

Benefits of the Regulation

The Commission anticipates benefits to the State's environment and the health and welfare of California residents. The proposed regulation changes are intended to provide increased fishing opportunity, reduce incidences of derelict trap gear continuing to fish, deter crab theft and promote a more orderly fishery at the start of the Dungeness crab season, and eliminate unfairness and unnecessary complexity in the bag and size limit regulations. The Commission anticipates benefits to the environment by the sustainable management of California's Dungeness crab resources.

Consistency with State or Federal Regulations

The proposed regulations are neither inconsistent nor incompatible with existing state regulations. Section 20, Article IV, of the State Constitution specifies that the Legislature may delegate to the Commission such powers relating to the protection and propagation of fish and game as the Legislature sees fit. The Legislature has delegated to the Commission the power to regulate the recreational take of Dungeness crab, specifically the size and bag limits and means of taking (FGC sections 200 and 205). The Commission has reviewed its own regulations and finds that the proposed regulations are neither inconsistent nor incompatible with existing state regulations. The Commission has searched the CCR and finds no other state agency regulations pertaining to the recreational take of Dungeness crab and the use of crab traps while recreational fishing.

Regulatory Language

Amend Section 29.80, Title 14, CCR, as follows:

§29.80. GEAR RESTRICTIONS.

... [No changes to subsections (a) and (b)]

(c) Crab traps:
~~(c)~~(1) Crab traps shall have at least two rigid circular openings of not less than four and one-quarter inches inside diameter so constructed that the lowest portion of each opening is no lower than five inches from the top of the trap.
(2) Starting August 1, 2016, crab traps shall contain at least one destruct device of a single strand of untreated cotton twine size No. 120 or less that creates an unobstructed escape opening in the top or upper half of the trap of at least five inches in diameter when the destruct attachment material corrodes or fails.
(3) Starting August 1, 2016, every crab trap except those used under authority of subsection 29.85(a)(5) of these regulations shall be marked with a buoy. Each buoy shall be legibly marked to identify the operator's GO ID number as stated on his/her sport fishing license.
(4) Starting August 1, 2016, crab traps shall not be deployed and used in ocean waters seven days prior to the opening of the Dungeness crab season.

... [No changes to subsection (d)]

(e) Crab trap areas: Crab traps, including crab loop traps, may be used north of Point Arguello, Santa Barbara County, to take all species of crabs (see regulations for take of Dungeness crabs in traps from commercial passenger fishing vessels in Section 29.85~~, Title 14, CCR~~ of these regulations).

... [No changes to subsections (f) through (j)]

Note: Authority cited: Sections 200, 202, 205, 215 and 220, Fish and Game Code. Reference: Sections 200, 202, 205, 206, 215 and 220, Fish and Game Code.

Amend Section 29.85, Title 14, CCR, as follows:

§29.85. CRABS.

... [No changes to subsections (a)(1) and (a)(2)]

(a)(3) Limit: Ten~~, except in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties, when fishing aboard a commercial passenger fishing vessel required to be licensed pursuant to Section 7881 and/or Section 7920, Fish and Game Code, the limit is six~~.

... [No changes to subsections (a)(4) through (a)(6)]

(a)(7) Minimum size: Five and three-quarter inches measured by the shortest distance through the body from edge of shell to edge of shell directly in front of and

excluding the points (lateral spines)~~; except in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties, when fishing aboard a commercial passenger fishing vessel required to be licensed pursuant to Section 7881 and/or Section 7920, Fish and Game Code, the minimum size is six inches measured by the shortest distance through the body from edge of shell to edge of shell directly in front of and excluding the points (lateral spines)~~.

... [No changes to subsections (b) through (d)]

Note: Authority cited: Sections 200, 202, 205 and 220, Fish and Game Code. Reference: Sections 200, 202, 205, 206 and 220, Fish and Game Code.

Attachment A
Department of Fish and Wildlife Review of
Commercial Dungeness Crab Landings Trends and Recent Recreational Catch Trends in Central California Coastal Counties
July 2015

The Department of Fish and Wildlife (Department) has reviewed Dungeness crab landings data for the commercial fleet in Central California coastal counties over the past 20 years, and reviewed recent recreational catch estimates from this region.

The Department has maintained records of seasonal commercial catch for over 100 years. Historically, catches have been cyclical but, despite wide fluctuations in catch on decadal time scales, the commercial fishery appears sustainable under the current management scheme in that no long term crashes have been observed over this time period. During the past ten seasons (from 2004-05 to 2013-14), average commercial Dungeness crab landings were 7.9 million pounds from Sonoma County south. This represents a more than threefold increase from the previous ten seasons (1994-95 to 2003-04), where average landings were 2.6 million pounds.

Data for the recreational fishery is much more limited. Commercial Passenger Fishing Vessel (CPFV) catch data are derived from catch reported by CPFVs on their daily logs, and no estimates of catch from anglers aboard private vessels or who fish from shore are available. Recently, the California Recreational Fishery Survey (CRFS) effort was used to estimate recreational Dungeness crab catch at the start of the 2013-14 and 2014-15 fishing season for the geographical portion of the fishery in CRFS District 4 (Sonoma, Marin, San Francisco, and San Mateo counties) during the month of November (2013 and 2014), which is the month of highest angler effort. These preliminary catch estimates accounted for about 2-3% of the total combined recreational and commercial catch for the area during the same time period, and catch from CPFVs was <1% of the total combined catch for both November 2013 and 2014. Although the recreational data does not include catch from Santa Cruz and Monterey counties, the increasing trend in commercial landings and the small proportion of recreational catch compared to these landings suggests that a similar trend would apply if estimates were added for Santa Cruz and Monterey counties. Therefore, the Department concludes that the proposed increase in CPFV bag limit from 6 to 10 crab, and reduction in minimum size limit from 6 inches to 5.75 inches in Central California coastal counties (from Sonoma to Monterey counties), would be unlikely to significantly alter catch patterns between sectors of the fishery in this area.

Attachment B. Notes on Department Meeting with Commercial Passenger Fishing Vessel (CPFV) Operators in Greater Bay Area on Proposed Changes to Recreational Dungeness Crab Regulations

Location: Santa Rosa Marine Department Office
Date: May 19, 2015
Time: 5:30-7:00pm

CDFW Staff attended:
Christy Juhasz, Environmental Scientist, Marine Region
Bob Puccinelli, Captain, Law Enforcement Division

CPFV operators in affected area (Sonoma to Monterey counties) were invited via mailed Department letter that was sent to those operators who had log books showing Dungeness crab caught in the last year at ports in affected area.

Nine recreational anglers contacted me via email and four of these anglers identified themselves as current or past CPFV operators, but did not attend the meeting. One of these anglers identified as a CPFV captain supported status quo on the issue of statewide uniform bag and size limits (parity). All other anglers supported parity for the daily bag limit only. Of these anglers, most expressed that they wanted parity for the size limit as well to increase consistency in the regulations, but did not specify which limit they prefer. One angler contacted me via the phone and supported uniform bag limits of ten crab per day.

Nine CPFV operators attended meeting and were given a short presentation by C. Juhasz on the background and proposed regulations package:
1. Uniform daily bag and size limits at 10 crab/day and 5.75 inches minimum size limit
2. Marking buoys on crab traps from private vessels with GO ID number
3. Destruct device
4. Seven day moratorium on deploying crab traps prior to start of Dungeness crab season
5. Clarify location of Point Arguello in Santa Barbara County

CPFV operators found no issue with items #2-5.
-One person commented that the benefit of this seven day moratorium could be that enforcement would be able to pick up derelict gear in water just prior to start of season

CPFV operators were concerned with item #1, so the following votes were taken on this issue and related issues that were also suggested:

1. Uniform daily bag and size limits or parity:
    a) Parity: make daily bag limit and size limit for CPFVs in Bay Area to be 10 crab/day at a minimum of 5.75 inches.
    Support: 5 votes
    No Support/Status quo (no change): 4 votes

-issues brought up to support this was that fishery has limited or incomplete data and better science is needed to support increasing daily bag limit and increasing take of smaller sized Dungeness crab
-size of 5.75" is too small for harvesting because crabs generally do not have enough meat at this size
-FYI, the Department utilized CRFS data to estimate recreational take limited to Sonoma and San Mateo counties for the months of November and December in 2013 & 2014 and presented this data at the meeting. Take home result is that monthly recreational catch accounts for only 2-3% of total take when compared with commercial take

b) Parity at 10 daily bag limit, and what is your preference of minimum size limit?:
6 inches: 3 votes
5.75 inches: 5 votes
Neutral: 1 vote

-neutral vote had issue with increasing limits to 6 inches for anglers that are pier fishing where crab sizes are generally smaller
-one person in support of 5.75 inches preferred having a wider range between commercial size limit of 6.25 inches and said increasing to 6 inches would shorten that range

2. If daily bag limit were to increase, then the 60 crab trap limit would be inadequate for large CPFV vessels versus smaller vessels like six-packs and CPFV operators. It was suggested repealing the 60 trap limit on CPFVs if daily bag limit increase is adopted
Support: 9 votes
No support: 0 votes

3. CPFV operators suggested limiting the number of traps deployed by private vessels, and enforcement personnel explained that this would only be enforceable if buoys are labelled using the operator's GO ID number. CPFV operators alternatively suggested using the vessel's CF number to label buoys.

a) Set trap limit on private recreational vessels if GO ID number is used to label buoys
Support: 1 vote
No support: 7 votes
Neutral: 1 vote

- Issue is that limiting individuals using GO ID would not necessarily reduce total number of traps used by private vessels, since each fisherman aboard would have his own trap limit.

b) Set trap limit on private recreational vessels if CF vessel number is used to label buoys
Support: 8 votes
No support: 0 votes

Neutral: 1 vote

1. What limits for private vessels would you consider?
20 trap limit: 5 votes
30 trap limit: 2 votes
40 trap limit: 1 vote
Neutral: 1 vote

4. Although CPFV operators supported the seven day moratorium on deploying crab traps they suggested that a pre-soak period of time be instituted similar to the commercial fishery (current limits are 18hr for District 10/Central CA and 64hr for Northern CA) and the recreational season begins the first Saturday of November.

a) Institute a Pre-soak period?
Support: 9 votes
No Support: 0 votes

-Safety concerns regarding running gear in inclement weather as well as safety about running gear while carrying passengers as there are stability and weight capacity issues (potentially enforced by Coast Guard requirements)

b) What time periods for a pre-soak do you prefer?
24 hours translates to 12:01am, Friday before season starts: 1 vote
42 hours translates to 6:01am, Thursday before season starts: 6 votes
64 hours translates to 8:01am, Wednesday before season starts: 2 votes

STATE OF CALIFORNIA

NATURAL RESOURCES AGENCY

DEPARTMENT OF FISH AND WILDLIFE NEGATIVE DECLARATION

PREPARED FOR
THE CALIFORNIA FISH AND GAME COMMISSION

FOR
PROPOSED AMENDMENTS AND ADDITIONS
TO
DUNGENESS CRAB RECREATIONAL FISHING AND
CRAB TRAP REQUIREMENT REGULATIONS
TITLE 14, CALIFORNIA CODE OF REGULATIONS

Prepared by: Christy Juhasz
Environmental Scientist

This Report Has Been Prepared Pursuant to the
California Environmental Quality Act of 1970
State of California
Natural Resources Agency
Department of Fish and Wildlife

INITIAL STUDY AND NEGATIVE DECLARATION
FOR
PROPOSED AMENDMENTS AND ADDITIONS
TO
DUNGENESS CRAB RECREATIONAL FISHING AND CRAB TRAP REQUIREMENT REGULATIONS
TITLE 14, CALIFORNIA CODE OF REGULATIONS

The Project

The Department of Fish and Wildlife proposes to amend regulations regarding the recreational Dungeness crab fishery and add regulations concerning the use of crab traps. The proposal would eliminate area-based restrictions for Dungeness crab anglers fishing on board Commercial Passenger Fishing Vessels (CPFVs) in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz and Monterey counties to allow statewide uniform daily bag and size limits for the recreational Dungeness crab fishery. The other changes in the proposal would require a destruct device on all crab traps used by recreational anglers, have buoys attached to these traps be labelled to properly identify the operator of each trap, and impose a seven-day moratorium on deploying crab traps in California waters prior to the opening day of the Dungeness crab season.

The Findings

The project will have a less than significant impact on biological resources, greenhouse gas emissions, recreation, and transportation/traffic. The project will have no impact to aesthetics, agriculture and forest resources, air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, and utilities and service systems.

Basis of the Findings

Based on the initial study, the Department finds that implementing the proposed project will have a less than significant to no impact on the environment. Therefore, a negative declaration is filed pursuant to the California Environmental Quality Act, Public Resource Code Section 21080 (c2).

This proposed negative declaration consists of the following:

- Project Description and Background Information on the Proposed Amendments and Additions to Dungeness Crab Recreational Fishing and Crab Trap Requirement Regulations
- Initial Study Environmental Checklist Form
- Explanation of the Response to the Initial Study Environmental Checklist Form

PROJECT DESCRIPTION AND BACKGROUND INFORMATION FOR PROPOSED AMENDMENTS AND ADDITIONS TO DUNGENESS CRAB RECREATIONAL FISHING AND CRAB TRAP REQUIREMENT REGULATIONS TITLE 14, CALIFORNIA CODE OF REGULATIONS

Introduction

The Fish and Game Commission (Commission) considered proposals from several recreational fishing associations and members of the public regarding modifications to the recreational Dungeness crab fishery.

These requests included aligning the current Dungeness crab daily bag limits and size limits for statewide uniformity by eliminating the separate and different bag limits and size limits currently in place for California Commercial Passenger Fishing Vessels (CPFVs) in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz and Monterey counties (central California coastal counties).

The Commission directed these requests to be presented to the Dungeness Crab Task Force (DCTF) at its April 2014 meeting in accordance with Fish and Game Code subsection (c)(2) of Section 8276.4. The DCTF agreed that there should be uniform bag limits and minimum size limits for the recreational fishery throughout California, but deferred the decision on these specific limits to the Commission with input from the Department of Fish and Wildlife (Department) and the recreational constituency.

After soliciting CPFV operators in the affected area and in accordance with the original request from members of the sport fishing community, the Department is recommending that the CPFV regulations requiring different bag and size limits in the central California coastal counties be eliminated from Title 14, California Code of Regulations (CCR), so that these limits are uniform throughout the state. This would change current limits for anglers on board CPFVs in this area from increasing the daily bag limit from six to ten Dungeness crab and decrease the minimum size limit from 6 to 5.75 inches (across the widest length of their carapace, not including the lateral spines).

Two additional requests put forth by recreational fishing groups are also being recommended by the Department. These additional proposals would require that recreational crab traps contain a destruct device to prevent ‘ghost fishing’ by lost traps, and that trap buoys display the contact information of the crab trap operator to deter theft of crabs from traps. The Department recommends that each trap possess a destruct device similar to commercial crab traps as well as a crab trap buoy that displays the trap operator’s GO ID number, obtained from his/her sport fishing license. The Commission expressed its support of these

additional requirements at the August 2014 meeting. These changes would be added Title 14, CCR.

Lastly, the Department recommends a seven day waiting period prior to the start of the Dungeness crab recreational season for deploying crab traps. This would prevent crab traps from occupying fishing grounds for Dungeness crab before the season starts. This change would also be added to Title 14, CCR.

Project goals and objectives

The goal of this project is to create a more uniform and orderly Dungeness crab recreational fishery by having daily bag and size limits be the same for all fishery user groups and regulating the use of crab traps.

Background

The Department has been collecting landings data for the commercial fishery for 100 seasons and during this time, there have been no coastwide long-term declines in statewide landings. The resource appears to be sustainably managed under current measures for both the commercial and recreational fisheries, and these proposed regulation changes should not alter that conclusion.

Catch by angler in the central California coastal counties could increase following higher daily bag limits from six to ten, however the number of traps that a CPFV can use would still be limited to 60. Reducing the minimum size limit of Dungeness crab on CPFVs in this area from 6 to 5.75 inches is still larger than the minimum size at reproduction of approximately 4 inches. Additionally, estimates of sport-caught crab contribute less than 5% to the overall Dungeness crab landings when combined with the commercial fishery (there are no quotas in place for the Dungeness crab fishery), so any expected increase in recreational catch should have a negligible effect on the resource compared to the overall catch from both fisheries.

The three other regulatory changes in the proposal concern crab trap use in state waters north of Point Arguello, Santa Barbara County. First, crab traps would be required to have a destruct device. A destruct device is designed to deteriorate over time when traps are lost or abandoned at sea and prevents the continual trapping of organisms in a process known as ‘ghost fishing’. This provision is currently in place for crab traps used in both the Dungeness crab and rock crab commercial fisheries and if adopted would ensure all crab traps fished in California waters contain a destruct device, promoting a positive net effect on the ocean ecosystem and nearshore environment.

Second, a buoy that is attached to a crab trap would need to identify the operator of each trap with their GO ID number (from sport fishing license) labelled on the buoy. Crab traps deployed by CPFVs are already required to label their traps with their vessel identification number. In addition, buoys attached to Dungeness

crab traps in the commercial fishery are labeled with the fisher's commercial license number and are affixed with a trap limit buoy tag which also identifies the vessel permit. These forms of identification are used by enforcement and should deter other fishers from recklessly disturbing traps that do not belong to them. Identification of buoys used by recreational anglers on private vessels would serve the same purpose.

Lastly, a seven-day moratorium on deploying crab traps in California waters would be imposed prior to the opening day of the Dungeness crab season. The recreational rock crab fishing season is open year-round and crab traps are used to fish all species of *Cancrid* crab. Imposing this moratorium will limit premature fishing from anglers that are covertly targeting Dungeness crab when they deploy generic crab traps as early as seven days prior to the start date of the Dungeness crab season (first Saturday of November). During this period of time when traps cannot be used, all crab trap gear including derelict and abandoned traps can be removed by enforcement personnel since any deployed trap gear would be in violation of this provision.

Project Location

These regulation modifications would apply to State of California ocean waters from the California/Oregon border down south to Point Arguello, Santa Barbara County.

Schedule

If adopted by the Commission, the proposed regulatory amendment removing CPFV regulations concerning the daily bag and size limits will go into effect prior to the 2015-16 Dungeness crab season that begins on November 7, 2015. The additional crab trap requirements regulations will go in to effect August 1, 2016 in time for the 2016-17 Dungeness crab season.

Project Description

The proposed regulation changes to the Dungeness crab fishery and crab trap requirements would modify Sections 29.80 & 29.85, Title 14 California Code of Regulations (CCR)**:**

1. Uniform size and bag limit for recreationally caught Dungeness crab of ten Dungeness crab that are at least 5.75 inches
2. Require destruct device for recreational crab traps
3. Require buoys be labelled on recreational crab traps
4. Seven-day moratorium on deploying crab traps prior to Dungeness crab recreational season opener

ENVIRONMENTAL CHECKLIST FORM

1. Project Title:
   Proposed Amendments to Dungeness crab Recreational Fishing Regulations and Crab Trap Requirements, Title 14, California Code of Regulations

2. Lead Agency Name and Address:
   California Department of Fish and Wildlife, Marine Region 20 Lower Ragsdale Dr. Suite #100 Monterey, CA 93940

3. Contact Person and Phone Number:
   Christy Juhasz, (707) 576-2887

4. Project Location:
   State of California ocean waters north of Point Arguello, Santa Barbara County.

5. Project Sponsor's Name and Address:
   California Department of Fish and Wildlife, Marine Region 5355 Skylane Blvd. Suite B Santa Rosa, CA 95403

6. General Plan designation: N/A (statewide)

7. Zoning: N/A (statewide)

8. Description of Project:
   The Department of Fish and Wildlife proposes to amend regulations regarding the recreational Dungeness crab fishery and add regulations concerning the use of crab traps.

9. Surrounding land uses and setting: N/A

10. Other Public Agencies Whose Approval Is Required: None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

☐	Aesthetics	☐	Agriculture and Forestry	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology/Soils
☐	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials	☐	Hydrology/Water Quality
☐	Land Use/Planning	☐	Mineral Resources	☐	Noise
☐	Population/Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Utilities/Service Systems	☐	Mandatory Findings of Significance

DETERMINATION:

☒	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☐	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required

Signature:	**Date:** 8/14/15
Craig Shuman, Marine Region Manager	**Department of Fish and Wildlife**

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b)Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

EXPLANATION OF RESPONSES TO INITIAL STUDY ENVIRONMENTAL CHECKLIST

I. AESTHETICS

a) The project will not have an adverse effect on a scenic vista. Such an impact will not occur because the project will not involve any construction, land alternation, or modification of any buildings or structures. The project would not substantially affect the way in which Dungeness crab traps are already recreationally deployed on private vessels or on board Commercial Passenger Fishing Vessels (CPFVs) so should not further create any adverse effects on the aesthetics of the environment.

4b) The project will not damage scenic resources such as trees, rock outcroppings, and historic buildings. Such an impact will not occur because the project will not involve any construction, land alteration, or modification of any buildings or structures.

c) The project will not substantially degrade the existing visual character or quality of the work sites and their surroundings. Such an impact will not occur because the project will not involve any construction, land alternation, or modification of any buildings or structures.

d) The project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

II. AGRICULTURE RESOURCES

a) The project will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, to non-agricultural use. Such an impact will not occur because the project will not involve any construction, land alternation, or land use changes. The project would have no adverse effects on land-based agricultural farm or forest lands.

b) The project will not conflict with existing zoning for agricultural use or a Williamson Act contract. Such an impact will not occur because the project will not involve any construction, land alternation, or land use changes.

c) The project will not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timber zoned Timberland Production. Such an impact will not occur because the project will not involve any construction, land alternation, or land use changes.

d) There will be no loss of forest land and the project will not result in the conversion of forest land to non-forest use. Such an impact will not occur

because the project will not involve any construction, land alternation, or land use changes.

e) The project will not involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use. Such an impact will not occur because the project will not involve any construction, land alternation, or land use changes.

III. AIR QUALITY

a) The project will not conflict with or obstruct implementation of the applicable air quality plan. Such an impact will not occur because the project will not involve any construction, land alternation, or land use changes. The project would not substantially affect the way in which Dungeness crab are already recreationally fished on private vessels or on board CPFVs and air quality effects created by marine vessels should not change substantially under these regulations from how they currently operate. One effect of these regulations may reduce the number of recreational vessels in the ocean one week prior to the opening of the Dungeness crab season since in the past they have deployed crab traps during this time.

b) The project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Such an impact will not occur because the project will not involve any construction, land alternation, or land use changes.

c) The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors). Such an impact will not occur because the project involves no ongoing sources of air pollution.

d) The project will not expose sensitive receptors to substantial pollutant concentrations. Such an impact will not occur because the project will not increase pollutant concentrations.

e) The project will not create objectionable odors affecting a substantial number of people.

IV. BIOLOGICAL RESOURCES

a) The project will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the CDFW, National Marine Fisheries Service (NMFS) or U. S. Fish and Wildlife Service (USFWS). The project would not substantially affect the way in which Dungeness

crab are already recreationally fished on private vessels or on board CPFVs in state ocean waters. The use of a destruct device on recreationally fished crab traps would not alter the way in which crab traps are currently fished but would discontinue the process known as 'ghost fishing' from lost or abandoned traps by allowing any live trapped crabs or other organisms to escape when the device disintegrates.

b) The project will not have an adverse effect on any riparian habitat or other sensitive natural communities identified in local or regional plans, policies and regulations, or by the CDFW or the USFWS. Such an impact will not occur because the project will not involve any construction, land alternation, or land use changes.

c) The project will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Such an impact will not occur because the project will not involve any construction, land alteration, or land use changes.

d) The project will not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Such an impact will not occur because the project will not involve any construction, land alteration, or land use changes. The projecy would also not change the current effects the Dungeness crab recreational fishery has on migratory fish or wildlife species.

e) The project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Such an impact will not occur because the project will not result in any construction, land alteration, or land use changes.

f) The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Such an impact will not occur because the project will not involve any construction, land alteration, or land use changes.

V. CULTURAL RESOURCES

a) The project will not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. There is no ground disturbing work and thus no potential to affect historical resources. Resources, such as these, found on Dungeness crab fishing grounds would not be impacted any differently since this project would not alter the way in which crab traps are currently fished.

b) The project will not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. There is not ground disturbing work and thus no potential to affect archaeological resources. Resources, such as these, found on Dungeness crab fishing grounds would not be impacted any differently since this project would not alter the way in which crab traps are currently fished.

c) The project will not directly or indirectly destroy any unique paleontological resources or sites, or unique geologic features. There is no ground disturbing work and thus no potential to affect paleontological resources.
29 d) The project will not disturb any human remains, including those interred outside of formal cemeteries. There is no ground disturbing work and thus no potential to affect human remains. Resources, such as these, found on Dungeness crab fishing grounds would not be impacted any differently since this project would not alter the way in which crab traps are currently fished.

VI. GEOLOGY AND SOILS

a i) The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault. Such an impact will not occur because the project will not involve ground disturbing work.

a ii) The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Such an impact will not occur because the project will not involve ground disturbing work.

a iii) The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Such an impact will not occur because the project will not involve ground disturbing work.

a iv) The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. Such an impact will not occur because the project will not involve ground disturbing work.

b) The project will not result in substantial soil erosion or the loss of topsoil. Such an impact will not occur because the project will not involve ground disturbing

work. c) The project will not be located on a geologic unit or soil that unstable, or that would become unstable and potentially result in on- or off- site landslides, lateral spreading, subsidence, liquefaction, or collapse. Such an impact will not occur because the project will not involve ground disturbing work.

d) The project will not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. Such an impact will not occur because the project will not involve ground disturbing work.

e) The project will not create any sources of waste water requiring a septic system

VII. GREENHOUSE GAS EMISSIONS

a) The project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. The project will not involve any construction, land alternation, or land use changes. The project would not substantially change greenhouse gas emissions created by marine vessels from how they currently operate in the recreational fishery and the project is not expected to generate any more greenhouse gas emissions. One effect of these regulations may reduce the number of recreational vessels in the ocean one week prior to the opening of the Dungeness crab season since in the past fishers have deployed crab traps during this time.

VIII. HAZARDS AND HAZARDOUS MATERIALS

a) The project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The project will not involve the transport, use, or disposal of hazardous materials.

b) The project will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The project will not involve the transport, use, or disposal of hazardous materials.

c) The project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The project will not involve the transport, use, or disposal of hazardous materials. d) The project will not be located on any site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e) The project will not be located within an airport land use plan area.

f) The project will not be located within the vicinity of a private airstrip.

g) The project will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. The project will not involve any construction, land alteration, or land use changes.

h) The project will not expose people or structures to a significant risk of loss, injury, or death involving wild land fires. The project will not involve any construction, land alteration, or land use changes.

IX. HYDROLOGY AND WATER QUALITY

a) The project will not violate any water quality standards or waste discharge requirements. The project will not involve any construction, land alteration, water use, or water discharge.

b) The project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The project will not involve any construction, land alteration, or groundwater use.

c) The project will not substantially alter the existing drainage pattern of the work sites in a manner that would result in substantial erosion or siltation on- or off-site because the project will not involve any construction or land alteration.

d) The project will not substantially alter the existing drainage pattern of the work sites, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site because the project will not involve any construction or land alteration.

e) The project will not create or contribute runoff water that would exceed the capacity of existing or planned storm-water drainage systems, or provide substantial additional sources of polluted runoff because the project will not involve any construction or land alteration.

f) The project will not substantially degrade water quality. The project will not involve any construction or land alteration, and thus will not have any adverse impacts on water quality.

g) The project will not place housing within a 100-year flood hazard area as mapped on any flood hazard delineation map. No housing will be created as part of this project.

h) The project will not place within a 100-year flood hazard area structures which would significantly impede or redirect flood flows. No new structures will be associated with this project.

i) The project will not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. The project will not involve any construction, land alteration, or land use changes.

j) The project will not expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow. The project will not involve any construction, land alteration, or land use changes.

X. LAND USE AND PLANNING

a) The project will not physically divide an established community. The project will not involve any construction, land alteration, or land use changes.

b) The project does not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. The project will not involve any construction, land alteration, or land use changes.

c) The project will not conflict with any Habitat Conservation or Natural Community Conservation plan. The project will not involve any construction, land alteration, or land use changes.

XI. MINERAL RESOURCES

a) The project will not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Such an impact will not occur because the project will not involve any construction, land alteration, or land use changes.

b) The project will not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Such an impact will not occur because the project will not involve any construction, land alteration, or land use changes.

XII. NOISE

a) The project will not result in exposure of persons to, or generation of noise levels in excess of, standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The project will not involve construction or physical alteration of land, and its implementation will not generate noise levels in excess of agency standards. There will be no change in the way crab traps are currently fished and any noise created by marine vessels should not change substantially under these regulations from how they currently operate.

b) The project will not result in exposure of persons to, or generation of, excessive ground-borne vibration or ground-borne noise levels. The project will not involve construction or physical alteration of land.

c) The project will not result in a substantial permanent increase in ambient noise levels in the project vicinity. The project will not involve construction or physical alteration of land, or the creation of any permanent noise sources.

d) The project will not result in a substantial temporary, or periodic, increase in ambient noise levels in the project vicinity above levels existing without the project. The project will not involve construction or physical alteration of land.

e) The project will not be located within an airport use plan or within two miles of a public airport or public use airport.

f) The project will not be located within the vicinity of a private airstrip.

XIII. POPULATION AND HOUSING

a) The project will not induce substantial population growth in an area, either directly or indirectly. Such an impact will not occur because the project will not construct any new homes, businesses, roads, or other human infrastructure.

b) The project will not displace any existing housing and will not necessitate the construction of replacement housing elsewhere.

c) The project will not displace any people and will not necessitate the construction of replacement housing elsewhere.

XIV. PUBLIC SERVICES

a) The project will not have any significant environmental impacts associated with new or physically altered governmental facilities. The project will not involve any construction, land alteration, or land use changes.

XV. RECREATION

a) The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The project would not substantially affect the way in which Dungeness crab are already recreationally fished on private vessels or on board CPFVs in California state ocean waters and are not expected to result in the increase use of neighborhood or regional parks.

b) The project will not involve any construction, land alternation, or land use changes. There will be no construction or expansion of recreational facilities.

XVI. TRANSPORTATION/TRAFFIC

a) The project will not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. There will be no change in the way Dungeness crab and crab traps are currently fished and any traffic created by recreational fishers should not change substantially under these regulations.

b) The project will not conflict, either individually or cumulatively, with any applicable congestion program established by the county congestion management agency for designated roads or highways. There will be no change in the way Dungeness crab and crab traps are currently fished and any traffic created by recreational fishers should not change substantially under these regulations.

c) The project will not result in any change in air traffic patterns.

d) The project will not alter terrestrial features or is incompatible with uses of equipment.

e) The project will not result in inadequate emergency access. The project does not involve construction.

f) The project will not significantly affect parking capacity or demand for parking.

XVII. UTILITIES AND SERVICE SYSTEMS

a) The project will not produce wastewater.

b) The project will not require, or result in the construction of, new water or wastewater treatment facilities or expansion of existing facilities. Such an impact will not occur because the project will not produce wastewater.

c) The project will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities.

d) The project will have sufficient water supplies available to serve the project from existing entitlements and resources.

e) The project will not produce wastewater.

f) The project will not generate solid waste requiring disposal in a landfill.

g) The project will not create solid waste. Thus, the project will be in compliance with federal, state, and local statutes related to solid waste.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) The project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. The project is consistent with the Department's mission to manage California's diverse fisheries resources for their ecological value, their use and for the public's enjoyment.

b) The project does not have adverse impacts that are individually limited, but cumulatively considerable. Cumulative adverse impacts will not occur because there are no potential adverse impacts due to project implementation.

c) The project does not have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly. The project will not involve any construction, land alteration, or the creation of new infrastructure.

~California Dungeness Crab Task Force~

http://www.opc.ca.gov/2009/04/dungeness-crab-task-force/

REPORT

TO:	California Department of Fish and Wildlife, Charlton Bonham, Director California Fish and Game Commission, Michael Sutton, President
CC:	California Department of Fish and Wildlife, Craig Shuman, Marine Region Director California Fish and Game Commission, Sonke Mastrup, Executive Director California Ocean Protection Council, Catherine Kuhlman, Executive Director Joint Committee on Fisheries and Aquaculture, Wesley Chesbro, Chair Joint Committee on Fisheries and Aquaculture, Noreen Evans, Vice Chair
FROM:	California Dungeness Crab Task Force
DATE:	May 9, 2014
RE:	California Dungeness Crab Task Force Review of Coastside Fishing Club Proposal to Modify Recreational Dungeness Crab Regulations
ATTACHMENT:	(1) Coastside Fishing Club Proposal Requesting Changes to the Recreational Dungeness Crab Regulations- October, 9 2013

During its April 22-23, 2014 meeting in Ukiah, CA, the California Dungeness Crab Task Force (DCTF) discussed and addressed a proposal by the Coastside Fishing Club regarding changes to the Dungeness crab recreational fishery (see attached). The California Department of Fish and Wildlife (CDFW) requested the DCTF review and offer feedback on Coastside Fishing Club's proposal to help inform the state's deliberations on the issues pertaining to the recreational Dungeness crab fishery. This report provides a summary of the recommendations that emerged during DCTF deliberations on the Coastside Fishing Club proposal.

The DCTF values its strong working relationship with CDFW and the California Fish and Game Commission (the Commission), and looks forward to continuing to work in partnership with the Commission and CDFW staff on all issues related to the management of the California Dungeness crab fishery. The DCTF welcomes future requests from CDFW and the Commission to review and provide recommendations on recreational Dungeness crab issues.

Additional information, including a detailed summary from the DCTF's April 22-23, 2014 meeting, will be available on the DCTF webpage: http://www.opc.ca.gov/2009/04/dungeness-crab-task-force/.

DCTF BACKGROUND

The DCTF was established pursuant to Senate Bills 1690 (Wiggins, 2008) and 369 (Evans, 2011). The California Ocean Protection Council (OPC) is designated as the body responsible for establishing and administering the DCTF. The DCTF is directed to review and evaluate Dungeness crab fishery management measures, including the newly implemented trap limit program for California permits, and provide its recommendations to the Joint Committee on Fisheries and Aquaculture, CDFW, and the Commission. Pursuant to SB 369, the DCTF will make initial recommendations by January 15, 2015 and final recommendations by January 15, 2017.

As mandated in SB 369, The DCTF is composed of 27 members including seventeen (17) members representing commercial fishing interests, two (2) members representing sport fishing interests, two (2) members representing crab processing interests, one (1) member representing Commercial Passenger Fishing Vessel (CPFV) interests, two (2) members representing nongovernmental organization interests, one (1) member from Sea Grant, and two (2) members from CDFW. Additional information about the history of the DCTF is available on the DCTF webpage: http://www.opc.ca.gov/2009/04/dungeness-crab-task-force/.

DCTF PROCESS AND PROCEDURES

Together, SB 369 and the DCTF Charter describe the DCTF's operating and voting procedures. The DCTF Charter was developed and ratified by the DCTF in September 2009 and amended in March 2012 and April 2014. The charter establishes ground rules, member roles, and voting procedures for the group. In keeping with those procedures, "a proposed recommendation that receives an affirmative vote of at least 15 of the non-ex officio members of the DCTF may be transmitted … [and] shall be considered to be the consensus of the task force, and shall be considered to be evidence of consensus in the Dungeness crab industry." The following voting protocol, described in the DCTF Charter, was used to conduct straw polls and final voting on the Committee's proposals to the DCTF:

- **Thumbs Up:** I think this proposal is the best choice of the options available to us.
- **Thumbs Sideways:** I can accept the proposal although I do not necessarily support it.
- **Thumbs Down:** I do not agree with the proposal. I feel the need to block its adoption and propose an alternative.
- **Abstention:** At times, a pending decision may be infeasible for a Member to weigh in on.

Thumbs up and thumbs sideways were *both* counted as affirmative votes to determine a 15-member majority on each recommendation.

COASTSIDE FISHING CLUB REQUEST

In its October 9, 2013 proposal to the Commission, Coastside Fishing Club requested the following:

1. Prohibit retention of female crabs (presently legal in the sport fishery).
2. Require use of "rotten cotton"* on traps (not presently required).
3. Require that pots be labeled with the owner's name and contact information.
4. Prohibit pulling pots (not your own) without the owner's written permission.
5. Conforming the 10-crab limit to all sport anglers. Presently, there is an exception for recreational anglers on commercial passenger fishing vessels (CPFVs) in five California counties, who are limited to six crab.
6. Conforming the 5.75" minimum size throughout the recreational fishery. Presently, crab on CPFVs operating in five California counties have a minimum size of 6".

As outlined in the attached document, the Coastside Fishing Club contends that the proposed regulations are necessary for "resource conservation, equity among recreational license holders, and discouraging the theft of crab from lawfully set recreational traps" (pg. 1). Many of the proposed regulations are consistent with commercial regulations, including requests 1, 2, 3, and 4. Requests 5 and 6 vary somewhat from the commercial fishery in their details, but are similar in that they request uniform take restrictions throughout

* All commercial Dungeness crab traps are required to have a biodegradable trap destruction "device that destructs rapidly enough to facilitate escape of a substantial proportion of all species confined in the trap from any trap that cannot be raised" (Fish and Game Code Section 9003). The Coastside Fishing Club proposal requests the same or a similar regulation of the recreational Dungeness crab fishery.

California. In the commercial fishery, size and sex restrictions are uniform throughout California.

DCTF VOTES AND ANALYSIS

The recommendations below represent agreements of the DCTF members (per voting protocols defined in the DCTF Charter); however, in some cases they are not the *verbatim* language from when the votes were taken. Because of the iterative nature of the conversations at DCTF meetings, the language of some recommendations has been adjusted to improve clarity. The verbatim language from the meeting is available on the DCTF webpage as part of the April 22-23 DCTF meeting summary for reference. Some recommendations are grouped together for clarity. Explanatory notes are provided below recommendations, when necessary.

DCTF Recommendations to CDFW and the Commission Regarding the October 9, 2013 Coastside Fishing Club Proposal

Recommendation 1- Per the Commission's direction, the DCTF has discussed the Coastside Fishing Club's proposal (dated October 9, 2013). The DCTF feels strongly that these issues need to be vetted through and decided on by the Commission with input from CDFW and members of the recreational fishing fleet.

The DCTF agrees that there should be a uniform bag limit and minimum size for the recreational fishery throughout California. However, at this time, the DCTF agrees that the Commission should decide the details of these issues with input from CDFW and members of the recreational fleet.

The DCTF looks forward to discussing future recreational fishery issues.

Vote of all DCTF Members (nonvoting Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
21	0	0	0	1

NOTES*:*
Currently, CPFVs operating south of Sonoma County are allowed a bag limit of 6 crabs per person at a minimum size limit of 6", while CPFVs operating in the north may retain up to 10 crabs at a minimum size of 5.75". The DCTF agrees there should be a uniform bag limit and minimum size for all CPFVs operating throughout California. However, the DCTF agrees the Commission should decide the details of those regulations with input from the recreational fleet and CDFW. The DCTF looks forward to continuing discussing issues related to the recreational fishery and welcomes future requests from CDFW and the Commission to review and provide recommendations on recreational Dungeness crab issues.

CONCLUSION

The DCTF looks forward to keeping CDFW and the Commission informed of all current and future work conducted by the DCTF. For more information on DCTF discussions and additional detail and context for the votes above, see the April 22-23, 2014 meeting summary on the DCTF webpage: http://www.opc.ca.gov/2009/04/dungeness-crab-task-force/

Coastside Fishing Club
P.O. Box 5928
Napa, CA 94581

October 9, 2013

BY HAND DELIVERY

President Michael Sutton
California Fish and Game Commission
1416 Ninth Street, Suite 1320
Sacramento, CA 95814

Dear President Sutton:

Coastside Fishing Club asks that the Fish & Game Commission make changes to regulations governing the take of Dungeness crab by recreational anglers. The requested changes are:

1. Prohibit retention of females (presently legal in the sport fishery).
2. Require use of "rotten cotton" on traps (not presently required).
3. Require that pots be labeled with the owner's name and contact information.
4. Prohibit pulling pots (not your own) without the owner's written permission.
5. Conforming the 10-crab limit to all sport anglers. Presently, there is an exception for recreational anglers on commercial passenger fishing vessels (CPFVs) in five California counties, who are limited to six crab.
6. Conforming the 5.75" minimum size throughout the recreational fishery. Presently, crab on CPFVs operating in five California counties have a minimum size of 6”.

These requests further three important goals: resource conservation, equity among recreational license holders, and discouraging the theft of crab from lawfully set recreational traps. Coastside brought these suggestions to the Department of Fish and Wildlife in this past August with the anticipation that the changes could be evaluated and adopted, as the Commission sees fit, by the start of the recreational Dungeness crab season in November 2014.

While the recreational crab fishery is small in comparison to the commercial fishery, it must nevertheless be prosecuted responsibly. Prohibiting the take of females and requiring the use of "rotten cotton," as in the commercial fishery, will benefit the fishery, even if marginally owing to the small size of the recreational fishery. It may be reasonable to make an accommodation for shore and pier anglers whose access to the resource is limited.

There exists an odd discontinuity as it relates to recreational anglers using the services of CPFV operators. The statewide daily bag limit is ten Dungeness crab for recreational anglers regardless of fishing platform: private boat, CPFV, pier or shore. Section 29.85(a)(3), Title 14, CCR. However, there is a special exception for recreational fishing aboard a CPFV in five California counties: Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey. Moreover, there is a special minimum size for such crab of 6.0" rather than 5.75" as proscribed generally for recreational take.

These discriminatory exceptions do not apply in the balance of the State and there is no resource protection justification in view of the already small take under recreational regulations. Indeed, these exceptions arose to address a "resource allocation issue" between recreational and commercial crabbers and purportedly resulted from a "compromise between commercial, CPFV and private angler interests." See *Public Proposed Changes to Marine Sport Fishing Regulations For the 2006 Triennial Process, and Department Recommendations For Acceptance Or Denial Of Those Changes*, Basis for Department Recommendation in response to Comment No. 34 (requesting uniform 10 crab recreational limit), September 8, 2006 (the "2006 Process").

Coastside objects on two grounds to the Department's 2006 justification for disparate treatment of CPFVs. First, it is not within the Department's purview to address resource allocations between the commercial and recreational sectors. By all accounts, the Dungeness crab fishery is healthy and abundant and the recreational take is small. The resource is not constrained by Total Allowable Catch. In any event, this public trust resource belongs in the first instance to California's citizens who are permitted direct access through regulations promulgated by the Commission.

Second, no heed should be paid to the closed-door "compromise" leading to these discriminatory regulations. Private boat anglers were never represented. Many if not most of the larger CPFV operators become commercial crabbers when that season opens. Their "compromise" with commercial crabbers is meaningless. There is no evidence that such a "compromise" was reached in an open, public process. Moreover, CPFV operators serving the recreational public – as opposed to CPFV participating in the commercial fishery – object to this discriminatory treatment.

Finally, Coastside asks that steps be taken to combat the theft and disturbance of recreational crab traps. During the 2006 Process, the Department acknowledged concerns about trap tampering and supported regulatory changes, albeit not quite as far as Coastside proposes here. See Comment Nos. 7, 8, 20, 23, 33 and 38. Unfortunately, the Department has not followed through with regulations to protect the integrity of traps used by recreational crabbers. Pulling and emptying another's crab trap is a rampant problem without any enforcement solution. Therefore, Coastside turns to the Commission.

It has been suggested that the statutory Dungeness Crab Task Force (DCTF) play a role in the amendment of recreational crabbing regulations. The voting membership of the DCTF is almost exclusively comprised of commercial interests. Of the 22 voting members, only two represent recreational anglers. There is one CPFV representative. The balance are commercial crabbers and processors. It is not a representative body. Indeed, there is an inherent conflict of interest since commercial interests seek to restrain recreational crabbing in order to address a perceived allocation issue.

Coastside believes that there exists adequate time for the Commission to carefully consider Coastside's requests and act in time for the 2014 opening of the recreational Dungeness crab season.

Very truly yours,

Richard Ross
President, Coastside Fishing Club

cc: Charlton Bonham (by hand delivery)
Craig Shumann (by email *Craig.Shuman@wildlife.ca.gov*)
Peter Kalvass (by email *Peter.Kalvass@wildlife.ca.gov*)
Dungeness Crab Task Force (by email *rachelle@strategicearth.com*)

Coastside Fishing Club
P.O. Box 5928
Napa, CA 94581

May 2, 2014

BY EMAIL: ***fgc@fgc.ca.gov***

President Michael Sutton
California Fish and Game Commission
1416 Ninth Street, Suite 1320
Sacramento, CA 95814

Re: Renewed Petition for Changes in Dungeness Crab Regulations

Dear President Sutton:

In 2013, Coastside Fishing Club petitioned the Commission to make certain changes to regulations governing the recreational take of Dungeness crab. This was discussed at the Commission's November and December meetings. The Department persuaded the Commission that Coastside's requests ought to be vetted before the Dungeness Crab Task Force (DCTF), a body comprised almost exclusively of commercial crabbing interests.

The DCTF met in April, voted on Coastside's proposed changes, and unanimously adopted the following language:

- Per the Commission's direction, the DCTF has discussed the Coastside Fishing Club proposal. The DCTF feels strongly that these issues need to be vetted through and decided on by the Commission with input from CDFW and members of the sport fleet.

The DCTF also voted unanimously that the current two-tiered recreational bag limits and minimum sizes should end:

- The DCTF agrees that there should be a uniform bag limit and minimum size for the sport fishery throughout California. However, the details of this should be decided on by the Commission with input from CDFW and the sport fleet.

Accordingly, Coastside renews its petition to the Commission to revise regulations governing the recreational take of Dungeness crab. However, in order to simplify the task before the Department and Commission, Coastside is willing to defer certain items in its 2013 petition:

Change Request in Original Petition	Comment
1. Prohibit retention of females	May be deferred. The Department stated at the DCTF meeting that it does not believe that eliminating recreational take of females would appreciably benefit the resource. Few are now taken in the sport fishery and a new prohibition would create enforcement issues. Angler education may be the preferred approach.
2. Require use of "rotten cotton" on traps	May be deferred. The Department stated stated at the DCTF meeting that it does not believe that requiring escape devices would appreciably benefit the resource. A new prohibition would create enforcement issues. Angler education may be preferred approach.
3. Require that pots be labeled with the owner's name and contact information	May be deferred. While the Department stated that it generally agrees with the need to label pots and/or buoys, there was disagreement with Coastside's specific approach. Additional discussions are needed between the Department and stakeholders.
4. Prohibit pulling pots (not your own) without the owner's written permission.	Already in regulations per the Department.
5. Conforming the 10-crab limit to all sport anglers.	**Requires Commission action**

6. Conforming the 5.75" minimum size throughout the recreational fishery.	**Requires Commission action**

In order for these changes to be considered on this year's regulatory calendar, and therefore be effective for the November 2015 Dungeness crab season, Coastside understands that they must be placed on the Commission's June agenda. The changes to regulatory language are minimal, requiring only the striking of unfair language previously added to create a two-tiered regulatory structure. The deleted language never served any resource conservation goal, only acting to penalize recreational anglers in the six-county area without their own boats.

> 14 CCR Section 29.85 (a)(3) Limit: Ten, ~~except in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties, when fishing aboard a commercial passenger fishing vessel required to be licensed pursuant to Section 7881 and/or Section 7920, Fish and Game Code, the limit is six~~.
>
> 14 CCR Section 29.85 (a)(7) Minimum size: Five and three-quarter inches measured by the shortest distance through the body from edge of shell to edge of shell directly in front of and excluding the points (lateral spines); ~~except in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, and Monterey counties, when fishing aboard a commercial passenger fishing vessel required to be licensed pursuant to Section 7881 and/or Section 7920, Fish and Game Code, the minimum size is six inches measured by the shortest distance through the body from edge of shell to edge of shell directly in front of and excluding the points (lateral spines).~~

The Department estimates recreational exploitation of the Dungeness crab resource at 2% or less. The resource is healthy with commercial exploitation <u>not limited</u> by total allowable catch. The requested changes will allow recreational license holders on party boats from Sonoma County south to enjoy the Dungeness crab resource in the same measure as those on party boats above Sonoma County or on private boats throughout the State. Coastside previously reached out to the Department on April 24, but has not yet received a response. See April 24, 2014 letter to Director Bonham, attached to this letter.

As requested by the Department, Coastside's proposal has been publicly vetted by the DCTF, which reached a unanimous conclusion. Providing a single, statewide recreational bag limit and minimum size cannot be the subject of genuine controversy. The removal of this unfair language is long overdue and should not be delayed further.

Very truly yours,

Marc Gorelnik, Coastside Fishing Club

Attachment: Coastside's April 24, 2014 letter to Director Bonham

cc: Commissioner Jack Baylis
Commissioner Jim Kellogg
Commissioner Richard Rogers
Commissioner Jacque Hostler-Carmesin
Executive Director Sonke Mastrup (via email: *Sonke.Mastrup@fgc.ca.gov*)

Coastside Fishing Club
P.O. Box 5928
Napa, CA 94581

April 24, 2014

VIA HAND DELIVERY

Mr. Charlton H. Bonham
Director
California Department of Fish and Wildlife
1416 Ninth Street , 12th Floor
Sacramento, CA 95814

Re: Action Needed to Place Sport Crab Regulations on Commission's June Calendar

Dear Director Bonham:

In 2013, the Coastside Fishing Club petitioned the California Fish and Game Commission to revise regulations for the recreational take of Dungeness crab. The Department persuaded the Commission that the proposed changes needed to be run through the Dungeness Crab Task Force (DCTF). The DCTF has 23 voting members, almost entirely from the commercial crabbing industry. There are two representatives of recreational license holders. Department staff and others serve as non-voting members and advisors.

At its meeting held April 22 and 23, 2014, the DCTF voted unanimously to return Coastside's proposal to the Commission:

- Per the Commission's direction, the DCTF has discussed the Coastside Fishing Club proposal. The DCTF feels strongly that these issues need to be vetted through and decided on by the Commission with input from CDFW and members of the sport fleet.

The DCTF also voted unanimously that the current two-tiered recreational bag limits and minimum sizes should end:

- The DCTF agrees that there should be a uniform bag limit and minimum size for the sport fishery throughout California. However, the details of this should be decided on by the Commission with input from CDFW and the sport fleet.

Currently, there is a different and more restrictive bag limit and minimum size applied to anglers on a commercial passenger fishing vessel (CPFV) from Sonoma to Monterey Counties. These restrictions do not apply to CPFVs north of Sonoma County or to private boaters statewide. There is no resource protection issue whatsoever to justify these varying regulations, which should be eliminated.

Coastside understands that the Commission is prepared to take action on Coastside's proposal provided, however, that the Department requests the matter be placed on the agenda for the Commission's June meeting. This would permit the proposal to be included on the regulatory calendar in August.

Even if the Department and Commission timely act on Coastside's proposal, it will be over a year, November 2015, until the changes take effect. Delaying action, however, would further delay the changes to November 2016 or later.

Coastside Fishing Club thanks the Department for its efforts at the DCTF. We look forward to seeing this matter placed on the Commission's June agenda.

Respectfully submitted,

Marc Gorelnik
Coastside Fishing Club
gorelnik@gmail.com

cc: California Fish and Game Commission

June 26, 2015

Mr. Charlton H. Bonham, Director
Department of Fish and Wildlife
1416 9th Street, 12th Floor
Sacramento, CA 95814

Re: Reducing whale entanglements in California pot and trap gear fisheries

Dear Mr. Bonham:

On behalf of the Center for Biological Diversity, Earthjustice, and their members and supporters, we are writing to thank you for the progress that has been made since our April 28, 2015, request for action to prevent whale entanglements in state-managed fixed-gear fisheries, namely the Dungeness crab, spot prawn, and spiny lobster fisheries. We hope to continue conversations with your agency, the Commission, other state bodies, and the Dungeness Crab Task Force to develop and implement long-term strategies to reduce entanglement risk.

We are following up on the request you made during our phone call on May 1, 2015, to provide suggestions specific to the Dungeness crab fishery that can help reduce the risk of entanglements before the start of the next fishing season, in late 2015. In response, we have reviewed measures that have been implemented to reduce whale entanglements in other fisheries, including the New England lobster fishery and the West Coast groundfish pot fishery, as well as scientific literature, and have begun to discuss the utility and effectiveness of various measures with representatives of government agencies, industry, and other non-governmental organizations. Based on this research, we believe a range of measures would be effective in reducing the risk of whale entanglement. These measures would address important issues such as data collection to determine where whale entanglements are occurring, as well as identifying ways to directly reduce the risk of entanglement. Some, such as improved reporting and the initiation of pilot programs, represent key steps in developing the information necessary to implement effective measures and reduce the risk of entanglement in the longer term. We recognize that a successful, complete program to reduce whale entanglements will be a long-term effort.

The Legislature has declared that the protection and conservation of fish and wildlife resources of the State are of utmost public interest and that conservation is a proper State responsibility.[1] Taking measures to ensure that trap and pot fisheries do not entangle large whales would further demonstrate California's leadership in wildlife management and protection; be legally consistent with federal laws prohibiting take of marine mammals and endangered species; and improve data collection and fisheries management. In that context, we ask you to consider adopting the effective and immediate measures to curb whale entanglements outlined below.

[1] Fish & G. Code § 1600.

Background

Management of all California fisheries is complex and resource-intensive, but especially so in the Dungeness crab fishery, which spans both state and federal waters.[2] In California, Fish and Game Code sections 8275-8284 delegate authority to the Department to manage the fishery only with respect to specific activities, such as to open and close the fishing season in certain districts and to administer the permitting system for the restricted access fishery.[3] As a result, implementation of some fundamental changes to reduce entanglement risk will ultimately require statutory amendments and thus will have to wait until the 2016 state legislative year. Nevertheless there are steps that the Department and Commission can initiate right away.

We are aware that the State is interested in addressing the risk of whale entanglement in all State-managed fisheries. To that end, we recommend that the Department consider measures for all State fisheries known to entangle whales. We also recognize that establishing such measures in multiple fisheries will take time and there is benefit to starting efforts in the Dungeness fishery, which has already expressed a willingness to engage in proactive efforts to reduce entanglements. In terms of tailoring measures specific to the Dungeness fishery, we provide below a few suggestions that could be accomplished before the start of the next fishing season. The Department may not be able to implement all of these measures in a short timeframe, but ideally the variety of options for the Department's consideration will begin a conversation about how to move forward.

- Continue current efforts to increase accountability for lost traps;
- Require logbooks to improve information collection;
- Implement a program for using vessel monitoring systems to track vessel movements and locations where gear is deployed;
- Implement a pilot program in the 2015-16 season to test a two-trap per buoy line gear configuration to reduce entanglement risk;
- Support the Fish and Game Commission in developing a tag program for recreational fisheries; and
- Apply for authorized take of endangered marine mammals for Dungeness crab, spot prawn, and spiny lobster fisheries.

In the sections below, we outline possible measures that the Department could implement in the near term and long term in order to reduce whale entanglements in Dungeness crab gear, many of which could also be useful to address other types of pot and trap gear. As noted below, some of the near-term measures we support are already underway. Other near-term measures could be implemented under the Department's existing authority and would provide key steps for developing longer-term measures to address whale entanglements. Finally, we outline

[2] The federal Magnuson-Stevens Fishery Conservation and Management Act assigns authority to the States of Washington, Oregon, and California to govern Dungeness crab fishing in waters 200 nautical miles from shore, with the authority expiring September 30, 2016. 16 U.S.C. § 1856 note.
[3] *See, e.g.*, Fish & G. Code §§ 8276.2, 8276.5, 8277, 8280.2-8280.3.

suggestions for measures that we believe the Department should consider implementing in the 2016-17 season and beyond.

Near-Term Actions

1. **<u>Continue current efforts to increase accountability for lost traps</u>.**

In response to industry and regulator demand, the Dungeness crab fishery has in place or has discussed several ways to increase accountability for lost traps, specifically: (a) tending pots at least once every 96 hours; (b) eliminating the in-season tag replacement regulations; and (c) establishing a program to retrieve lost gear. These efforts and requirements that are already in place or underway could be critical to reducing whale entanglement risk. We urge you to consider supporting, expanding, and enhancing implementation of these regulations and programs.[4]

a. **Support requirements for pots to be tended at least once every 96 hours and not abandoned.**

We recognize the Department's ongoing, concerted efforts to monitor and enforce current requirements, and particularly appreciate the hard work being done by the Department's Law Enforcement Division. Recognizing that hard work, we offer the following ideas with the aim of maximizing the effectiveness of the Department's limited resources.

Current regulations require Dungeness crab traps to be raised, cleaned, serviced and emptied every 96 hours.[5] Regularly checking the pots can reduce the chance that an entanglement will go unnoticed. If an entangled whale is at the site where the pot was deployed, checking on the pot gives an opportunity for the fisherman to alert disentanglement teams.

Introducing new technology may assist in monitoring trap tending and provide assurance to trap owners that only the owner is pulling his or her traps. Recent projects in New England have tested placing radio-frequency identification devices (RFIDs) on lines and or traps, which allows a device on board the vessel to register each time the trap comes over the side.[6] Use of RFIDs could make it easier for enforcement officers to monitor how often traps are being tended, as well as deter vessels from pulling traps that do not belong to the vessel owner.

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[4] *Id*. § 850 (granting authority to the Director to employ or appoint people to carry out duties required by law); *id.* § 1000 (requiring fund expenditure as necessary for collection and diffusion of statistics and information pertaining to conservation and protection of mammals and fish).

[5] Fish & G. Code § 9004.

[6] La Valley, K. et al., 2010. *An Automated RFID and GPS Fixed Gear Identification System for Onboard Realtime Data Collection*, http://www.greateratlantic.fisheries.noaa.gov/whaletrp/trt/meetings/Mid-Atlantic_Southeast_ALWTRT_Materials/IFAW_UNH_finalreport%20(3-8-2010).pdf; Patton, J. and D. Cromhout, 2011. *NOAA RFID Fishing Line Tagging*, http://www.greateratlantic.fisheries.noaa.gov/prot_res/GrantsResearchProjects/reports/NOAA_Taggingv1_7%20(12-20-2011).pdf

In addition to requiring checking on the pots at regular intervals, the Fish and Game Code requires that "no trap shall be abandoned in the waters of this state."[7] When a fisherman realizes the pot is lost, recording the area and time it was lost can help identify areas where gear loss is higher. With a real-time system in place that shows within a week when a trap is missing, finding and recovering lost traps by other vessels on the water nearby could begin immediately. As an example, currently recreational fishermen have been helpful in identifying locations of abandoned fishing pots for retrieval by commercial fishermen at the end of the season. A real-time system could assist in identifying and recovering lost traps during the season as well.

Finally, encouraging and providing incentives for fishermen to report entanglement can put extra eyes in areas where entanglements typically go unnoticed. Most reports of entangled whales come from on-water observations near large cities, where boating activity is higher. Commercial fishermen report two percent of total whale entanglements.[8] While this could reflect the proportion of commercial vessels on the water, the low number suggests there might be ways to encourage reports from commercial vessels to result in quantifiable improvement in whale rescue. This could involve facilitating educational workshops between fishermen and whale disentanglement volunteers, in which fishermen learn how to report entanglements and what information to collect in order to file the most helpful report, and fishermen educate disentanglement volunteers regarding how to identify fishing gear.

b. Amend regulations to eliminate ability to replace lost tags in-season and increase the fees for each replacement tag.

In order to increase accountability for lost traps, the Department could amend regulations to eliminate in-season replacement of buoy tags[9] (except in extreme circumstances) and increase the fee for replacement trap tags.

As background, in 2013 the Department issued regulations under authority delegated by the Legislature to establish a Dungeness crab trap limit program.[10] The Fish and Game Code specified that "permit holders may replace lost tags by application to the department and payment of a fee not to exceed the reasonable costs incurred by the department."[11] For a fee of $1.00, the regulations currently allow in-season replacement buoy tags.[12] At the end of the season, the in-season replacement tags must be returned to the Department in exchange for between-season replacement buoy tags.[13]

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[7] Fish & G. Code § 9004.
[8] NOAA Fisheries, Whale Entanglements Off California Fact Sheet, http://farallones.noaa.gov/manage/pdf/sac/13_05/whale_entanglement_fact_sheet.pdf (stranding network members and government report most entanglements, at 27% and 17% respectively, with recreational boats, private citizens, scientists, whale watching boats and fishery observers reporting a greater percent than commercial fishermen).
[9] 14 C.C.R. § 132.4.
[10] *Id.* § 8276.5.
[11] *Id.* § 8276.5(a)(5).
[12] 14 C.C.R. § 132.4.
[13] *Id.*

First, in order to both simplify the process of replacement buoy tags and encourage fishermen to keep track of gear, the Department should amend the current tag replacement regulations to eliminate in-season replacement. The Dungeness Crab Task Force has expressed concerns with in-season tag replacement creating potential loopholes in the trap permit system.[14] Eliminating in-season replacement therefore could solve several problems at once. Similarly, Washington Department of Fish and Wildlife recently reduced the number of replacement tags issued to each license owner and is considering further reductions or eliminating the program altogether.[15] Eliminating replacement tags would provide incentives for fishermen to maintain and tend traps and buoys, close potential loopholes in tracking tag limits, and reduce regulatory burden on the Department.

Second, the Department should set the cost of the replacement trap tag fee to an amount that covers the reasonable cost of lost gear and tags.[16] As noted by the Legislature in enacting sections 710 - 711 of the Fish and Game Code, the Department has been unable to adequately meet its regulatory mandates due in part to a lack of funding, which has "prevented proper planning and manpower allocation" to carry out its "public trust responsibilities" and "additional responsibilities placed on the department by the Legislature."[17] As a result, the Department is burdened with "the inability . . . to effectively provide all of the programs and activities required under this code and to manage the wildlife resources held in trust by the department for the people of the state."[18] Collecting fees adequate to account for the full costs of the fishery, including monitoring and enforcement, provides the foundation for a sustainable fishery.

c. Encourage retrieval of lost or abandoned gear.

Lost or abandoned gear poses risks not only to whales, but also other marine life. Traps that are lost or abandoned – i.e., left in the water without being tended at a minimum every 96 hours – pose navigational hazards for large whales on their annual migrations. It can also interfere with safe navigation by other vessels.

The California Fish and Game code provides authority to the Department and fishermen to alleviate this problem by retrieving traps.[19] First, the Fish and Game Code declares that any trap used without a buoy or in violation of the Code or regulations is a public nuisance and can

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[14] Dungeness Crab Task Force, *Initial recommendations from the California Dungeness Crab Task Force as requested in SB 369 (Fish and Game Code 8276.4)*, January 15, 2015, at 6, http://www.fgc.ca.gov/meetings/2015/Feb/Exhibits/16_1_Report_Dungeness_Crab_Task_Force_Jan2015_Final.pdf.

[15] Washington Department of Fish and Wildlife, *Industry Notice: Change to the Replacement Buoy Tag Program for 2014-2015 Season and Beyond*, http://www.psmfc.org/crab/2014-2015%20files/WAReplacementBuoyTags%2012.10.14.pdf.

[16] Fish & G. Code § 8276.5(a)(5). Current regulations set the replacement tag fee at $1.00. 14 C.C.R. § 132.4(a), (b).

[17] Fish & G. Code § 710.

[18] *Id.* § 710.5.

[19] Fish & G. Code §§ 9007, 9008.

be removed from State waters by any person authorized to enforce the Code.[20] Second, any Dungeness crab permitted vessel may retrieve from the ocean crab traps of another permitted Dungeness crab vessel that were lost, damaged, abandoned, or otherwise derelict.[21] From July 16 through October 31, an unlimited number of Dungeness crab traps may be retrieved per fishing trip and in other times, no more than six may be retrieved per trip except with a Department waiver.[22] Third, the Department, in consultation with the Dungeness Crab Task Force, shall develop regulations as necessary to provide for retrieval of lost or abandoned commercial crab traps.[23] In order to reduce risk to whales, the Department and Commission should take steps to reduce lost and abandoned commercial and recreational pots and traps.

The Dungeness Crab Task Force has already recommended an industry designed, funded, and implemented lost gear retrieval program that works in cooperation with the Department.[24] According to the Task Force, the "Lost Fishing Gear Recovery Project (http://www.seadocsociety.org/california-lost-fishing-gear-removal-project/), which is run by the SeaDoc Society in partnership with Humboldt State University, has been working to retrieve lost Dungeness crab traps near the ports of Eureka, Trinidad, and Crescent City" and has enjoyed "widespread support" from the industry.[25] We understand that this program is underway and on the agenda for the tentative DCTF meeting in October. We support this effort and encourage you to work with the DCTF to ensure that any necessary changes to the Fish and Game Code or the California Code of Regulations are proposed as soon as possible, no later than spring 2016.

2. **Improve information collection through use of vessel monitoring systems (VMS) and electronic logbooks.**

First, fishery-wide use of vessel monitoring systems (VMS) would offer multiple benefits for management. VMS are widely used (and required) in federally managed fisheries. As such, the technology has been demonstrated to be practicable and useful for monitoring, enforcement, and aiding voluntary efforts to move fishing gear away from areas where whales are congregating. It would greatly boost the ability of enforcement personnel to ensure that vessels are observing seasonal closures, and staying out of closed areas or marine protected areas. It would also provide useful data on the locations of vessels and gear that could be compared to known migratory pathways of whales or congregations of whales. That information could be used to inform fishermen of any increased risk of entanglement so that fishermen could avoid or remove their gear from those areas. The information would also be very useful for identifying any consistent trends in whale entanglements and developing measures to address them.

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[20] *Id.*
[21] 14 C.C.R. § 132.2(a)(2).
[22] *Id.*
[23] Fish & G. Code § 9002.5(a).
[24] Dungeness Crab Task Force, *Initial recommendations from the California Dungeness Crab Task Force as requested in SB 369 (Fish and Game Code 8276.4)*, January 15, 2015, at 7, http://www.fgc.ca.gov/meetings/2015/Feb/Exhibits/16_1_Report_Dungeness_Crab_Task_Force_Jan2015_Final.pdf.
[25] *Id.* at 7.

Second, electronic logbooks allow efficient, standardized reporting of the locations where gear is deployed and collected as well as catch composition and other information useful for fishery management. They would be particularly useful in the context of reducing whale entanglements when used to record the locations where gear is set and collected, how much gear is set, lost gear (including gear type, location of the loss, and if lost from the vessel or at sea), and lost gear that is later retrieved. Submission of electronic logbooks that are linked to a VMS system would greatly improve data collection. Without logbooks, the only available proxy of total fishing effort is landed catch, which provides very limited information about spatial distribution of effort.

Logbooks currently in existence or under development can provide a template for development of a Dungeness crab fishery form. California regulations state that if required by the Department, each commercial fisherman permitted to use traps must complete and submit a log of fishing operations on a form provided by the Department.[26] Currently California requires a logbook in the spot prawn pot and spiny lobster trap fisheries, which could provide useful in development for a Dungeness crab form.[27] Another example can be found in the Washington Dungeness fishery, which requires a logbook entry form that collects information on depth, pots fished, pots lost, soak time, and lost gear recovered.[28]

Efforts to implement logbooks are underway in federal fisheries as well. First, the Pacific Fishery Management Council recommended that mandatory logbooks be required for all federal fixed gear fisheries to be implemented in 2009-2010.[29] At that time, management measures like trawl rationalization took precedence over logbook requirements, which have not been implemented. Second, NMFS completed an Endangered Species Act consultation in 2012 on the effects of the West Coast groundfish pot fishery and provided a set of recommendations to reduce entanglements.[30] The biological opinion required that fishery managers:

- Create electronic monitoring and logbook reporting measures that require or recommend fishers to document effort and lost gear;
- Develop a database to track fishing effort, locations, and lost fixed gear (the biological opinion provided an example database);
- Summarize data on lost gear to evaluate the magnitude of gear loss and factors that may influence loss (specific areas, times of year, etc.); and

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[26] 14 C.C.R. § 180(d).

[27] Fish & G. Code §8026; 14 C.C.R. §§190, 195; *see* California Department of Fish and Wildlife, California Fishing Regulations Commercial Digest 2014-2015, at 11 ("Currently, logbooks are required in the sea urchin, sea cucumber, lobster, gill net, trawl, live bait, shrimp, prawn, market squid, swordfish, and harpoon fisheries."); *but see* 14 C.C.R. § 180(d) (referencing a Daily Sablefish Trap Log).

[28] WAC 220-52-041, http://wdfw.wa.gov/fishing/commercial/crab/coastal/logbook.html.

[29] Final Environmental Impact Statement, *Proposed Acceptable Biological Catch and Optimum Yield Specifications and Management Measures For the 2009-2010 Pacific Coast Groundfish Fishery*, January 2009, at 140, http://www.pcouncil.org/wp-content/uploads/0910GF_SpexFEIS.pdf.

[30] NFMS, Dec. 7, 2012. Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion and Section 7(a)(2) "Not Likely to Adversely Affect" Determination Continuing Operation of the Pacific Coast Groundfish Fishery, PCTS Number: NWR-2012-876.

- Summarize fish-gear fishing effort and locations to support overlap analysis with large whale migrations or aggregations.

To our knowledge, these terms and conditions that require logbooks have not yet been implemented. Currently, however, observers in the West Coast groundfish pot fishery record the type and amount of lost gear, derelict gear observed at sea, and starting in 2015, lost gear that is later retrieved, and enter all of that information into a database.[31]

Finally, the Council reiterated its support for logbooks at its June 2015 meeting, recommending that NMFS initiate the process to implement a logbook requirement for all commercial groundfish fisheries.[32] These efforts by both the Council and NMFS confirm that logbooks are necessary for responsible fishery management and that they can be an important part of reducing whale entanglements.

The Department currently has authority to establish such a program for all fisheries. The Department has a general duty to gather and prepare data on commercial fisheries, "showing particularly the extent of the fisheries."[33] The Commission has authority to require a complete and accurate record of fishing activities, in a form prescribed by the Department.[34]

We recommend that the Department establish a pilot program to test the use of VMS and electronic logbooks within the Dungeness crab fishery during the 2015-2016 season. We understand that some vessels in the fishery may already be fitted with VMS technology and therefore may be able to participate in such a program without incurring additional cost for VMS installation. We further recommend that the information from that pilot program be used to develop a fishery-wide VMS and electronic logbook program for the 2016-2017 season and beyond.

3. <u>Implement pilot program in 2015-16 season to test a two-trap per buoy line gear configuration as a means to reduce entanglements.</u>

We encourage the Department to implement experimental gear programs to develop fishing methods that have potential to minimize entanglements with whales. One idea that holds promise for directly reducing the risk of entanglements is to configure gear so that two traps are connected to each buoy line instead of only one, as current regulations require. This configuration would significantly reduce the number of vertical lines in the water, and thus reduce the chances of a whale becoming entangled in buoy lines. The Department could assist the development of alternative fishing gear due to the need to protect marine mammals.[35] Experimental fishing permits issued by the Department are limited to not more than one year and

[31] D4 Supp Att Draft Bycatch Report, dated May 22, 2015, at 29-30.
[32] Pacific Fishery Management Council, Decision Summary Document, June 12-16, 2015, at 2, http://www.pcouncil.org/wp-content/uploads/2015/06/0615decisions.pdf.
[33] Fish & G. Code § 8010.
[34] *Id.* § 8026; 14 C.C.R. § 190.
[35] Fish & G. Code § 8606.

may authorize use of new types of commercial gear and new methods of using existing gear.[36] We recommend that the Department facilitate and/or administer an experimental program during the 2015-16 season to test the effectiveness and practicability of a two-trap per line gear configuration, including developing data collection methods and criteria for evaluating the success of the gear.

4. **Apply for authorized take of endangered marine mammals for Dungeness crab, spot prawn, and spiny lobster fisheries.**

We are pleased to hear that California will request authorization for takes of endangered marine mammals in state fisheries. The MMPA and ESA incorporate important safeguards for endangered marine mammals that fisheries incidentally take. We continue to believe that securing MMPA authorization is important to protect both animals and fishermen, since these fisheries are otherwise subject to penalties for the incidental taking of marine mammals. Ideally, such a request would include information necessary for NMFS to evaluate the state fisheries' effect on endangered marine mammals, such as a description of the fisheries, including when and where they operate, any available measures of fishing effort, and whether any monitoring or mitigation measures exist. Please let us know when California will request authorization and the expected timeframe for NMFS's consideration.

Longer-Term Measures

1. **Analyze and recommend measures to the State Legislature for adoption in 2016.**

We are optimistic that organizations such as the Ocean Protection Council and the Dungeness Crab Task Force are taking steps to meet and develop a process by which to create recommendations for the Legislature to address long-term solutions for the issue of whale entanglements, possibly including authorization for an independent review of Dungeness management and increasing landing fees to improve resources available for management. We urge you to continue to participate in and encourage these conversations, especially by providing scientific and management information uniquely known to the Department.

Two operational- or administrative-type analyses could help improve management of the Dungeness crab fishery: (1) an independent study of management and enforcement in the Dungeness crab fishery and (2) evaluation of the costs and benefits of increasing landing fees. First, an independent study could help to answer some of the questions raised in the past about balancing management flexibility with Legislature control. The difference in management processes among California, Oregon, and Washington has highlighted some issues where more responsive management in California could be beneficial. Second, an analysis of whether to increase landing tax rates or fees could inform the Legislature of the costs and benefits of the current system. California is unique among the west coast states in requiring a tax that is not tied

[36] *Id*. § 8606.

to the ex-vessel price or landing fee.[37] The California landing tax for Dungeness crab, which has not changed since 1994, is $0.0019 per pound.[38] Increasing this amount by tying it to ex-vessel price could increase funds for management, regulation, and oversight of fishing activities by the California Department of Fish and Wildlife.

Finally, two fishery-specific changes should be considered to reduce whale entanglement: requiring two traps per buoy to reduce the amount of vertical line that whales can encounter, based on the results of the experiment(s) recommended above, and requiring that lines be marked according to fishery so that the origins of entangling ropes can be identified.

In some entanglement incidents, traps or buoys have become detached from the entangling lines and therefore identification is missing. This poses a problem because the loss of the identification means a loss of information, such as the type of gear, owner of the gear, and where the gear was set. The California Fish and Game Code requires that every commercial trap used to take fish or crustaceans is marked with a buoy that identifies the fishery.[39] Adding identifying marks to the lines attached to buoys and traps will provide more information and accountability when traps and buoys are accidentally detached.[40]

While gear marking does not reduce immediate entanglement risks to whales, we encourage a simple, color-coded, regional gear marking scheme for all pot and trap fisheries in California. Planning a comprehensive system rather than incremental marking requirements will promote equity among fisheries and efficiency for individual fishermen to adapt to one new system. An effective gear marking system can and should achieve collection of robust data to identify where whales are entangled, by which fishery and gear part. This information is critical to effective fisheries management.

Unique gear marks – color combinations, size, and frequency – should be designated for areas near expected whale entanglement hotspots in order to ascertain where whales are entangled. NMFS has developed a model identifying areas where large whales are more likely to encounter gear.[41] The results of the model were confirmed by locations of entanglements, providing justification for treating areas of higher predicted occurrence differently than areas of lower entanglement risk. The model could be improved with better data on fishing effort, but the best available science should be used as the basis for different line marks based on risk of

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[37] California Dungeness Crab Task Force, *Dungeness crab landing tax rates in California, Oregon, and Washington*, http://www.opc.ca.gov/webmaster/ftp/project_pages/dctf/DC_Landing_Tax_Rates_CA_OR&WA.pdf.
[38] Fish & G. Code § 8051.
[39] Fish & G. Code § 9006.
[40] The Department has general authority to regulate gear marking and is responsible for enforcement and administration of the regulations for commercial fisheries in state and federal waters. *Id*. §§ 878, 7857, 8280.4, 9006.
[41] Saez, L., D. Lawson, M. DeAngelis, E. Petras, S. Wilkin, and C. Fahy. 2013. Understanding the co-occurrence of large whales and commercial fixed gear fisheries off the west coast of the United States. U.S. Department of Commerce Technical Memorandum, NOAA-TM-NMFS-SWR-044, 102 p.

entanglement. Although entanglements may still occur in areas whenever at least one whale and some fishing gear are in the same location, unique line marks could help inform the Department on areas to prioritize for further work.

2. **Implement a tag program for recreational fisheries.**

We recognize the Department's ongoing, concerted efforts to monitor recreational fishing effort, and encourage that work to continue. This spring, the Department made a presentation with a proposal to require crab trap buoys that identify the owner with their GO ID number, i.e. their sportfishing license number, to be implemented in the 2016-2017 season.[42] We support this effort and encourage you to implement the program on that proposed timeline.

Monitoring of the recreational Dungeness crab fishery is important to create reliable estimates of catch and effort,[43] and thereby allow a measure of risk of interactions between recreational pots and large whales. Because the Commission regulates the recreational Dungeness fishery,[44] we appreciate the Department's taking the first steps to proposed and encourage collection of the information necessary to evaluate the risk of recreational traps entangling whales.

As you know, the Legislature has also expressed interest in exploring management measures for the recreational fishery.[45] The Legislature mandated that the Dungeness Crab Task Force "prioritize the review of pot limit restriction options, current and future sport and commercial fishery effort, season modifications, essential fishery information needs, and short- and long-term objectives for improved management."[46] The Department's proposed requirement for placing GO ID numbers on crab trap buoys is a terrific first step.

3. **Analyze possible time-area closures or dynamic management areas to reduce entanglement risk in areas where large numbers of whales congregate.**

Avoiding overlap between fishing gear and concentrations of whales is a reliable way to reduce the risk of entanglements. We encourage you to work with scientists at NMFS, the OPC, DCTF, and others to gather data on gear locations and whale entanglements, oceanographic conditions that influence whale movements, and other relevant information to analyze likely "hotspots" or conditions (such as concentrations of food) that could lead to whales congregating in a particular area. Identifying these locations and conditions would provide an opportunity for fishermen to voluntarily avoid areas where the risk of entangling a whale is relatively high. If

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[42] Christy Juhasz, Environmental Scientist, Department of Fish & Wildlife, Apr. 8, 2015. *Notice of Proposed Regulation Changes to Recreational Dungeness Crab Fishery and Crab Trap Requirements for seasons: 2015-2016 & 2016-17*.
[43] California Ocean Science Trust, *Rapid Assessment for Selected California Fisheries*, August 2013, at 55-56.
[44] Fish & G. Code § 200 (delegating to the Commission the power to regulate the taking or possession of fish, excluding the taking for commercial purposes).
[45] *See id*. § 8276.4(c).
[46] *Id*. § 8276.4(c)(3).

necessary, it would also provide information necessary to establish any regulatory time-area closures.

Conclusion

We greatly appreciate your willingness to find ways to address the increase in whale entanglements in fishing gear as quickly as possible. We look forward to working with you to develop and implement near-term measures, with a particular focus on identifying key steps toward developing effective long-term measures that both reduce the risk of whale entanglements and improve overall fishery management. We appreciate your consideration of these ideas.

Sincerely,

Catherine W. Kilduff, M.S., J.D.
Staff Attorney
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Andrea A. Treece
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Earthjustice
50 California Street, Suite 500
San Francisco, CA 94111
415-217-2000
atreece@earthjustice.org

CC: Mr. Jack Baylis, President, California Fish and Game Commission

Subject: Upgrading 10 bag limit for Crab to be equal throughout Califfronia

From: [redacted]

To: fgc@fgc.ca.gov;

Date: Tuesday, August 11, 2015 10:54 AM

My Name is LARRY STARK, I am a license, concerned fisherman. I am not a wealthy person, but I love to fish and go fishing both inland and in the ocean. I annually go crab fishing on chartered boats every year. Recently I saw that the California Fish and Game Commission, on their agenda, questioned the need to up the bag limit of crabs to 10 per limit per day. This is already the limit in the ocean except for chartered fishing boats. I would like to express my concerns that this limit should be the same throughout California coastal waters for license fisherman no matter if they fish in private boats, rafts, canoes, or chartered boat. I do not have to resources to buy a boat my self or do I have a storage place to put a boat, this should not be a factor in determining if I can get a limit of 6 or 10 crabs. I would like to see the limits equal along the coast line in California hopefully to 10. Thank you for listening to a concerned fisherman.

Larry Stark

FISH AND GAME COMMISSION
2015 SEP -4 PM 2:05
M CS

From: Mastrup, Sonke@FGC
To: FGC; Shuman, Craig@Wildlife; Farrell, Bob@Wildlife; Barnes, Tom@Wildlife
Subject: FW: Crab on Charter boats
Date: Monday, November 24, 2014 10:59:49 AM

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fyi

From: Tom Mattusch [redacted]
Sent: Monday, November 24, 2014 10:27 AM
To: Mastrup, Sonke@FGC
Subject: Crab on Charter boats

Mr. Sonke Mastrup,
Executive Director FGC

Director Mastrup,

As recreational Dungeness crab limits are discussed and revised regarding angler possession limits on CPFV (charterboats) I wanted to make sure the limitation on 60 pots was eliminated.

Regards,

Capt Tom Mattusch
Huli Cat
[redacted]

From: [redacted]
To: christy.juhasz@widlife.ca.gov
Cc: FGC
Subject: Proposed Regulatory Changes Sport Dungeness
Date: Thursday, August 27, 2015 12:20:57 PM

Hello Ms. Juhasz,

My name is Erik Owen, Tier 5 Dungeness Crab permit holder and active crabber for over 30 years, primarily in District 10. I am very concerned with the proposed regulation changes to the sport Dungeness regulations, in particular the changes in subsections (a)3 and (a)7 of section 29.85.

When these proposed regulations were presented and voted on by the DCTF and when they were put to notice at the CDFGC meeting in Santa Rosa, there was language within the proposal that would cease the recreational take of female Dungeness in CA. Am I correct in this observation and if so, why has this language been omitted from these proposed changes?

Should these regulation changes be adopted, I believe the sustainability of this valuable public resource will be seriously jeopardized as the Dungeness reproductive cycle can and will be heavily predated upon by the CPFV fleet. I have seen 6" egger females but they are uncommon, 5 3/4" egger females are prevalent all season long. Could you please show me any science put forth by the DFW or other agencies that these regulations would not affect the reproductive cycle of Dungeness?

I apologize for my bluntness on that last question, please understand my passions concerning this subject. In the last 15 years the CA recreational Dungeness fishery has been expanding at a rapid rate and to my knowledge, there is no method of accountability other than extrapolated data from DFW checkers and CPFV logbook data. Many traps are left untended and are abandoned at the close of the season presenting navigational hazards and cetacean entanglement issues. Please consider a tag system for these "sport" pots similar to the commercial program. It would provide better data for your dept as well as a sizable revenue increase to further enhance your research on this resource.

Thank you in advance for any response you can give regarding my questions.

Best Regards,
Erik Owen

From: [redacted]
To: FGC
Subject: Proposed regulation change
Date: Thursday, September 10, 2015 4:23:48 PM

This email is concerning the proposed regulation changes to Recreational Dungeness Crab and crab trap regulations for charter boats.

I Fish for Dungeness crab commercial and do not think that the limit for charter boats should be changed from 6 to 10 crab per person. In fact I think the sport limit should be reduced to 6 for everyone. What does any one need 10 crab for? Most of them probably go bad in the refrigerator and its a wast of the resource. I have also seen long strings of pots that belong to charter boats and think the number of pots that a charter boat can fish should be reduced. Commercial boats are required to check their pots ever 72 hours and I think charter boats and sport fisherman should be required to do the same. They should only be allowed to fish a number of traps that they can realistically pull every trip. Now they put so many pots out so that they can store crab in them for weeks, many of the crab die in the traps or the traps get lost. It should also be required that all sport pots have a cotton release so their not a death trap when they are lost.

Thanks,

Nick Krieger

August 26, 2015

FISH AND GAME
COMMISSION

2015 SEP -1 PM 2:10
MLS

Sonke Mastrup, Executive Director
Fish and Game Commission
1416 Ninth Street, Room 1320
Sacramento, CA 95814

RE: Opposition to Proposed Regulatory Action relative to amend Section 29.80 and 29.85, Title 14, California Code of Regulations, relating to recreational Dungeness crab and crap trap regulations.

Dear Ms. Mastrup:

I am opposed to the proposed regulation changes as stated in the August 20, 2015 news letter I received in the mail from the Fish and Game Commission. The proposed changes appear to focus on "unfairness to fishers aboard CPFVs in Sonoma, Marin, San Francisco, San Mateo, Santa Cruz and Monterey counties because they are only allowed to take six crabs that are six inches or greater under current regulations. If this is the sole reason for the commission changing the regulation, then the only support I would consider is a state wide change to sport fishing take of crab to the same size and gender requirement that all commercial fishers must follow, i.e., 6 1/4" or greater. If this was accepted and enforced I would also accept the increase allowable catch to be ten for each Sport fisher since the 6 1/4"size or greater for both sport and commercial is non-discriminatory. I have been told that one can recover approximately one-quarter edible crab meat if that crab is from a crab 6 1/4" or larger but this ratio does not hold up in crab that are 5 3/4" so what you are proposing is a loss both to the fisher and species.

The proposed decrease size to 5 3/4 inches and increase take limit is a direct contradiction to what the Fish and Game Commission has claimed; that they would only put forward laws that are biologically backed laws resulting in sustainable fisheries. My opposition to this reduced size and increase take is based on information I have read in the Fish and Wildlife biological papers discussing growth rate, spawning , molting and recruitment cycles. What you are proposing will be a direct contradiction to these studies and will lead to an eventual collapse of this fishery.

As a commercial Dungeness crab fisher, I remind you that commercial fishermen are providing a product for the general public who cannot or will not catch crab or other species of fish they wish to consume. To favor one group of fishers with size reduction will eventually affect everyone. Your consideration is appreciated.

Sincerely,
Joe Nungaray
Joe Nungaray, F/V Michael Too
[redacted]

Proposed Regulation Changes to Recreational Dungeness Crab Fishery and Crab Trap Requirements

Fish and Game Commission Meeting: Oct 7, 2015 Los Angeles

Presented by:
Christy Juhasz,
Environmental Scientist,
Marine Region

Timeline

- **Dec 2013**, Coastside petition to FGC for regulatory change
- **April 2014**, consideration by DCTF
- **April 2015**, Santa Rosa– Original Notice Hearing, direction to meet with stakeholders
- **August 2015**, Fortuna – Notice Hearing
- **October 2015**, Los Angeles – Discussion and Possible Adoption

Proposed Changes 2015-16 season*

- Uniform statewide bag and size limits:
  - 10 crab bag limit
  - ≥ 5 ¾ inch size limit

- Technical fix: Clarify location of Point Arguello as "Santa Barbara County"

Requires *OAL Expedited Review

Proposed Changes 2016-17 season*

- Crab traps must have destruct device
- Crab trap buoys must be marked with operator's unique "GO ID" number
- Prohibit crab traps from being deployed in ocean waters seven (7) days before Dungeness crab season

Effective August 1, 2016

Summary: Request Commission Authorization to Publish Notice

- For 2015-16 season:
  - Uniform Dungeness crab bag and size limits statewide
  - Technical fix to specify location
- After 2015-16 season (effective August 1, 2016):
  - Trap destruct devices
  - Marking crab trap buoys
  - No crab traps in state waters 7 days prior to start of Dungeness crab season

THANK YOU

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State of California
Department of Fish and Wildlife

Memorandum

Date: July 16, 2015

To: Sonke Mastrup
Executive Director
Fish and Wildlife Commission

From: Charlton H. Bonham
Director

Subject: **Agenda Item for the August 4-5, 2015, Fish and Game Commission Meeting Regarding Proposed Amendments to Section 632, Title 14, California Code of Regulations, Marine Protected Areas, Marine Managed Areas, and Special Closures**

The Department of Fish and Wildlife (Department) is proposing to clarify and correct errors and inconsistencies within Section 632, as follows:

- Clarify the origin of Marine Protected Area and Marine Managed Area (MMA) definitions.
- Clarify the allowed and prohibited take for marine resources in state marine reserves (SMRs), state marine conservation areas (SMCAs), state marine parks (SMPs), and state marine recreational management areas (SMRMAs).
- Remove the allowance for aquaculture within Drakes Estero SMCA.
- Clarify aquaculture use in Morro Bay SMRMA.
- Update obsolete commercial troll gear references.
- Change Año Nuevo's designation from an SMCA to an SMR.
- Simplify the names of twenty-one MMAs.
- Adjust the shared boundary between Laguna Beach SMR and Laguna Beach no-take SMCA to address municipality concerns.
- Replace the coordinate boundary at Goleta Slough SMCA with the mean high tide line.
- Delete unnecessary text pertaining to the mean high tide line for three offshore MMAs.
- Refine boundaries to improve geographic accuracy for 106 MMAs and special closures by: adding a third decimal place to increase precision for all current coordinates ending at 1/100th of a minute; moving coordinates closer to an intended point of reference; adding additional coordinates to existing boundaries; and anchoring offshore boundaries on the 3 nautical mile state line.
- Correct a printing error in subsection 632(b)(120) and make other nonsubstantive changes for clarity and consistency.

If you have any questions regarding this item, please contact Dr. Craig Shuman, Regional Manager in the Department's Marine Region at (805) 568-1246. The public notice for this rulemaking should identify Environmental Scientist, Ms. Amanda Van

Diggelen as the Department's point of contact. Ms. Van Diggelen can be reached at (562) 342-7176 or Amanda.VanDiggelen@wildlife.ca.gov.

Attachments

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STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR PROPOSED REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Section 632
Title 14, California Code of Regulations
Re: Marine Protected Areas

I. Date of Initial Statement of Reasons: June 4, 2015

II. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: August 4, 2015
Location: Fortuna, CA

(b) Discussion Hearing: Date: October 7, 2015
Location: Los Angeles, CA

(c) Adoption Hearing: Date: December 9, 2015
Location: San Diego, CA

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

Background Information

The Marine Life Protection Act (MLPA) (Fish and Game Code Sections 2850-2863) established a programmatic framework for designating Marine Protected Areas (MPAs) in the form of a statewide network. The Marine Managed Areas Improvement Act (Public Resources Code [PRC] Sections 36600-36900) standardized the designation of marine managed areas (MMAs), which include MPAs. The overriding goal of these acts is to protect, conserve, and help sustain California's valuable marine resources including maintaining natural biodiversity through adaptive management.

Since implementation of MPA regulations Section 632, Title 14, California Code of Regulations, the Fish and Game Commission (Commission), Department of Fish and Wildlife (Department), and the public, have identified opportunities to clarify the regulations in subsequent administrative regulatory packages. This regulatory package proposes: an MMA designation change, renaming MMAs, correcting aquaculture allowances, refining MMA boundaries to improve compliance and enforceability, and correcting errors and inconsistencies in regulations. For a complete listing of proposed changes to specific MMAs and special closures refer to Attachment 1: Table 1- Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations, and Attachment 2: Table 2- Summary of proposed boundary refinement

amendments to Title 14, Section 632, California Code of Regulations. To view proposed boundary refinement images refer to Attachment 3: California State Marine Protected Areas Proposed Boundary Refinements.

Proposed Amendment to Subsection 632(a):

The proposed regulation identifies the origin of the MMA definitions by adding the following text to subsection 632(a)(1): "in MPAs and MMAs, as defined in Public Resources Code Section 36710:"

Necessity and Rationale: The current definitions within subsection 632(a)(1) were placed there verbatim from PRC, Section 36710, for each type of MMA, so users of MMAs could quickly reference what type of protection is afforded to a given marine area. For the accessibility of users, it is necessary to add the citation to help clarify the origin of the definitions.

Proposed Amendment to Subsection 632(b), Generally:

The MMAs indicated on Attachment 1, within the "Allowable Activities" column, are proposed for the following amendment.

The existing regulations of subsection 632(b) specify that the take of any living marine resource is prohibited in state marine reserves (SMRs), and that the take of any living marine resource is prohibited, except species explicitly listed, for the remaining MMA designations.

In an effort to clarify the intent of the MMA designations and avoid confusion regarding allowable uses, the proposed regulation amendment replaces the existing text with new text, as follows:

Area	Existing text	New text
State Marine Reserve	"Take of all living marine resources is prohibited"	"Area restrictions defined in subsection 632(a)(1)(A) apply"
State Marine Park (SMP)	"Take of all living marine resources is prohibited except…"	"Area restrictions defined in subsection 632(a)(1)(B) apply with the following specified exceptions…"
State Marine Conservation Area (SMCA)		"Area restrictions defined in subsection 632(a)(1)(C) apply with the following specified exceptions…"

State Marine Recreational Management Area (SMRMA)	"Take of all living marine resources is prohibited" OR "Take of all living marine resources is prohibited except…"	"Area Restrictions defined in subsection 632(a)(1)(D) apply" OR "Area restrictions defined in subsection 632(a)(1)(D) apply with the following specified exceptions…"

Necessity and Rationale: According to PRC, Section 36710, SMRs and SMCAs prohibit the take of any living, geological, or cultural marine resource; SMPs prohibit the take of any living or nonliving marine resource; and in SMRMAs it is unlawful to perform any activity that would compromise the recreational values for which the area may be designated. To better reflect the intent of PRC 36710 for protecting both living and non-living marine resources there is a need to clarify allowed and prohibited uses under subsection 632(b), as proposed above.

<u>Proposed Amendments to Subsection 632(b), Specifically:</u>

The following subsections of subsection 632(b) are proposed for amendments to clarify the restrictions and allowable activities in these MMAs or special closures; provide greater clarity and enforcement; or correct boundary descriptions.

The MMAs indicated on Attachment 1, within the "Clarify Take" column, are proposed for the following amendments.

1. In an effort to streamline language and reduce redundancies within the regulatory text, the following MMAs are proposed to have their current regulations rewritten:

   MacKerricher SMCA, subsection 632(b)(22)(B), Russian Gulch SMCA, subsection 632(b)(24)(B), and VanDamme SMCA, subsection 632(b)(26)(B) are proposed to have the existing text "All other commercial and recreational take is allowed in accordance with current regulations" deleted. These MMAs are also proposed to have two subsections added identifying allowable recreational and commercial take as follows: "1. All recreational take is allowed in accordance with current regulations. 2. All commercial take is allowed in accordance with current regulations, except the commercial take of bull kelp (*Nereocystis luetkeana*) and giant kelp (*Macrocystis pyrifera*) is prohibited".

   Arrow Point to Lion Head Point (Catalina Island) SMCA, 632(b)(123)(B) is proposed to have the existing text "Take of other living marine resources is allowed" deleted. This MMA is also proposed to have two subsections added to the regulations identifying allowable recreational and commercial

take as follows: "1. All recreational take is allowed in accordance with current regulations, except the recreational take of invertebrates is prohibited. 2. All commercial take is allowed in accordance with current regulations."

Necessity and Rationale: The regulatory text for these four MMAs, regarding allowable activities within their respective areas, was written with a different approach than the other 132 MMAs in subsection 632(b). Specifically, these areas indicate the prohibited activities rather than the allowable activities. Therefore, the Department is proposing to rewrite the language for these MMAs to increase consistency, while retaining the original allowable activities for these respective areas.

2. Excluding the four aforementioned MMAs. The Department is proposing to add the text "is allowed" to the regulations of the remaining 41 MMAs identified on Attachment 1, within the "Clarify Take" column.

   Necessity and Rationale: When rewriting the regulatory text as outlined in the previous "Allowable Activities" category, the 41 abovementioned MMAs allowable activities would lose their original intent if the text "is allowed" is not added to the same subsection. Therefore, in order to maintain the original regulatory intent, it is necessary to add "is allowed" to the allowable activities text.

3. The Department is proposing to clarify text for Point Lobos SMCA, subsection 632(b)(82), and Big Creek SMCA, subsection 632(b)(86), to clarify that albacore may be taken both recreationally and commercially.

   Necessity and Rationale: The regulatory text is unclear whether albacore may be taken commercially, recreationally or both commercially and recreationally in these MMAs. Therefore, to maintain the original regulatory intent, the regulations have been simplified, and now stipulate which species are permitted for either recreational or commercial harvest.

The MMAs indicated on Attachment 1, within the "Aquaculture" column, are proposed for the following amendment.

1. The Department is proposing to remove the allowance for aquaculture activities within Drakes Estero SMCA, subsection 632(b)(47)(B). To do so, the existing subsection 632(b)(47)(B)2. with the text "2. Aquaculture of shellfish, pursuant to a valid State water bottom lease and stocking permit." would be deleted. The text "the recreational take of clams" would then be integrated into subsection 632(b)(47)(B), dissolving subsection 632(b)(47)(B)1. along with the remaining text. Finally, the text "is allowed" would be added to finish the newly structured regulation.

   Necessity and Rationale: In 1972, the Johnson Oyster Company (JOC) sold its property to the U.S. Government subject to a 40 year reservation of use and occupancy. In 1976, Congress designated Drakes Estero as potential

wilderness under the 1976 Point Reyes Wilderness Act (Public Law 94-544). In 2005, the JOC sold the aquaculture operation to the Drakes Bay Oyster Company (DBOC). On January 1, 2015 DBOC closed its business permanently, and the National Park Service proceeded with the conversion to wilderness area. Since commercial activities are prohibited in the wilderness area, the reference to aquaculture operations is outdated and needs to be deleted.

2. The Department is proposing to make the aquaculture activities language for Morro Bay SMRMA, subsection 632(b)(91)(C)2., dependent upon lease conditions rather than a set list of species by deleting the text "of oysters" from subsection 632(b)(91)(C)2.

   Necessity and Rationale: Currently, there are two companies in Morro Bay operating under three state water bottom leases which were in place at the time of MMA designation. The SMRMA regulations were designed to accommodate these pre-existing lease agreements, but only specified the aquaculture of Pacific oyster, the only actively-grown species at the time, as permitted in the SMRMA. However, these lease agreements are approved for the production of Pacific oysters, quahog and Manila clams, mussels, ghost shrimp, and innkeeper worms. To legally allow the lease to continue as intended, subsection 632(b)(91)(C)2. needs be amended to include the aquaculture of the additional species allowed identified in the current leases. Therefore, the Department is proposing to generalize the language for aquaculture to be dependent upon the lease conditions, rather than a set list of species.

The MMAs indicated on Attachment 1, within the "Troll Gear" column, are proposed for the following amendment.

1. The Department is proposing to delete the outdated troll gear reference, subsection 182.1(l) from the existing regulations for Bodega Head SMCA, subsection 632(b)(40)(B).

   Necessity and Rationale: The current regulation referenced in the regulatory text, subsection 182.1(l), was repealed as of April 30, 1989. An updated reference for commercial troll fishing gear for pelagic finfish has not been drafted. Therefore, the Department is proposing to delete the obsolete reference.

2. Excluding the previously mentioned Bodega Head SMCA, the Department is proposing to update the regulation reference pertaining to the commercial take of salmon by troll fishing gear for the remaining nine MMAs indicated on Attachment 1, within the "Troll Gear" column. This update will occur by replacing the outdated regulation reference, subsection 182.1(l), with the correct regulation reference, subsection 182(c)(4).

   Necessity and Rationale: The current regulatory text pertaining to the commercial take of salmon with troll fishing gear was repealed as of

April 30, 1989. This obsolete reference, subsection 182.1(l), needs to be replaced with the current salmon troll gear reference, subsection 182(c)(4), to maintain consistency and enforceability of the regulations.

The one MMA indicated on Attachment 1, within the "Designation" column, is proposed for the following amendment.

The Department is proposing to remove the commercial harvest of kelp as an allowable activity from Año Nuevo SMCA, subsection 632(b)(67). The Department is also proposing to change the designation of the Año Nuevo SMCA to a SMR.

Necessity and Rationale: During the central coast planning process, the regional stakeholders intended to establish a SMR around Año Nuevo. However, before the MMAs were implemented, it was learned that a kelp bed was being leased within the boundaries of the proposed Año Nuevo SMR permitting commercial take of giant kelp (*Macrocystis pyrifera*) by hand harvest. During MMA adoption, the Commission voted to change Año Nuevo from the proposed SMR to a SMCA to allow for the commercial take of kelp by hand harvest. However, the commercial harvest was only for the existing leaseholder in the area until the lease expired. With the expiration of the commercial kelp lease in 2010, the Department is proposing to change the MMA designation from an SMCA to the originally planned SMR.

The MMAs indicated on Attachment 1, within the "Name Change" column, are proposed for the following amendment.

In order to simplify the names of the 21 MMAs indicated on Attachment 1 within the "Name Change" column, the Department is proposing to strike the parenthesized text within the MMA's name.

Necessity and Rationale: The naming format for 21 MMAs includes the geographic location of the MMA within parentheses. The geographic location does not make the MMA name any more or less unique, and is not consistent with the naming format for the rest of the statewide network. To make the regulations consistent, and simplify the names of the 22 MMAs, the Department is proposing to strike the geographic location from each MMA name.

The MMAs and special closures indicated on Attachment 2, within the "1/100th to 1/1000th" column, are proposed for the following amendment.

In an effort to improve consistency and accuracy, the 76 MMAs and 8 special closures with coordinates currently ending at 1/100th of a minute are proposed to be refined by adding a third decimal place to the current coordinates so they then end at 1/1000th of a minute.

Necessity and Rationale: During the MLPA planning process MMA boundaries were selected remotely using satellite imagery in a Geographical Information System and/or similar mapping programs. The MMAs and special closures

identified on Attachment 2 within the "1/100th to 1/1000th" column have coordinates which end at two decimal places (1/100th of a minute), equating to an accuracy of plus/minus 60 feet for Global Positioning System (GPS) users in the field. By amending the current boundary coordinates to end at three decimal places (1/1000th of a minute), boundary accuracy increases to plus/minus 6 feet for GPS users in the field; thereby improving the clarity, compliance and enforceability of regulations.

The MMAs and special closures indicated on Attachment 2, within the "Point of Reference" column, are proposed for the following amendment.

In an effort to improve accuracy and enforceability, 61 MMAs and 3 special closures within subsection 632(b) are proposed to have one or more of the coordinates moved towards an intended point of reference established during the planning process. The proposed movements are depicted in Attachment 3.

Necessity and Rationale: Department staff visited all MMAs and special closures in the statewide network to confirm the location of boundary coordinates. Going out to each location with a handheld GPS, Department staff assessed where a boundary coordinate landed, and compared that coordinate to where the boundary was proposed to land during the planning process. Upon groundtruthing each MMA, it was found that not all coordinates were set as accurately as possible to their intended point of reference. These proposed amendments will move the boundary coordinates of the 61 MMAs and 3 special closures closer to their intended point of reference, such as a headland, bridge, or mean high tide line, and make it easier for a user to identify whether they are within an MMA.

Most MMAs proposed to undergo this boundary refinement will have a net change in area of 0.00 square miles (Attachment 2). Any point of reference boundary amendment that yields a percent area change greater than plus/minus 0.00 percent to 0.01 percent, or a change in area larger than 0.00 square miles is explained below.

1. Big River Estuary SMCA, subsection 632(b)(25), is proposed to have a minor shape change at its southwest coordinate (Attachment 3). The coordinate currently lands on the river bank next to the bridge. However, in order to capture fluctuations in the river, this coordinate has been moved upslope, onto more stable ground, and ensures that the MMA captures the mean high tide line during flood events. This proposed change would increase the MMA by 0.07 percent, but yield a change in area of 0.00 square miles.

2. Navarro River Estuary SMCA, subsection 632(b)(27), is proposed to have a small shape change at its southwestern boundary to anchor the coordinates on more prominent features and encompass the mouth of the estuary (Attachment 3). This proposed change would decrease the MMA by 0.10 percent, but yield a change in area of 0.00 square miles. Of the MMA's two

southern coordinates, the more northwestern coordinate is proposed to move to a prominent rock nearer the ocean, while the southeastern coordinate is proposed to move up shore near the parking lot as an easier reference location for constituents. Changes to the two northern coordinates yielding an area change less than 0.01 percent are also proposed for this SMCA.

3. Estero de Limantour SMR, subsection 632(b)(46), will increase in size by 0.03percent, but have a 0.00 square mile change in area, if the proposed amendments are adopted. This increase is caused by the relocation of current boundaries, which land subtidally near shore (Attachment 3). These coordinates are proposed to be relocated closer to the mean high tide line to capture the extent of the MMA originally proposed by stakeholders during the planning process.

4. Natural Bridges SMR, subsection 632(b)(69), will decrease in size by 0.07percent, with a 0.00 change in square miles, if the proposed amendments are adopted. This decrease occurs due to the movement of the eastern boundary of Natural Bridges SMR to a more distinguishable shore location (Attachment 3). The current boundary lands due east of a prominent sand stone bluff. The Department is proposing to move the current coordinate onto the sand stone bluff to provide users with an identifiable reference point, so they know if they are within or outside of the SMR. This proposed move will shift the boundary slightly west and slightly decrease the overall SMR size. A change to the western coordinate yielding an area change less than 0.01 percent is also proposed for this SMR.

5. Edward F. Ricketts SMCA, subsection 632(b)(75), will decrease in size by 0.74percent, with a 0.00 square mile change in area, if the proposed amendments are adopted. The eastern most coordinate currently lands beyond the coast guard jetty. However, when this SMCA was designed this eastern coordinate was supposed to land at the end of the coast guard jetty. Therefore, the Department is proposing to relocate said coordinate from beyond the jetty, and anchor it to the end of the jetty as originally designed (Attachment 3). A change to the western most coordinate yielding an area change less than 0.01 percent is also proposed for this SMCA.

6. Carmel Bay SMCA, subsection 632(b)(80), is proposed to have its northern coordinate anchored on the mainland, as this coordinate currently lands in the subtidal zone (Attachment 3). In order to meet the original design criteria provided by the regional stakeholders during the planning process, this coordinate needs to be moved northwest, and anchored on shore to capture the mean high tide line. The proposed amendment to move this coordinate out of the subtidal zone, would anchor the coordinate just north of noticeable wash rocks, and would increase the size of Carmel Bay SMCA by 0.54 percent, or add 0.01 square miles to the SMCA due to the angle of the boundary.

7. Bolsa Bay SMCA, subsection 632(b)(121), is proposed to have all four of its current coordinates relocated in order to capture the mean high tide within the bay (Attachment 3). This proposed change would increase the size of the MMA by 0.20 percent, with a change in area of 0.00 square miles. The two northern most boundaries of Bolsa Bay SMCA are anchored under an overpass for a road way. These two boundaries are proposed to move up on the bank of the bay beneath this overpass in order to capture the actual size of the MMA beneath this roadway. The two southern most boundaries are proposed to undergo similar changes to encompass the true extent of the bay, but the new coordinates will be anchored beneath the overlying pedestrian bridge which is the current point of reference.

8. If the proposed boundary refinement is adopted for Cat Harbor ~~(Catalina Island)~~ SMCA, subsection 632(b)(131), the MMA will increase by 0.86 percent, but yield a 0.00 change in square miles. When this boundary was reassessed, Department staff found that the northeastern coordinate landed more inland than the stakeholders intended when designing the MMA (Attachment 3). In order to set this boundary as accurately as possible, the Department is proposing to relocate the coordinate to the southern end of a bluff, and closer to the water to both encompass the mean high tide line, and provide a discernable point of reference.

9. Four of the current coordinates defining Upper Newport Bay SMCA, subsection 632(b)(132), are proposed to be amended to improve the accuracy of the SMCA's boundaries (Attachment 3). The two southern most coordinates were proposed to land just before Pacific Coast Highway. However, when groundtruthed the current coordinates landed north of the intended location. The Department is proposing to move these two coordinates closer to Pacific Coast Highway, on the bank of the bay, in order to maintain the original shape designed by the stakeholders. Similarly, the northeast boundary was designed to land just before Jamboree Road, but the current boundary lands due east, beneath the road. Therefore the Department is proposing to move both of the coordinates which define the northeastern boundary slightly west, so the boundary lines up along the bay before meeting the roadway. These proposed changes would increase the size of the MMA by 0.04 percent, with a 0.00 square mile change in area.

The MMAs indicated on Attachment 2, within the "Mean High Tide Line" column, are proposed for the following amendment.

1. The existing regulations of subsections 632(b)(79)(A), 632(b)(84)(A), and 632(b)(88)(A) define the boundaries for Carmel Pinnacles SMR, Point Sur SMCA, and Piedras Blancas SMCA, respectively. The proposed regulation change will delete unnecessary text pertaining to the "mean high tide line" currently used to describe the boundaries for these three MMAs.

   Necessity and Rationale: Each of these three MMAs occurs offshore, and their boundaries are not influenced by the tide. However, the current

regulatory text defining the boundaries for these MMAs states: “This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed”. Given the offshore location of Carmel Pinnacles SMR, Point Sur SMCA, and Piedras Blancas SMCA, the Department is proposing to delete the text “the mean high tide line and” due to its irrelevance.

2. The existing regulations of subsection 632(b)(100)(A) define the boundaries for Goleta Slough SMCA. The existing Goleta Slough State Marine Conservation Area boundary is proposed to be removed and replaced by the mean high tide line.

   Necessity and Rationale: This is the only remaining MMA slough in the statewide network to not have its tidally influenced boundary defined by the mean high tide line. Due to the transient nature of water and tidal cycles, it is more effective to have slough boundaries set by the mean high tide line than a distinct set of coordinates. Additionally, this particular slough is an embayment with only one entrance and exit point for water transfer. By using the mean high tide as a boundary any future fluctuations in the Slough’s water level will be protected, while set coordinates cannot successfully encompass the Slough’s waters consistently. For these reasons the Department is proposing to replace the sole coordinate boundary of this MMA with the mean high tide line.

The MMAs indicated on Attachment 2, within the “Shift” column, are proposed for the following amendment.

The existing regulations of subsections 632(b)(134)(A) and 632(b)(135)(b) define the boundaries for the Laguna Beach SMR and Laguna Beach no-take SMCA, respectively. The proposed regulations adjust the boundary between Laguna Beach SMR and Laguna Beach no-take SMCA south to the city beach/county beach line near Aliso Creek to address municipality concerns. The proposed movements are depicted in Attachment 3.

Necessity and Rationale: During the south coast planning process, it became apparent that the proposed Laguna Beach SMR had an outfall pipe running through the MMA which would require maintenance. A regulatory package was created to address this issue (and others) in 2010. The Department presented the Commission with five distinct amendment options to account for the outfall pipe. Four of the amendment options were intended to have the southern boundary of the Laguna Beach SMR at the city beach/county beach line near Aliso Creek just north of an outfall pipe. However, when presented to the Commission, the agreed upon southern Laguna Beach SMR boundary was erroneously only addressed in three of the five proposal options. When adopted, the option selected by the Commission did not have the southern Laguna Beach SMR boundary at the city beach/county beach line. Instead the boundary coordinates were placed north of the city beach/county beach boundary. This placement split a prominent location, Treasure Island, in half

creating city and county jurisdictional concerns for Laguna Beach. Pursuant to requests from representatives of local agencies, the Department is now proposing to shift the shared boundary between the Laguna Beach SMR and the Laguna Beach no-take SMCA south to align with the city beach/county beach line.

This proposed amendment would move 0.38 square miles from the Laguna Beach no-take SMCA into the Laguna Beach SMR, however the overall size of the protected areas together would remain the same (see Attachment 2). As indicated in Attachment 2, this shift of area would result in a change in the individual size of each area relative to their original sizes, with a 6.08 percent increase in size of the Laguna Beach SMR, and an 11.07 percent decrease in size of the Laguna Beach no-take SMCA. These size changes will not impact fishermen, enforcement, or science guidelines as the shift is between two no-take MMAs.

The MMAs indicated on Attachment 2, within the "NOAA State Line" column, are proposed for the following amendment.

To improve offshore boundary accuracy, 25 MMA boundaries within subsection 632(b) are proposed to have one or more of their coordinates moved to the National Oceanic and Atmospheric Administration's (NOAA) revised 3 nautical mile (nm) state line to improve clarity, compliance, and enforceability of regulations. The proposed movements are depicted in Attachment 3.

Necessity and Rationale: When Department staff reassessed all MMA coordinates for accuracy, a subset of MMAs which reach offshore revealed discrepancies between reported MMA coordinates and NOAA's 3 nm state line. For many of the central coast MMAs this misplacement of the coordinate to NOAA's 3 nm state line occurred during the central coast planning process. When the central coast MMAs were designed, regional stakeholders used the then-current 3 nm state line generated by NOAA to establish MMAs' western most boundaries. However, just as the central coast MMAs were implemented, NOAA released updated navigational charts, which relocated the state's 3 nm line in some areas. Due to the timing overlap, the western boundaries of the central coast MMAs were anchored to the previous reporting of the state's 3 nm line. To ensure accuracy, the Department is now proposing to anchor these coordinates to NOAA's current 3 nm state line as originally intended during the central coast planning process. If implemented, the area for a given MMA will not change because the Department has always used NOAA's 3 nm state line as the western boundary. While it may appear that a large area is now made unavailable for fishing within the central coast MMAs, the Department has always used the 3 nm state line as the western boundary when describing these locations, and is proposing to anchor these coordinates to the new 3 nm state line location to maintain accuracy and consistency.

The remaining statewide MMA adjustments to the 3nm state line will undergo minimal movement in order to anchor the coordinates more accurately on

NOAA's 3 nm state line thereby increasing accuracy and enforceability of these MMAs throughout the state.

With the exception of Judith Rock ~~(San Miguel Island)~~ SMR, subsection 632(b)(104), all MMAs within the "NOAA State Line" column of Attachment 2 have a net area change of 0.00 square miles which means there is no significant change in the size of the given MMA. However, if the proposed amendments are adopted, Judith Rock SMR will decrease in size by , 0.39 percent of its original size, or 0.02 square miles, because the current extent of the MMA lies beyond NOAAs 3 nm state line (Attachment 3). If the new coordinates are adopted as proposed, the coordinates will be moved onto the 3 nm state line, closer to San Miguel Island, which will cause a slight decrease in the reported area of the MMA. However, the MMA was designed to have the 3 nm state line be the furthest offshore boundary so this size decrease will not impact the condition of the SMR in any way.

The MMAs indicated on Attachment 2, within the "Added Position" column, are proposed for the following amendments.

1. The Department is proposing to add two additional coordinates to the existing regulations of Stewarts Point SMR, subsection 632(b)(34)(A) to improve clarity, compliance, and enforceability of regulations. One added coordinate will be placed at the same coordinate location of Stewarts Point SMCA's southern mainland location, and the other additional proposed coordinate will be placed at the same location as Stewart's Point SMCA's southern offshore coordinate. These added coordinates will make Stewarts Point SMR independent of Stewarts Point SMCA, as the boundaries of these two MMAs currently overlap. The new proposed coordinates are depicted in Attachment 3, as positions 34_1 and 34_2.

   In addition to these proposed additional coordinates, to make Stewarts Point SMCA and Stewarts Point SMR independent of one another, the text: "except that Stewarts Point State Marine Conservation Area as described in subsection 632(b)(33)(A) is excluded" will be deleted from the current regulations of subsection 632(b)(34)(A).

   Necessity and Rationale: Currently, the boundaries of Stewarts Point SMCA and Stewarts Point SMR overlap one another. The Department is proposing to make these two MMAs independent of one another, mirroring the approach used for Big Creek SMR, subsection 632(b)(85)(A) and Big Creek SMCA, subsection 632(b)(86)(A). Separating the Stewarts Point SMR and Stewarts Point SMCA will simplify the regulations, and improve the overall consistency of designating boundaries throughout the statewide network. To make these two MMAs independent of one another, Stewarts Point SMR will gain two additional coordinate positions, both of which will be identical to Stewarts Point SMCA's two southern most coordinates. Thus, allowing these two MMAs to now share a boundary rather than overlapping one another.

2. The existing regulations of subsection 632(b)(66)(A) define the boundaries for Pillar Point SMCA. The Department is proposing to increase the current number of coordinates for Pillar Point SMCA by adding one position to the MMA's existing boundary regulations. The added coordinate will be placed southeast of the southernmost mainland coordinate to protect a rocky cove. The new proposed coordinate is depicted in Attachment 3, as position 66_6.5.

   Necessity and Rationale: When Department staff reassessed all MMA coordinates for accuracy, it was found that the original coordinate, proposed to land on this rocky headland, landed due west in a subtidal zone. In order to include the mean high tide line and the small alcove within this area of the MMA, an additional point should be added. This will allow the alcove to be within the protection of the MMA, while maintaining the current offshore boundary and line of sight through this rocky headland. This proposed additional position maintains the size and shape of the MMA originally designed by the regional stakeholders during the planning process.

3. The existing regulations of subsection 632(b)(67)(A) and subsection 632(b)(68)(A) define the boundaries for Año Nuevo ~~SMCA~~ SMR and Greyhound Rock SMCA, respectively. The Department is proposing to increase the current number of coordinates for Año Nuevo ~~SMCA~~ SMR and Greyhound Rock SMCA by adding one position to each MMA's boundary regulations. The added coordinate will be anchored on Greyhound Rock which lies on the shared boundary of the two MMAs. The new proposed coordinate is depicted in Attachment 3, as position 67_4.5 and position 68_1.5.

   Necessity and Rationale: When Department staff reassessed all MMA coordinates for accuracy, it was found that the original coordinate, proposed to land on Greyhound Rock, landed due west of the intended location. To maintain the shape originally proposed by the regional stakeholders during the central coast planning process, the current coordinate is being relocated from the water to the mainland shore, and an additional coordinate will be added to Greyhound Rock. Both MMAs which share this boundary will not change in size or shape, but will instead have more accurate and enforceable boundaries to aid users.

4. The existing regulations of subsection 632(b)(77)(A) and subsection 632(b)(78)(A) define the boundaries for Pacific Grove Marine Gardens SMCA and Asilomar SMR, respectively. The Department is proposing to increase the current number of coordinates for Asilomar SMR and Pacific Grove Marine Gardens SMCA by adding one position to each MMA's boundary regulations. The added coordinate will be placed on the rocky point, which currently resides in Asilomar SMR, causing a shift in the shared boundary of Pacific Grove Marine Gardens SMCA and Asilomar SMR. The new proposed coordinate is depicted in Attachment 3, as position 77_4.5 and position 78_1.5.

Necessity and Rationale: When Department staff reassessed all MMA coordinates for accuracy, this location stood out as an area that could be refined to aid users in determining their location within a given MMA. The proposed location for this added position is on a very prominent rocky outcropping which would be easy to spot from shore or when out in the water. Using this outcropping as a point of reference, individuals could quickly identify if they were in Asilomar SMR (to the south or west of the point), or if they were within Pacific Grove Marine Gardens SMCA (to the north or east of the point). By adding this position the shared boundary would change in shape of these MMAs. The size of Pacific Grove Marine Gardens SMCA would increase by 0.03 square miles (3.00 percent of its original size), while Asilomar SMR would decrease by 0.03 square miles (1.87 percent of its original size), as indicated on Attachment 2.

5. The existing regulations of subsection 632(b)(133)(A) and subsection 632(b)(134)(A) define the boundaries for Crystal Cove SMCA and Laguna Beach SMR, respectively. The Department is proposing to add an additional boundary coordinate at the shared boundary between Crystal Cove SMCA and Laguna Beach SMR. The added coordinate will be located on a headland, northeast of the nearest existing coordinate and is depicted in Attachment 3, as position133_4.5 and position 134_0.5.

   Necessity and Rationale: When Department staff reassessed all MMA coordinates for accuracy, it was found that the original coordinate, proposed to land on the rocky mainland point, landed due west of the intended location in the intertidal zone, rather than on the mainland. The Department's intent is to minimize boundary changes made to the MMAs as much as possible. Therefore, this additional boundary position allows the offshore longitude to remain on 2/10ths of a minute (a simple coordinate for fishermen use), while maintaining the line of sight through the prominent rocky outcropping, and anchors the boundary to shore. This proposed additional position yields a net area change of 0.00 square miles (0.0 percent) (Attachment 2) for both MMAs while providing more accurate and enforceable boundaries to aid users.

The proposed regulations correct a printing error in subsection 632(b)(120)(B)1., Abalone Cove SMCA.

Necessity and Rationale: The regulatory text as approved by the Office of Administrative Law (OAL) in rulemaking file 2014-0703-03s is not accurately reflected in the printed version of Title 14, causing ambiguity as to what recreational fishing activities are allowed in this SMCA. The proposed change reflects the language adopted by the Commission and approved by OAL.

Various nonsubstantive changes are also proposed for clarity and consistency.

<u>Goals and Benefits of the Proposed Regulations</u>

The proposed regulations will provide clarity and consistency within the regulations and will provide consistency with current fishing practices.

(b) Authority and Reference Sections from Fish and Game Code for Regulation:

Authority: Sections 200, 202, 205(c), 220, 240, 1590, 1591, 2860, 2861, and 6750, Fish and Game Code; and Sections 36725(a) and 36725(e), Public Resources Code.

Reference: Sections 200, 202, 205(c), 220, 240, 2861, 5521, 6653, 8420(e), and 8500, Fish and Game Code; and Sections 36700(e), 36710(e), 36725(a) and 36725(e), Public Resources Code.

(c) Specific Technology or Equipment Required by Regulatory Change:

None

(d) Identification of Reports or Documents Supporting Regulation Change:

Attachment 1: Table 1- Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations

Attachment 2: Table 2- Summary of proposed boundary refinement amendments to Tile 14, Section 632, California Code of Regulations

Attachment 3: California State Marine Protected Areas Proposed Boundary Refinements

Attachment 4: Comparison of NOAA Nautical Charts

Attachment 5: North Coast Planning Process Intent

Attachment 6: North Central Coast Planning Process Intent

Attachment 7: Central Coast Planning Process Intent

Attachment 8: South Coast Planning Process Intent

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

No public meetings were held prior to the notice publication. The 45-day comment period provides adequate time for public review of the proposed amendments.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

No alternatives were identified by or brought to the attention of Commission staff that would have the same desired regulatory effect.

(b) No Change Alternative:

The no-change alternative would leave existing MMA regulations with decreased boundary accuracy and inconsistencies, and would not provide for better public understanding and enforcement of MMA regulations.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the proposed regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states because the proposed amendments make clarification and consistency changes to the current regulations; make minor boundary adjustments; re-designate and rename existing MMAs; and add specified methods of take consistent with existing commercial fishing regulations.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The Commission does not anticipate any impacts on creation or elimination of jobs, the creation of new businesses, the elimination of existing businesses or

the expansion of businesses in California because these changes will neither increase nor decrease recreational or commercial fishing opportunities within MMAs.

The Commission does not anticipate any benefits to the health and welfare of California residents or to worker safety.

The proposed amendments may benefit the environment by clarifying the administration of the protection of habitat and biodiversity in MMAs.

(c) Cost Impacts on a Representative Private Person or Business:

The Commission is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

(e) Nondiscretionary Costs/Savings to Local Agencies:

None.

(f) Programs Mandated on Local Agencies or School Districts:

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs:

None.

VII. Economic Impact Assessment

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State:

The proposed amendments will not create or eliminate jobs within the state because the proposed amendments make clarification and consistency changes to the current regulations; make minor boundary adjustments; re-designate and rename existing MMAs; and add specified methods of take consistent with commercial fishing practices. These changes will neither

increase nor decrease recreational or commercial fishing opportunities within MMAs.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State:

The proposed amendments will not create any new businesses or eliminate existing businesses because the proposed regulations will neither increase nor decrease recreational or commercial fishing opportunities within MMAs.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State:

The proposed amendments are not expected to result in the expansion of businesses currently doing business within the state because the proposed regulations will neither increase nor decrease recreational or commercial fishing opportunities within MMAs.

(d) Benefits of the Regulation to the Health and Welfare of California Residents:

The proposed amendments will not result in benefits to the health and welfare of State residents.

(e) Benefits of the Regulation to Worker Safety:

The proposed amendments do not have foreseeable benefits to worker safety because the regulations do not affect working conditions.

(f) Benefits of the Regulation to the State's Environment:

The proposed amendments may benefit the state’s environment by clarifying and improving the understanding and enforcement of recreational and commercial fishing regulations in California MMAs.

Informative Digest/Policy Statement Overview

The Marine Life Protection Act (Fish and Game Code Sections 2850-2863) established a programmatic framework for designating Marine Protected Areas (MPAs) in the form of a statewide network. The Marine Managed Areas Improvement Act (Public Resources Code [PRC] Sections 36600-36900) standardized the designation of marine managed areas (MMAs), which include MPAs. The overriding goal of these acts is to protect, conserve, and help sustain California's valuable marine resources. Unlike previous laws, which focused on individual species, these acts focus on maintaining the health of marine ecosystems and natural biodiversity in order to sustain resources.

Existing regulations in Section 632, Title 14, California Code of Regulations (CCR), provide general provisions, definitions, and site-specific area classifications, boundary descriptions, commercial and recreational take restrictions, and other restricted/allowed uses for MPAs, MMAs and special closures.

The proposed regulatory changes will clarify the allowed and prohibited uses for all MMA designations; amend aquaculture activities for two MMAs; and amend troll gear references for ten MMAs. In addition, the proposed regulations change the designation of one MMA; change the names of 21 MMAs; and refine boundary coordinates for 106 MMAs.

The following is a summary of the proposed changes to Section 632, Title 14, CCR.

<u>Amendment to Subsection 632(a):</u>

1. The proposed regulations add a citation to the statute (Public Resources Code Section 36710) which established the MMA definitions in subsection 632(a)(1).

<u>Amendments to Subsection 632(b):</u>

1. The proposed regulations clarify regulatory language, correct existing errors, and update allowable activities within MMAs.

    a. The proposed regulation replaces the existing text with new text, as follows:

Area	Existing text	New text
State Marine Reserve (SMR)	"Take of all living marine resources is prohibited"	"Area restrictions defined in subsection 632(a)(1)(A) apply"
State Marine Park	"Take of all living marine resources is prohibited except…"	"Area restrictions defined in subsection 632(a)(1)(B) apply with the following specified exceptions…"
State Marine Conservation Area (SMCA)		"Area restrictions defined in subsection 632(a)(1)(C) apply with the following specified exceptions…"

State Marine Recreational Management Area (SMRMA)	"Take of all living marine resources is prohibited" OR "Take of all living marine resources is prohibited except…"	"Area Restrictions defined in subsection 632(a)(1)(D) apply" OR "Area restrictions defined in subsection 632(a)(1)(D) apply with the following specified exceptions…"

b. The proposed regulations restructure the regulatory text for MacKerricher SMCA, subsection 632(b)(22)(B), Russian Gulch SMCA, subsection 632(b)(24)(B), Van Damme SMCA, subsection 632(b)(26)(B), and Arrow Point to Lion Head Point (Catalina Island) SMCA, subsection 632(b)(123)(B), in order for their activities language to resemble the remaining MMA descriptions, listing allowable activities instead of prohibited activities.

c. The proposed regulations add the text "is allowed" to the current regulatory text for 41 MMAs.

d. The proposed regulations delete the allowance for aquaculture in Drakes Estero SMCA, subsection 632(b)(47)(B).

e. The proposed regulations amend the current species list for aquaculture within Morro Bay SMRMA, subsection 632(b)(91)(C), to be dependent upon lease conditions rather than a designated list of species.

f. The proposed regulations replace obsolete salmon troll gear reference with the current salmon troll gear reference for nine MMAs.

g. The proposed regulations delete the obsolete pelagic finfish troll gear reference from Bodega Head SMCA, subsection 632(b)(40)(B).

h. The proposed regulations remove commercial harvest of kelp as an allowed activity in Año Nuevo SMCA, subsection 632(b)(67), and redesignate this SMCA as a SMR.

i. The proposed regulations simplify the names of 21 MMAs by striking the parenthesized text which identifies the geographic location of a given MMA.

j. The proposed regulations amend text for Point Lobos SMCA, subsection 632(b)(82), and Big Creek SMCA, subsection 632(b)(86), to clarify that albacore may be taken both recreationally and commercially.

2. The proposed regulations improve boundary accuracy and ease of enforcement for numerous MMAs.

   a. The proposed regulations add a third decimal place to the current coordinates for 76 MMAs and eight special closures.

b. The proposed regulations move one or more of the existing coordinates toward an intended point of reference, such as a headland, bridge or mean high tide line, for 61 MMAs and three special closures.

c. The proposed regulations delete text pertaining to the mean high tide line for Carmel Pinnacles SMR, subsection 632(b)(79)(A), Point Sur SMCA, subsection 632(b)(84)(A), and Piedras Blancas, SMCA 632(b)(88)(A).

d. The proposed regulations replace the sole coordinate boundary at Goleta Slough SMCA, subsection 632(b)(100)(A), with the mean high tide line.

e. The proposed regulations move the shared boundary between the Laguna Beach SMR, subsection 632(b)(134)(A), and Laguna Beach no-take SMCA, subsection 632(b)(135)(A), south to the city beach/county beach line near Aliso Creek.

f. The proposed regulations anchor coordinates for 25 MMAs to the current National Oceanic and Atmospheric Administration's three nautical mile state line.

g. The proposed regulations add one or two positions to the list of coordinates for eight MMAs.

3. The proposed regulations correct a printing error in subsection 632(b)(120)(B)1., Abalone Cove SMCA, and make other nonsubstantive changes for clarity and consistency.

The proposed amendments to section 632 will clarify the restrictions and allowable activities in these MMA's; provide greater ease of public understanding and enforceability; and correct boundary descriptions.

The proposed regulations are consistent with regulations concerning sport and commercial fishing and kelp harvest found in Title 14, CCR. The State Water Resources Control Board may designate State Water Quality Protection Areas and the State Park and Recreation Commission may designate State Marine Reserves, State Marine Conservation Areas, State Marine Recreational Management Areas, State Marine Parks and State Marine Cultural Preservation Areas; however, only the Fish and Game Commission has authority to regulate commercial and recreational fishing and any other taking of marine species in Marine Managed Areas. Department staff has searched the California Code of Regulations and has found no other regulations pertaining to authorized activities in marine protected areas and therefore has determined that the proposed amendments are neither inconsistent, nor incompatible, with existing state regulations.

Regulatory Language

Section 632, Title 14, CCR, is amended to read:

632. Marine Protected Areas (MPAs), Marine Managed Areas (MMAs), and Special Closures.

(a) General Rules and Regulations:

The areas specified in this section have been declared by the commission to be marine protected areas, marine managed areas, or special closures. Public use of marine protected areas, marine managed areas, or special closures shall be compatible with the primary purposes of such areas. MPAs, MMAs, and special closures are subject to the following general rules and regulations in addition to existing Fish and Game Code statutes and regulations of the commission, except as otherwise provided for in subsection 632(b), areas and special regulations for use. Nothing in this section expressly or implicitly precludes, restricts or requires modification of current or future uses of the waters identified as marine protected areas, special closures, or the lands or waters adjacent to these designated areas by the Department of Defense, its allies or agents.

(1) Protection of ~~Resources.~~Resources in MPAs and MMAs, as defined in Public Resources Code Section 36710:

(A) State Marine Reserves: In a state marine reserve, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource, except under a scientific collecting permit issued by the department pursuant to Section 650 or specific authorization from the commission for research, restoration, or monitoring purposes.

(B) State Marine Parks: In a state marine park, it is unlawful to injure, damage, take, or possess any living or nonliving marine resource for commercial purposes. Any human use that would compromise protection of the species of interest, natural community or habitat, or geological, cultural, or recreational features, may be restricted by the commission as specified in subsection 632(b), areas and special regulations for use. The department may issue scientific collecting permits pursuant to Section 650. The commission may authorize research, monitoring, and educational activities and certain recreational harvest in a manner consistent with protecting resource values.

(C) State Marine Conservation Areas: In a state marine conservation area, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for commercial or recreational purposes, or a combination of commercial and recreational purposes except as specified in subsection 632(b), areas and special regulations for use. The department may issue scientific collecting permits pursuant to Section 650. The commission may authorize research, education, and recreational activities, and certain commercial and recreational harvest of marine resources, provided that these uses do not compromise protection of the species of interest, natural community, habitat, or geological features.

(D) State Marine Recreational Management Areas: In a state marine recreational management area, it is unlawful to perform any activity that would compromise the recreational values for which the area may be designated. Recreational opportunities may be protected, enhanced, or restricted, while preserving basic resource values of the area. No other use is restricted unless specified in subsection 632(b), areas and special regulations for use.

[No changes to current regulatory text in subsections 632(a)(2) through (a)(12)]

(b) Areas and Special Regulations for Use. Pursuant to the commission's authority in Fish and Game Code Section 2860 to regulate commercial and recreational fishing and any other taking of marine species in MPAs, Fish and Game Code Sections 10500(f), 10500(g), 10502.5, 10502.6, 10502.7, 10502.8, 10655, 10655.5, 10656, 10657, 10657.5, 10658, 10660, 10661, 10664, 10666, 10667, 10711, 10801, 10900, 10901, 10902, 10903, 10904, 10905, 10906, 10907, 10908, 10909, 10910, 10911, 10912, 10913, and 10932 are superseded as they apply to designations in Subsection 632(b). All geographic coordinates listed use the North American Datum 1983 (NAD83) reference datum:

(1) Pyramid Point State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
42° 00.000' N. lat. 124° 12.735' W. long.;
42° 00.000' N. lat. 124° 19.814' W. long.; thence southward along the three nautical mile offshore boundary to
41° 57.500' N. lat. 124° 17.101' W. long.; and
41° 57.500' N. lat. 124° 12.423' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of surf smelt [Section 28.45] by dip net or Hawaiian type throw net [Section 28.80] is allowed.
2. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations found in subsection 632(b)(1) of these regulations and shall comply with all other existing regulations and statutes:
Smith River Rancheria.

(2) Point St. George Reef Offshore State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
41° 52.000' N. lat. 124° 23.189' W. long.;
41° 52.000' N. lat. 124° 25.805' W. long.; thence southward along the three nautical mile offshore boundary to
41° 49.000' N. lat. 124° 26.252' W. long.;
41° 49.000' N. lat. 124° 23.189' W. long.; and
41° 52.000' N. lat. 124° 23.189' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmon by trolling [subsection 27.80(a)(3)]; and Dungeness crab by trap is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(*l*)';~~182(c)(4)] Dungeness crab by trap is allowed.
3. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations found in subsection 632(b)(2) of these regulations and shall comply with all other existing regulations and statutes:
Elk Valley Rancheria, and
Smith River Rancheria.

[No changes to current regulatory text in subsections (b)(3) through (b)(5)]

(6) Reading Rock State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
41° 20.100' N. lat. 124° 04.911' W. long.;
41° 20.100' N. lat. 124° 10.000' W. long.;
41° 17.600' N. lat. 124° 10.000' W. long.; and
~~41° 17.600' N. lat. 124° 05.497' W. long.~~
41° 17.600' N. lat. 124° 05.399' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmon by trolling [subsection 27.80(a)(3)]; surf smelt [Section 28.45] by dip net or Hawaiian type throw net [Section 28.80]; and Dungeness crab by trap, hoop net or hand is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(*l*)~~‘182(c)(4)]; surf smelt by dip net; and Dungeness crab by trap is allowed.
3. The following federally recognized tribe is exempt from the area and take regulations found in subsection 632(b)(6) of these regulations and shall comply with all other existing regulations and statutes:
Yurok Tribe of the Yurok Reservation.

(7) Reading Rock State Marine Reserve.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
41° 20.100' N. lat. 124° 10.000' W. long.;
41° 20.100' N. lat. 124° 14.655' W. long.; thence southward along the three nautical mile offshore boundary to
41° 17.600' N. lat. 124° 11.963' W. long.;
41° 17.600' N. lat. 124° 10.000' W. long.; and
41° 20.100' N. lat. 124° 10.000' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(8) Samoa State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
40° 55.000' N. lat. 124° 08.432' W. long.;
40° 55.000' N. lat. 124° 12.677' W. long.; thence southward along the three nautical mile offshore boundary to
40° 52.000' N. lat. 124° 14.225' W. long.; and
40° 52.000' N. lat. 124° 09.803' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmon by trolling [subsection 27.80(a)(3)]; surf smelt [Section 28.45] by dip net or Hawaiian type throw net [Section 28.80]; and Dungeness crab by trap, hoop net or hand is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(*l*)~~‘182(c)(4)]; surf smelt by dip net; and Dungeness crab by trap is allowed.

3. The following federally recognized tribe is exempt from the area and take regulations found in subsection 632(b)(8) of these regulations and shall comply with all other existing regulations and statutes:
Wiyot Tribe.

(9) South Humboldt Bay State Marine Recreational Management Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
40° 43.000' N. lat. 124° 15.527' W. long.;
40° 43.000' N. lat. 124° 15.000' W. long.;
40° 42.000' N. lat. 124° 15.000' W. long.; and
40° 42.000' N. lat. 124° 16.141' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(D) apply, with the following specified exceptions:
1. The following federally recognized tribe is exempt from the area and take regulations found in subsection 632(b)(9) of these regulations and shall comply with all other existing regulations and statutes:
Wiyot Tribe.
(C) Waterfowl may be taken in accordance with the general waterfowl regulations (Sections 502, 550, 551, and 552).

[No changes to current regulatory text in subsection (b)(10)]

(11) South Cape Mendocino State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~40° 26.100' N. lat. 124° 24.353' W. long.;~~
40° 26.100' N. lat. 124° 24.340' W. long.;
40° 26.100' N. lat. 124° 31.958' W. long.; thence southward along the three nautical mile offshore boundary to
40° 24.900' N. lat. 124° 31.084' W. long.; and
~~40° 24.900' N. lat. 124° 23.813' W. long.~~
40° 24.900' N. lat. 124° 23.800' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

[No changes to current regulatory text in subsection (b)(12)]

(13) Mattole Canyon State Marine Reserve.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
40° 20.000' N. lat. 124° 22.500' W. long.;
40° 20.000' N. lat. 124° 25.902' W. long.; thence southward along the three nautical mile offshore boundary to
40° 17.000' N. lat. 124° 25.869' W. long.;
40° 17.000' N. lat. 124° 22.500' W. long.; and
40° 20.000' N. lat. 124° 22.500' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(14) Sea Lion Gulch State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
40° 14.400' N. lat. 124° 19.983' W. long.;
40° 14.400' N. lat. 124° 25.943' W. long.; thence southward along the three nautical mile offshore boundary to
40° 12.800' N. lat. 124° 24.809' W. long.; and
40° 12.800' N. lat. 124° 18.155' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(15) Big Flat State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
40° 09.400' N. lat. 124° 12.671' W. long.;
40° 09.400' N. lat. 124° 19.366' W. long.; thence southward along the three nautical mile offshore boundary to
40° 07.500' N. lat. 124° 16.203' W. long.; and
40° 07.500' N. lat. 124° 10.313' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmon by trolling [subsection 27.80(a)(3)]; and Dungeness crab by trap, hoop net or hand is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(*l*)';~~182(c)(4)] Dungeness crab by trap is allowed.
3. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations found in subsection 632(b)(15) of these regulations and shall comply with all other existing regulations and statutes:
Bear River Band of the Rohnerville Rancheria,
Big Valley Band of Pomo Indians of the Big Valley Rancheria,
Cahto Indian Tribe of the Laytonville Rancheria,
Coyote Valley Band of Pomo Indians,
Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria,
Guidiville Rancheria,
Habematolel Pomo of Upper Lake,
Hopland Band of Pomo Indians of the Hopland Rancheria,
Lower Lake Rancheria,
Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria,
Middletown Rancheria of Pomo Indians,
Pinoleville Pomo Nation,
Potter Valley Tribe,
Redwood Valley Rancheria of Pomo Indians,
Robinson Rancheria of Pomo Indians,
Round Valley Indian Tribes of the Round Valley Reservation,
Scotts Valley Band of Pomo Indians, and
Sherwood Valley Rancheria of Pomo Indians.

(16) Double Cone Rock State Marine Conservation Area.

(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
39° 48.500' N. lat. 123° 50.713' W. long.;
39° 48.500' N. lat. 123° 55.875' W. long.; thence southward along the three nautical mile offshore boundary to
39° 44.300' N. lat. 123° 54.178' W. long.; and
39° 44.300' N. lat. 123° 50.055' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmon by trolling [subsection 27.80(a)(3)]; and Dungeness crab by trap, hoop net or hand is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(l)~~;182(c)(4)] and Dungeness crab by trap is allowed.
3. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations found in subsection 632(b)(16) of these regulations and shall comply with all other existing regulations and statutes:
Big Valley Band of Pomo Indians of the Big Valley Rancheria,
Cahto Indian Tribe of the Laytonville Rancheria,
Coyote Valley Band of Pomo Indians,
Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria,
Guidiville Rancheria,
Habematolel Pomo of Upper Lake,
Hopland Band of Pomo Indians of the Hopland Rancheria,
Lower Lake Rancheria,
Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria,
Middletown Rancheria of Pomo Indians,
Pinoleville Pomo Nation,
Potter Valley Tribe,
Redwood Valley Rancheria of Pomo Indians,
Robinson Rancheria of Pomo Indians,
Round Valley Indian Tribes of the Round Valley Reservation,
Scotts Valley Band of Pomo Indians, and
Sherwood Valley Rancheria of Pomo Indians.

[No changes to current regulatory text in subsection (b)(17) through (b)(18)]

(19) Ten Mile State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
39° 35.900' N. lat. 123° 47.243' W. long.;
39° 35.900' N. lat. 123° 51.479' W. long.; thence southward along the three nautical mile offshore boundary to
39° 33.300' N. lat. 123° 50.559' W. long.; and
39° 33.300' N. lat. 123° 46.015' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(20) Ten Mile Beach State Marine Conservation Area.

(A) This area is bounded by the mean high tide and straight lines connecting the following points in the order listed except where noted:
39° 33.300' N. lat. 123° 46.015' W. long.;
39° 33.300' N. lat. 123° 50.559' W. long.; thence southward along the three nautical mile offshore boundary to
39° 32.500' N. lat. 123° 50.418' W. long.;
~~39° 32.500' N. lat. 123° 46.227' W. long.;~~
39° 32.500' N. lat. 123° 46.242' W. long.; thence northward along the mean high tide line onshore boundary to
39° 33.098' N. lat. 123° 46.003' W. long.;
39° 33.199' N. lat. 123° 45.966' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of Dungeness crab by trap, hoop net or hand is allowed.
2. The commercial take of Dungeness crab by trap is allowed.
3. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations found in subsection 632(b)(20) of these regulations and shall comply with all other existing regulations and statutes:
Big Valley Band of Pomo Indians of the Big Valley Rancheria,
Cahto Indian Tribe of the Laytonville Rancheria,
Coyote Valley Band of Pomo Indians,
Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria,
Guidiville Rancheria,
Habematolel Pomo of Upper Lake,
Hopland Band of Pomo Indians of the Hopland Rancheria,
Lower Lake Rancheria,
Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria,
Middletown Rancheria of Pomo Indians,
Pinoleville Pomo Nation,
Potter Valley Tribe,
Redwood Valley Rancheria of Pomo Indians,
Robinson Rancheria of Pomo Indians,
Round Valley Indian Tribes of the Round Valley Reservation,
Scotts Valley Band of Pomo Indians, and
Sherwood Valley Rancheria of Pomo Indians.

(21) Ten Mile Estuary State Marine Conservation Area.
(A) This area consists of waters below the mean high tide line within the Ten Mile Estuary, eastward of a line connecting the following two points:
39° 33.199' N. lat. 123° 45.966' W. long.; and
39° 33.098' N. lat. 123° 46.003' W. long.
~~And~~and westward of a line connecting the following two points:
39° 32.400' N. lat. 123° 44.785' W. long.; and
39° 32.382' N. lat. 123° 44.769' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations found in subsection 632(b)(21) of these regulations and shall comply with all other existing regulations and statutes:

Big Valley Band of Pomo Indians of the Big Valley Rancheria,
Cahto Indian Tribe of the Laytonville Rancheria,
Coyote Valley Band of Pomo Indians,
Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria,
Guidiville Rancheria,
Habematolel Pomo of Upper Lake,
Hopland Band of Pomo Indians of the Hopland Rancheria,
Lower Lake Rancheria,
Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria,
Middletown Rancheria of Pomo Indians,
Pinoleville Pomo Nation,
Potter Valley Tribe,
Redwood Valley Rancheria of Pomo Indians,
Robinson Rancheria of Pomo Indians,
Round Valley Indian Tribes of the Round Valley Reservation,
Scotts Valley Band of Pomo Indians, and
Sherwood Valley Rancheria of Pomo Indians.
2. Take pursuant to activities authorized in subsection 632(b)(21)(D) is allowed.
(C) Waterfowl may be taken in accordance with the general waterfowl regulations (Sections 502, 550, 551, and 552).
(D) Operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(22) MacKerricher State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~39° 30.100' N. lat. 123° 47.390' W. long.;~~
39° 30.100' N. lat. 123° 47.327' W. long.;
39° 30.100' N. lat. 123° 49.000' W. long.;
39° 27.120' N. lat. 123° 49.000' W. long.; and
39° 27.120' N. lat. 123° 48.830' W. long.
(B) Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. All recreational take is allowed in accordance with current regulations.
2. All commercial take is allowed in accordance with current regulations, except the ~~Commercial~~commercial take of bull kelp (*Nereocystis luetkeana*) and giant kelp (*Macrocystis pyrifera*) is prohibited. ~~All other commercial and recreational take is allowed in accordance with current regulations.~~

(23) Point Cabrillo State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
39° 21.400' N. lat. 123° 49.418' W. long.;
39° 21.400' N. lat. 123° 50.000' W. long.;
39° 20.600' N. lat. 123° 50.000' W. long.; and
39° 20.600' N. lat. 123° 49.266' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(24) Russian Gulch State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
39° 19.860' N. lat. 123° 48.840' W. long.;
39° 19.860' N. lat. 123° 49.000' W. long.;
39° 19.470' N. lat. 123° 49.000' W. long.; and
39° 19.470' N. lat. 123° 48.500' W. long.
(B) Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. All recreational take is allowed in accordance with current regulations.
2. All commercial take is allowed in accordance with current regulations, except the ~~Commercial~~commercial take of bull kelp (*Nereocystis luetkeana*) and giant kelp (*Macrocystis pyrifera*) is prohibited. ~~All other commercial and recreational take is allowed in accordance with current regulations.~~

(25) Big River Estuary State Marine Conservation Area.
(A) This area consists of waters below the mean high tide line within the Big River Estuary, eastward of a line connecting the following two points:
39° 18.134' N. lat. 123° 47.517' W. long.; and
~~39° 18.079' N. lat. 123° 47.540' W. long.~~
39° 18.070' N. lat. 123° 47.543' W. long.
~~And~~and westward of a line connecting the following two points:
39° 18.222' N. lat. 123° 46.242' W. long.; and
39° 18.150' N. lat. 123° 46.240' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of surfperch (family Embiotocidae) by hook and line from shore only; and Dungeness crab by hoop net or hand is allowed.
2. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations found in subsection 632(b)(25) of these regulations and shall comply with all other existing regulations and statutes:
Big Valley Band of Pomo Indians of the Big Valley Rancheria,
Cahto Indian Tribe of the Laytonville Rancheria,
Coyote Valley Band of Pomo Indians,
Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria,
Guidiville Rancheria,
Habematolel Pomo of Upper Lake,
Hopland Band of Pomo Indians of the Hopland Rancheria,
Lower Lake Rancheria,
Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria,
Middletown Rancheria of Pomo Indians,
Pinoleville Pomo Nation,
Potter Valley Tribe,
Redwood Valley Rancheria of Pomo Indians,
Robinson Rancheria of Pomo Indians,
Round Valley Indian Tribes of the Round Valley Reservation,
Scotts Valley Band of Pomo Indians, and
Sherwood Valley Rancheria of Pomo Indians.

3. Take pursuant to activities authorized in subsection 632(b)(25)(D) is allowed.
(C) Waterfowl may be taken in accordance with the general waterfowl regulations (Sections 502, 550, 551, and 552).
(D) Operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(26) Van Damme State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and a straight line connecting the following points:
39° 16.335' N. lat. 123° 47.712' W. long.; and
39° 16.147' N. lat. 123° 47.429' W. long.
(B) Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. All recreational take is allowed in accordance with current regulations.
2. All commercial take is allowed in accordance with current regulations, except the ~~Commercial~~commercial take of bull kelp (*Nereocystis luetkeana*) and giant kelp (*Macrocystis pyrifera*) is prohibited. ~~All other commercial and recreational take is allowed in accordance with current regulations.~~

(27) Navarro River Estuary State Marine Conservation Area.
(A) This area consists of waters below the mean high tide line within the Navarro River Estuary, eastward of a line connecting the following two points:
~~39° 11.575' N. lat. 123° 45.653' W. long.; and~~
~~39° 11.415' N. lat. 123° 45.487' W. long.~~
39° 11.536' N. lat. 123° 45.685' W. long.; and
39° 11.489' N. lat. 123° 45.516' W. long.
~~And~~and westward of a line connecting the following two points
~~39° 11.849' N. lat. 123° 44.808' W. long.; and~~
~~39° 11.807' N. lat. 123° 44.842' W. long.~~
39° 11.846' N. lat. 123° 44.809' W. long.; and
39° 11.803' N. lat. 123° 44.843' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmonids by hook and line is allowed consistent with salmonid regulations in Section 7.50.
2. The following federally recognized tribes (listed alphabetically) are exempt from the area and take regulations found in subsection 632(b)(27) of these regulations and shall comply with all other existing regulations and statutes:
Big Valley Band of Pomo Indians of the Big Valley Rancheria,
Cahto Indian Tribe of the Laytonville Rancheria,
Coyote Valley Band of Pomo Indians,
Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria,
Guidiville Rancheria,
Habematolel Pomo of Upper Lake,
Hopland Band of Pomo Indians of the Hopland Rancheria,
Lower Lake Rancheria,
Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria,
Middletown Rancheria of Pomo Indians,

Pinoleville Pomo Nation,
Potter Valley Tribe,
Redwood Valley Rancheria of Pomo Indians,
Robinson Rancheria of Pomo Indians,
Round Valley Indian Tribes of the Round Valley Reservation,
Scotts Valley Band of Pomo Indians, and
Sherwood Valley Rancheria of Pomo Indians.
(C) Waterfowl may be taken in accordance with the general waterfowl regulations (Sections 502, 550, 551, and 552).

(28) Point Arena State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~38° 57.35' N. lat. 123° 44.50' W. long;~~
~~38° 59.00' N. lat. 123° 44.50' W. long;~~
~~38° 59.00' N. lat. 123° 46.00' W. long;~~
~~38° 56.40' N. lat. 123° 46.00' W. long; and~~
~~38° 56.40' N. lat. 123° 43.82' W. long.~~
38° 57.350' N. lat. 123° 44.500' W. long;
38° 59.000' N. lat. 123° 44.500' W. long;
38° 59.000' N. lat. 123° 46.000' W. long;
38° 56.400' N. lat. 123° 46.000' W. long; and
38° 56.400' N. lat. 123° 43.820' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(29) Point Arena State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
~~38° 59.00' N. lat. 123° 46.00' W. long.;~~
~~38° 59.00' N. lat. 123° 48.16' W. long.;~~
38° 59.000' N. lat. 123° 46.000' W. long.;
38° 59.000' N. lat. 123° 48.162' W. long.; thence southward along the three nautical mile offshore boundary to
~~38° 56.40' N. lat. 123° 48.35' W. long.;~~
~~38° 56.40' N. lat. 123° 46.00' W. long.; and~~
~~38° 59.00' N. lat. 123° 46.00' W. long.~~
38° 56.400' N. lat. 123° 48.350' W. long.;
38° 56.400' N. lat. 123° 46.000' W. long.; and
38° 59.000' N. lat. 123° 46.000' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmon by trolling [subsection 27.80(a)(3)] is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(*l*)';~~182(c)(4)] is allowed.

(30) Sea Lion Cove State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:

~~38° 56.40' N. lat. 123° 43.82' W. long.;~~
~~38° 56.40' N. lat. 123° 44.00' W. long.;~~
~~38° 55.79' N. lat. 123° 44.00' W. long.; and~~
~~38° 55.79' N. lat. 123° 43.74' W. long.~~
38° 56.400' N. lat. 123° 43.820' W. long.;
38° 56.400' N. lat. 123° 44.000' W. long.;
38° 55.790' N. lat. 123° 44.000' W. long.; and
38° 55.790' N. lat. 123° 43.740' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the recreational and commercial take of finfish [subsection 632(a)(2)] is allowed.

(31) Saunders Reef State Marine Conservation Area
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~38° 51.80' N. lat. 123° 39.23' W. long.;~~
~~38° 51.80' N. lat. 123° 44.78' W. long.;~~
38° 51.800' N. lat. 123° 39.230' W. long.;
38° 51.800' N. lat. 123° 44.780' W. long.; thence southward along the three nautical mile offshore boundary to
~~38° 50.00' N. lat. 123° 42.58' W. long.; and~~
~~38° 50.00' N. lat. 123° 37.60' W. long.~~
38° 50.000' N. lat. 123° 42.580' W. long.; and
38° 50.000' N. lat. 123° 37.600' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmon by trolling [subsection 27.80(a)(3)] is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(*l*)~~;182(c)(4)] and urchin is allowed.

(32) Del Mar Landing State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~38° 44.70' N. lat. 123° 31.00' W. long.;~~
~~38° 44.20' N. lat. 123° 31.00' W. long.;~~
~~38° 44.20' N. lat. 123° 30.30' W. long.; and~~
~~38° 44.43' N. lat. 123° 30.30' W. long.~~
38° 44.706' N. lat. 123° 31.000' W. long.;
38° 44.200' N. lat. 123° 31.000' W. long.;
38° 44.200' N. lat. 123° 30.300' W. long.; and
38° 44.430' N. lat. 123° 30.300' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(33) Stewarts Point State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~38° 40.500' N. lat. 123° 25.370' W. long.;~~
38° 40.500' N. lat. 123° 25.345' W. long.;

38° 40.500' N. lat. 123° 25.500' W. long.;
38° 37.500' N. lat. 123° 23.500' W. long.;
~~38° 37.535' N. lat. 123° 23.027' W. long.~~
38° 37.543' N. lat. 123° 22.924' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the following may be taken recreationally from shore only: marine aquatic plants other than sea palm, marine invertebrates, finfish [subsection 632(a)(2)] by hook and line, surf smelt by beach net, and species authorized in Section 28.80 of these regulations by hand-held dip net.

(34) Stewarts Point State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
38° 37.543' N. lat. 123° 22.924' W. long.
38° 37.500' N. lat. 123° 23.500' W. long.;
~~38° 40.50' N. lat. 123° 25.37' W. long.;~~
~~38° 40.50' N. lat. 123° 30.24' W. long.;~~
38° 40.500' N. lat. 123° 25.500' W. long.;
38° 40.500' N. lat. 123° 30.243' W. long.; thence southward along the three nautical mile offshore boundary to
~~38° 35.60' N. lat. 123° 26.01' W. long.; and~~
~~38° 35.60' N. lat. 123° 20.80' W. long.,~~
38° 35.600' N. lat. 123° 26.018' W. long.; and
38° 35.600' N. lat. 123° 20.800' W. long. ~~except that Stewarts Point State Marine Conservation Area as described in subsection 632(b)(33)(A) is excluded.~~
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(35) Salt Point State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~38° 35.60' N. lat. 123° 20.80' W. long.;~~
~~38° 35.60' N. lat. 123° 21.00' W. long.;~~
~~38° 33.50' N. lat. 123° 21.00' W. long.; and~~
~~38° 33.50' N. lat. 123° 18.91' W. long.,~~
38° 35.600' N. lat. 123° 20.800' W. long.;
38° 35.600' N. lat. 123° 21.000' W. long.;
38° 33.500' N. lat. 123° 21.000' W. long.; and
38° 33.500' N. lat. 123° 18.910' W. long., except that Gerstle Cove as described in subsection 632(b)(36)(A) is excluded.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the recreational take of abalone and finfish [subsection 632(a)(2)] is allowed.

(36) Gerstle Cove State Marine Reserve.
(A) This area lies within the Salt Point State Marine Conservation Area and is bounded by the mean high tide line and a straight line connecting the following points:
~~38° 33.95' N. lat. 123° 19.92' W. long.; and~~

~~38° 33.95' N. lat. 123° 19.76' W. long.~~
38° 33.950’ N. lat. 123° 19.920’ W. long.; and
38° 33.950’ N. lat. 123° 19.760’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(37) Russian River State Marine Recreational Management Area.
(A) This area includes the waters below the mean high tide line eastward of the mouth of the Russian River estuary defined as a line connecting the following two points:
~~38° 27.16' N. lat. 123° 07.91' W. long.;~~
~~38° 27.01' N. lat. 123° 07.74' W. long.~~
38° 27.160’ N. lat. 123° 07.910’ W. long.;
38° 27.010’ N. lat. 123° 07.740’ W. long.
~~And~~and westward of the Highway 1 Bridge.
(B) Waterfowl may be taken in accordance with the general waterfowl regulations (Sections 502, 550, 551, and 552).
(C) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(D) apply.

(38) Russian River State Marine Conservation Area.
(A) This area is bounded by the mean high tide line, the mouth of the Russian River estuary as defined in subsection 632(b)(37)(A), and straight lines connecting the following points in the order listed:
~~38° 27.38' N. lat. 123° 08.58' W. long.;~~
~~38° 26.38' N. lat. 123° 08.58' W. long.;~~
~~38° 26.38' N. lat. 123° 07.70' W. long.~~
38° 27.380’ N. lat. 123° 08.580’ W. long.;
38° 26.380’ N. lat. 123° 08.580’ W. long.;
38° 26.380’ N. lat. 123° 07.700’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. ~~Only the following species may be taken recreationally:~~The recreational take of Dungeness crab by trap, and surf smelt using hand-held dip net or beach net is allowed.
2. ~~Only the following species may be taken commercially:~~The commercial take of Dungeness crab by trap is allowed.

(39) Bodega Head State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~38° 20.10' N. lat. 123° 04.04' W. long.;~~
~~38° 20.10' N. lat. 123° 08.38' W. long.;~~
38° 20.100’ N. lat. 123° 04.123’ W. long.;
38° 20.100’ N. lat. 123° 08.448’ W. long.; thence southward along the three nautical mile offshore boundary to
~~38° 18.00' N. lat. 123° 08.08' W. long.; and~~
~~38° 18.00' N. lat. 123° 03.64' W. long.~~
38° 18.000’ N. lat. 123° 08.140’ W. long.; and
38° 18.000’ N. lat. 123° 03.680’ W. long.

(B) ~~Take of all living marine resources is prohibited except for~~Area restrictions defined in subsection 632(a)(1)(A) apply, with the following specified exceptions: take pursuant to Fish and Game Code Section 10661 is allowed, and the director of the Bodega Marine Life Refuge may authorize certain activities in the formerly designated Bodega Marine Life Refuge (Section 10903, Fish and Game Code) pursuant to subsections (b) and (c) of Section 10502.7 and Section 10656 of the Fish and Game Code.

(40) Bodega Head State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~38° 18.00' N. lat. 123° 03.64' W. long.;~~
~~38° 18.00' N. lat. 123° 08.08' W. long.;~~
38° 18.000’ N. lat. 123° 03.680’ W. long.;
38° 18.000’ N. lat. 123° 08.140’ W. long.; thence southward along the three nautical mile offshore boundary to
~~38° 13.34' N. lat. 123° 03.51' W. long.; and~~
~~38° 17.93' N. lat. 123° 03.51' W. long.~~
38° 13.340’ N. lat. 123° 03.510’ W. long.; and
38° 17.930’ N. lat. 123° 03.510’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of pelagic finfish [subsection 632(a)(3)] by trolling [subsection 27.80(a)(3)], Dungeness crab by trap, and market squid by hand-held dip net, is allowed.
2. The commercial take of pelagic finfish [subsection 632(a)(3)] by troll fishing gear ~~[subsection 182.1(l)]~~ or round haul net [Section 8750, Fish and Game Code], Dungeness crab by trap, and market squid by round haul net [Section 8750, Fish and Game Code], is allowed. Not more than five percent by weight of any commercial pelagic finfish or market squid catch landed or possessed shall be other incidentally taken species.

(41) Estero Americano State Marine Recreational Management Area.
(A) This area includes the waters below the mean high tide line within Estero Americano westward of longitude ~~122° 59.25' W~~ 122° 59.250’ W.
(B) Waterfowl may be taken in accordance with the general waterfowl regulations (Sections 502, 550, 551, and 552).
(C) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(D) apply.

(42) Estero de San Antonio State Marine Recreational Management Area.
(A) This area includes the waters below the mean high tide line within Estero de San Antonio westward of longitude ~~122° 57.40' W~~ 122° 57.400’ W.
(B) Waterfowl may be taken in accordance with the general waterfowl regulations (Sections 502, 550, 551, and 552).
(C) ~~Take of all living marine resources is prohibited~~ Area restrictions defined in subsection 632(a)(1)(D) apply.

(43) Point Reyes State Marine Reserve.

(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~37° 59.90' N. lat. 123° 01.29' W. long.;~~
~~37° 59.90' N. lat. 123° 02.00' W. long.;~~
~~37° 59.00' N. lat. 123° 02.00' W. long.;~~
~~37° 59.00' N. lat. 122° 57.34' W. long.; and~~
~~38° 01.75' N. lat. 122° 55.00' W. long.;~~
37° 59.900' N. lat. 123° 01.278' W. long.;
37° 59.900' N. lat. 123° 02.000' W. long.;
37° 59.000' N. lat. 123° 02.000' W. long.;
37° 59.000' N. lat. 122° 57.340' W. long.; and
38° 01.750' N. lat. 122° 55.000' W. long.; thence westward along the mean high tide line onshore boundary to
38° 01.783' N. lat. 122° 55.286' W. long.; and
~~38° 01.954' N. lat. 122° 56.451' W. long.~~
38° 01.941' N. lat. 122° 56.364' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(44) Point Reyes State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
~~37° 59.00' N. lat. 123° 02.00' W. long.;~~
~~37° 56.71' N. lat. 123° 02.00' W. long.;~~
37° 59.000' N. lat. 123° 02.000' W. long.;
37° 56.712' N. lat. 123° 02.000' W. long.; thence eastward along the three nautical mile offshore boundary to
~~37° 56.36' N. lat. 122° 57.34' W. long.;~~
~~37° 59.00' N. lat. 122° 57.34' W. long.; and~~
~~37° 59.00' N. lat. 123° 02.00' W. long.~~
37° 56.370' N. lat. 122° 57.340' W. long.;
37° 59.000' N. lat. 122° 57.340' W. long.; and
37° 59.000' N. lat. 123° 02.000' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of salmon by trolling [subsection 27.80(a)(3)] and Dungeness crab by trap is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(l);~~182(c)(4)] and Dungeness crab by trap is allowed.

(45) Point Reyes Headlands Special Closure. Special restrictions on boating and access apply to the Point Reyes headlands as follows.
(A) A special closure is designated on the south side of the Point Reyes Headlands from the mean high tide line to a distance of 1000 feet seaward of the mean lower low tide line of any shoreline between lines extending due south from each of the following two points:
~~37° 59.65' N. lat. 123° 01.00' W. long; and~~
~~37° 59.39' N. lat. 122° 57.80' W. long.~~
37° 59.650' N. lat. 123° 01.000' W. long; and

37° 59.390’ N. lat. 122° 57.800’ W. long.
(B) No person except department employees or employees of the United States Fish and Wildlife Service, National Park Service, or United States Coast Guard, in performing their official duties, or unless permission is granted by the department, shall enter this area at any time.

(46) Estero de Limantour State Marine Reserve.
(A) This area consists of waters below the mean high tide line within Estero de Limantour and within Drakes Estero, southward of a line connecting the following two points:
~~38° 02.66' N. lat. 122° 56.89' W. long.; and~~
~~38° 02.66' N. lat. 122° 56.15' W. long.~~
38° 02.660’ N. lat. 122° 56.900’ W. long.; and
38° 02.660’ N. lat. 122° 56.150’ W. long.
~~And~~and northward of a line connecting the following two points:
38° 01.783' N. lat. 122° 55.286' W. long.; and
~~38° 01.954' N. lat. 122° 56.451' W. long.~~
38° 01.941’ N. lat. 122° 56.364’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(47) Drakes Estero State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line within Drakes Estero northward of a line connecting the following two points:
~~38° 02.66' N. lat. 122° 56.89' W. long.; and~~
~~38° 02.66' N. lat. 122° 56.15' W. long.~~
38° 02.660’ N. lat. 122° 56.900’ W. long.; and
38° 02.660’ N. lat. 122° 56.150’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exception:
~~1. The~~the recreational take of clams is allowed.~~; and~~
~~2. Aquaculture of shellfish, pursuant to a valid State water bottom lease and stocking permit.~~

(48) Point Resistance Rock Special Closure. Special restrictions on boating and access apply to Point Resistance Rock as follows:
(A) A special closure is designated from the mean high tide line to a distance of 300 feet seaward of the mean lower low tide line of any shoreline of Point Resistance Rock, located in the vicinity of ~~37° 59.92' N. lat. 122° 49.75' W. long.~~37° 59.916’ N. lat. 122° 49.759’ W. long.
(B) No person except department employees or employees of the United States Fish and Wildlife Service, National Park Service, or United States Coast Guard, in performing their official duties, or unless permission is granted by the department, shall enter this area at any time.

(49) Double Point/Stormy Stack Rock Special Closure. Special restrictions on boating and access apply to Stormy Stack Rock as follows.
(A) A special closure is designated from the mean high tide line to a distance of 300 feet seaward of the mean lower low tide line of any shoreline of Stormy Stack Rock, located

in the vicinity of ~~37° 56.83' N. lat. 122° 47.14' W. long.~~37° 56.830’ N. lat. 122° 47.140’ W. long.
(B) No person except department employees or employees of the United States Fish and Wildlife Service, National Park Service, or United States Coast Guard, in performing their official duties, or unless permission is granted by the department, shall enter this area at any time.

(50) Duxbury Reef State Marine Conservation Area.
(A) This area is bounded by the mean high tide line, a distance of 1000 feet seaward of mean lower low water, and the following points:
~~37° 55.52' N. lat. 122° 44.17' W. long.;~~
~~37° 55.42' N. lat. 122° 44.31' W. long.;~~
~~37° 53.65' N. lat. 122° 41.91' W. long.; and~~
~~37° 53.77' N. lat. 122° 42.02' W. long.~~
37° 55.514’ N. lat. 122° 44.179’ W. long.;
37° 55.420’ N. lat. 122° 44.310’ W. long.;
37° 53.650’ N. lat. 122° 41.910’ W. long.; and
37° 53.770’ N. lat. 122° 42.020’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the recreational take of finfish [subsection 632(a)(2)] from shore and abalone is allowed.

(51) North Farallon Islands State Marine Reserve
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
~~37° 45.70' N. lat. 122° 59.08' W. long.;~~
37° 45.700' N. lat. 122° 59.085' W. long.; thence northwestward along the three nautical mile offshore boundary to
~~37° 49.34' N. lat. 123° 7.00' W. long.;~~
~~37° 45.70' N. lat. 123° 7.00' W. long.; and~~
~~37° 45.70' N. lat. 122° 59.08' W. long.~~
37° 49.344’ N. lat. 123° 7.000’ W. long.;
37° 45.700’ N. lat. 123° 7.000’ W. long.; and
37° 45.700’ N. lat. 122° 59.085’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(52) North Farallon Islands Special Closure. Special regulations on boating and access apply to the North Farallon Islands as follows.
(A) A special closure is established at the islets comprising the North Farallon Islands.
(B) Except as permitted by federal law or emergency caused by hazardous weather, or as authorized by subsection 632(b)(52)(C), no vessel shall be operated or anchored at any time from the mean high tide line to a distance of 1000 feet seaward of the mean lower low tide line of any shoreline of North Farallon Island, or to a distance of 300 feet seaward of the mean lower low tide line of any shoreline of the remaining three southern islets, including the Island of St. James, in the vicinity of ~~37° 46.00' N. lat. 123° 06.00' W. long.~~37° 46.025’ N. lat. 123° 06.018’ W. long.
(C) No person except department employees or employees of the United States Fish and Wildlife Service, National Oceanic and Atmospheric Administration, or United

States Coast Guard, in performing their official duties, or unless permission is granted by the department, shall enter the area defined in subsection 632(b)(52)(B).
(D) All vessels shall observe a five (5) nautical mile per hour speed limit within 1,000 feet seaward of the mean lower low tide line of any shoreline of the islets defined in subsection 632(b)(52)(B).
(E) In an area bounded by the mean high tide line and a distance of one nautical mile seaward of the mean lower low tide line of any of the four islets comprising the North Farallon Islands, the following restrictions apply:
1. All commercial diving vessels operating in the defined area shall have their vessel engine exhaust system terminate either through a muffler for dry exhaust systems, or below the vessel waterline for wet exhaust systems.
2. All commercial diving vessels equipped with an open, deck-mounted air compressor system, while operating in the defined area, shall have their air compressor's engine exhaust system terminate below the vessel waterline.

(53) Southeast Farallon Island State Marine Reserve.
(A) This area is bounded by straight lines connecting the following points in the order listed:
~~37° 42.60' N. lat. 122° 59.50' W. long.;~~
~~37° 42.60' N. lat. 123° 02.00' W. long.;~~
~~37° 40.50' N. lat. 123° 02.00' W. long.;~~
~~37° 40.50' N. lat. 122° 59.50' W. long.; and~~
~~37° 42.60' N. lat. 122° 59.50' W. long.~~
37° 42.600’ N. lat. 122° 59.500’ W. long.;
37° 42.600’ N. lat. 123° 02.000’ W. long.;
37° 40.500’ N. lat. 123° 02.000’ W. long.;
37° 40.500’ N. lat. 122° 59.500’ W. long.; and
37° 42.600’ N. lat. 122° 59.500’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(54) Southeast Farallon Island State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
~~37° 42.60' N. lat. 123° 02.00' W. long.;~~
~~37° 42.60' N. lat. 123° 05.46' W. long.;~~
37° 42.600’ N. lat. 123° 02.000’ W. long.;
37° 42.600’ N. lat. 123° 05.461’ W. long.; thence southeastward along the three nautical mile offshore boundary to
~~37° 38.66' N. lat. 122° 59.50' W. long;~~
~~37° 40.50' N. lat. 122° 59.50' W. long;~~
~~37° 40.50' N. lat. 123° 02.00' W. long.; and~~
~~37° 42.60' N. lat. 123° 02.00' W. long.~~
37° 38.654’ N. lat. 122° 59.500’ W. long;
37° 40.500’ N. lat. 122° 59.500’ W. long;
37° 40.500’ N. lat. 123° 02.000’ W. long.; and
37° 42.600’ N. lat. 123° 02.000’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:

1. The recreational take of salmon by trolling [subsection 27.80(a)(3)] is allowed.
2. The commercial take of salmon with troll fishing gear [subsection ~~182.1(l)~~182(c)(4)] is allowed.

(55) Southeast Farallon Island Special Closure. Special regulations on boating and access apply to the island and islets comprising the Southeast Farallon Island as follows.
(A) A special closure is established at the Southeast Farallon Island.
(B) Except as permitted by federal law or emergency caused by hazardous weather, or as authorized by subsection 632(b)(55)(D), no vessel shall be operated or anchored at any time from the mean high tide line to a distance of 300 feet seaward of the mean lower low tide line of any shoreline of the Southeast Farallon Island year-round, EXCEPT:
1. The area north of Fisherman's Bay, from a line extending due west from ~~37° 42.26' N. lat. 123° 00.16' W. long.~~37° 42.260’ N. lat. 123° 00.160’ W. long., following clockwise around the island (including Fisherman's Bay), to a line extending due east from ~~37° 42.05' N. lat. 123° 00.07' W. long.~~37° 42.050’ N. lat. 123° 00.070’ W. long.
2. At East Landing, from a line extending due east from ~~37° 41.83' N. lat. 122° 59.98' W. long.~~37° 41.830’ N. lat. 122° 59.980’ W. long., following clockwise around the island, to a straight line connecting the following two points:
~~37° 41.72' N. lat. 123° 00.05' W. long.; and~~
~~37° 41.68' N. lat. 123° 00.07' W. long.~~
37° 41.720’ N. lat. 123° 00.050’ W. long.; and
37° 41.680’ N. lat. 123° 00.070’ W. long.
(C) This closure as defined in subsection 632(b)(55)(B) exists year round, except for the following areas, which are closed only from December 1 through September 14 of each year:
1. From Fisherman's Bay to East Landing, from a line extending due east from ~~37° 42.05' N. lat. 123° 00.07' W. long.~~37° 42.050’ N. lat. 123° 00.070’ W. long., following clockwise around the island to a line extending due east from ~~37° 41.83' N. lat. 122° 59.98' W. long.~~37° 41.830’ N. lat. 122° 59.980’ W. long.
2. The area southwest of East Landing, from a straight line connecting the following two points:
~~37° 41.72' N. lat. 123° 00.05' W. long.; and~~
~~37° 41.68' N. lat. 123° 00.07' W. long.~~
37° 41.720’ N. lat. 123° 00.050’ W. long.; and
37° 41.680’ N. lat. 123° 00.070’ W. long.
Following clockwise around the main island to a straight line extending due south from ~~37° 41.76' N. lat. 123° 00.16' W. long. to 37° 41.64' N. lat. 123° 00.16' W. long.~~37° 41.760’ N. lat. 123° 00.160’ W. long. to 37° 41.640’ N. lat. 123° 00.160’ W. long., and on the southeast side of Saddle (Seal) Rock, from a straight line extending due south from ~~37° 41.76' N. lat. 123° 00.16' W. long.~~37° 41.760’ N. lat. 123° 00.160’ W. long., following clockwise around Saddle (Seal) Rock, to a line extending due west from ~~37° 41.60' N. lat. 123° 00.26' W. long.~~37° 41.600’ N. lat. 123° 00.260’ W. long.
(D) No person except department employees or employees of the United States Fish and Wildlife Service, National Oceanic and Atmospheric Administration, or United States Coast Guard, in performing their official duties, or unless permission is granted by the department, shall enter the area defined in subsection 632(b)(55)(B) or 632(b)(55)(C) during the closure period.

(E) All vessels shall observe a five (5) nautical mile per hour speed limit 1,000 feet seaward of the mean lower low tide line of any shoreline of the Southeast Farallon Island.
(F) In an area bounded by the mean high tide line and a distance of one nautical mile seaward of the mean lower low tide line of any of the islands and islets comprising the Southeast Farallon Island, the following restrictions apply:
1. All commercial diving vessels operating in the defined area shall have their vessel engine exhaust system terminate either through a muffler for dry exhaust systems, or below the vessel waterline for wet exhaust systems.
2. All commercial diving vessels equipped with an open, deck-mounted air compressor system, while operating in the defined area, shall have their air compressor's engine exhaust system terminate below the vessel waterline.

(56) Fagan Marsh State Marine Park.
(A) This area consists of waters below the mean high tide line within the Fagan Marsh Ecological Reserve.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(B) apply, with the following specified exceptions: the recreational hook and line take of species other than marine aquatic plants is allowed.
(C) Only lightweight, hand-carried boats may be launched or operated within the park.

(57) Peytonia Slough State Marine Park.
(A) This area consists of waters below the mean high tide line within the Peytonia Slough Ecological Reserve.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(B) apply, with the following specified exceptions: the recreational hook and line take of species other than marine aquatic plants is allowed.
(C) Only lightweight, hand-carried boats may be launched or operated within the park.

(58) Corte Madera Marsh State Marine Park.
(A) This area consists of waters below the mean high tide line within the Corte Madera Marsh Ecological Reserve.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(B) apply, with the following specified exceptions: the recreational hook and line take of species other than marine aquatic plants from shore only is allowed.
(C) Only lightweight, hand-carried boats may be launched or operated within the park.
(D) Swimming, wading, and diving are prohibited within the park.

(59) Marin Islands State Marine Park.
(A) This area consists of waters below the mean high tide line within the Marin Islands Ecological Reserve.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(B) apply, with the following specified exceptions: the recreational hook and line take of species other than marine aquatic plants from shore only is allowed.
(C) Boating, swimming, wading, and diving are prohibited within the park.

(60) Albany Mudflats State Marine Park.

(A) This area consists of waters below the mean high tide line within the Albany Mudflats Ecological Reserve.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(B) apply, with the following specified exceptions: the recreational hook and line take of species other than marine aquatic plants from shore only is allowed.
(C) Boating, swimming, wading, and diving are prohibited within the park.

(61) Robert W. Crown State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and a distance of 150 feet seaward of mean lower low water, between the following points:
~~37° 45.97' N. lat. 122° 16.84' W. long.; and~~
~~37° 45.95' N. lat. 122° 16.52' W. long.~~
37° 45.970' N. lat. 122° 16.840' W. long.; and
37° 45.950' N. lat. 122° 16.520' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. ~~Finfish may be taken recreationally~~The recreational take of finfish by hook and line only is allowed.
2. ~~Finfish~~The commercial take of finfish and kelp ~~may be taken commercially~~is allowed.

(62) Redwood Shores State Marine Park.
(A) This area consists of waters below the mean high tide line within the Redwood Shores Ecological Reserve.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(B) apply, with the following specified exceptions: the recreational hook and line take of species other than marine aquatic plants is allowed.
(C) Only lightweight, hand-carried boats may be launched or operated within the park.

(63) Bair Island State Marine Park.
(A) This area consists of waters below the mean high tide line within the Bair Island Ecological Reserve.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(B) apply, with the following specified exceptions: the recreational hook and line take of species other than kelp from shore only is allowed.
(C) Boating, swimming, wading, and diving are prohibited within the park.
(D) No person, except state and local law enforcement officers, fire suppression agencies and employees of the department in the performance of their official duties or persons possessing written permission from the department, shall enter this park during the period February 15 through May 20.
(E) Waterfowl may be taken in accordance with the general waterfowl regulations (Sections 502, 550, 551, and 552).

(64) Egg (Devil's Slide) Rock to Devil's Slide Special Closure. Special restrictions on boating and access apply as follows.
(A) A special closure is designated from the mean high tide line to a distance of 300 feet seaward of the mean lower low tide line of any shoreline of any of the three rocks comprising Egg (Devil's Slide) Rock, located in the vicinity of ~~37° 34.64' N. lat. 122° 31.29' W. long.; 37° 34.66' N. lat. 122° 31.32' W. long; and 37° 34.63' N. lat. 122° 31.29'~~

~~W. long.;~~37° 34.640’ N. lat. 122° 31.290’ W. long.; 37° 34.660’ N. lat. 122° 31.320’ W. long; and 37° 34.630’ N. lat. 122° 31.290’ W. long.; and the area bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~37° 34.74' N. lat. 122° 31.08' W. long.;~~
~~37° 34.72' N. lat. 122° 31.31' W. long.;~~
~~37° 34.60' N. lat. 122° 31.33' W. long.; and~~
~~37° 34.52' N. lat. 122° 31.21' W. long.~~
37° 34.740’ N. lat. 122° 31.080’ W. long.;
37° 34.720’ N. lat. 122° 31.310’ W. long.;
37° 34.600’ N. lat. 122° 31.330’ W. long.; and
37° 34.520’ N. lat. 122° 31.210’ W. long.
(B) Transit in between the rock and the mainland between these points is prohibited at any time.
(C) No person except department employees or employees of the United States Fish and Wildlife Service, U.S. Bureau of Land Management, National Oceanic and Atmospheric Administration, or United States Coast Guard, in performing their official duties, or unless permission is granted by the department, shall enter this area.

(65) Montara State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~37° 32.70' N. lat. 122° 31.00' W. long.;~~
~~37° 32.70' N. lat. 122° 34.91' W. long.;~~
37° 32.700’ N. lat. 122° 31.000’ W. long.;
37° 32.700’ N. lat. 122° 34.908’ W. long.; thence southward along the three nautical mile offshore boundary to
~~37° 30.00' N. lat. 122° 34.61' W. long.; and~~
~~37° 30.00' N. lat. 122° 29.93' W. long.~~
37° 30.000’ N. lat. 122° 34.608’ W. long.; and
37° 30.000’ N. lat. 122° 29.920’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(66) Pillar Point State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~37° 30.00' N. lat. 122° 29.93' W. long.;~~
~~37° 30.00' N. lat. 122° 34.61' W. long.;~~
37° 30.000’ N. lat. 122° 29.920’ W. long.;
37° 30.000’ N. lat. 122° 34.608’ W. long.; thence southward along the three nautical mile offshore boundary to
~~37° 28.33' N. lat. 122° 33.47' W. long.;~~
~~37° 28.33' N. lat. 122° 30.83' W. long.;~~
~~37° 29.18' N. lat. 122° 30.36' W. long.; and~~
~~37° 29.74' N. lat. 122° 29.97' W. long.~~
37° 28.330’ N. lat. 122° 33.489’ W. long.;
37° 28.330’ N. lat. 122° 30.830’ W. long.;
37° 29.180’ N. lat. 122° 30.360’ W. long.;
37° 29.740’ N. lat. 122° 29.970’ W. long.; and

37° 29.733’ N. lat. 122° 29.950’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of pelagic finfish [subsection 632(a)(3)] by trolling [subsection 27.80(a)(3)], Dungeness crab by trap, and market squid by hand-held dip net is allowed.
2. The commercial take of pelagic finfish [subsection 632(a)(3)] by troll or round haul net [Section 8750, Fish and Game Code], Dungeness crab by trap, and market squid by round haul net [Section 8750, Fish and Game Code], is allowed. Not more than five percent by weight of any commercial pelagic finfish or market squid catch landed or possessed shall be other incidentally taken species.

(67) Año Nuevo State Marine ~~Conservation Area~~Reserve.
(A) This area is bounded by the mean high tide line and a distance of 200 feet seaward of mean lower low water between the following two points:
~~37° 10.00' N. lat. 122° 21.80' W. long; and~~
~~37° 08.70' N. lat. 122° 21.00' W. long.~~
37° 10.000' N. lat. 122° 21.800' W. long; and
37° 08.725' N. lat. 122° 21.000' W. long.
The area then continues southward bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~37° 08.70' N. lat. 122° 21.00' W. long.;~~
~~37° 04.70' N. lat. 122° 21.00' W. long.; and~~
37° 08.725' N. lat. 122° 21.000' W. long.;
37° 04.700' N. lat. 122° 21.000' W. long.;
37° 04.700' N. lat. 122° 16.062' W. long.; and
~~37° 04.70' N. lat. 122° 16.20' W. long.~~
37° 04.742' N. lat. 122° 16.026' W. long.
(B) ~~Take of all living marine resources is prohibited except the commercial take of giant kelp (*Macrocystis pyrifera*) by hand harvest only~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(68) Greyhound Rock State Marine Conservation Area.
(A) This area is bounded by the mean high tide line, the three nautical mile offshore boundary and straight lines connecting the following points in the order listed except where noted:
~~37° 04.70' N. lat. 122° 16.20' W. long.;~~
37° 04.742’ N. lat. 122° 16.026’ W. long.;
37° 04.700’ N. lat. 122° 16.062’ W. long.;
~~37° 04.70' N. lat. 122° 21.00' W. long.;~~
~~37° 03.55' N. lat. 122° 21.00' W. long.;~~
37° 04.700’ N. lat. 122° 21.000’ W. long.;
37° 03.520’ N. lat. 122° 21.000’ W. long.; thence southward along the three nautical mile offshore boundary to
~~37° 02.57' N. lat. 122° 19.10' W. long.; and~~
~~37° 02.57' N. lat. 122° 14.00' W. long.~~
37° 02.570’ N. lat. 122° 18.963’ W. long.; and
37° 02.570’ N. lat. 122° 13.989’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:

1. ~~Only the following species may be taken recreationally:~~The recreational take of giant kelp (*Macrocystis pyrifera*) by hand harvest only, market squid, salmon, and, by hook-and-line from shore only, other finfish is allowed.
2. ~~Only the following species may be taken commercially:~~The commercial take of giant kelp (*Macrocystis pyrifera*) by hand harvest only, salmon, and market squid is allowed. Not more than five percent by weight of any commercial market squid catch landed or possessed shall be other incidentally taken species.

(69) Natural Bridges State Marine Reserve.
(A) This area is bounded by the mean high tide line and a distance of 200 feet seaward of mean lower low water between the following two points:
~~36° 57.90' N. lat. 122° 07.65' W. long.; and~~
~~36° 57.00' N. lat. 122° 03.50' W. long.~~
36° 57.912’ N. lat. 122° 07.650’ W. long.; and
36° 57.015’ N. lat. 122° 03.504’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(70) Elkhorn Slough State Marine Reserve.
(A) This area includes the waters below mean high tide within Elkhorn Slough lying east of longitude ~~121° 46.40' W.~~121° 46.400’ W. and south of latitude ~~36° 50.50' N.~~36° 50.500’ N.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(71) Elkhorn Slough State Marine Conservation Area.
(A) This area includes the waters below mean high tide within Elkhorn Slough east of the Highway 1 Bridge and west of longitude ~~121° 46.40' W.~~121° 46.400’ W.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. ~~Only the following species may be taken recreationally:~~The recreational take of finfish by hook-and-line only and clams is allowed. Clams may only be taken on the north shore of the slough in the area adjacent to the Moss Landing State Wildlife Area [subsection 550(a)].

(72) Moro Cojo Slough State Marine Reserve.
(A) This area includes the waters within Moro Cojo Slough below mean high tide and east of the Highway 1 Bridge and west of the crossing of the Southern Pacific Railroad tracks.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(73) Soquel Canyon State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed:
~~36° 51.00' N. lat. 121° 56.00' W. long.;~~
~~36° 51.00' N. lat. 122° 03.80' W. long.;~~
~~36° 48.00' N. lat. 122° 02.88' W. long.;~~
~~36° 48.00' N. lat. 121° 56.00' W. long.; and~~

~~36° 51.00' N. lat. 121° 56.00' W. long.~~
36° 51.000’ N. lat. 121° 56.000’ W. long.;
36° 51.000’ N. lat. 122° 03.652’ W. long.;
36° 48.000’ N. lat. 122° 02.767’ W. long.;
36° 48.000’ N. lat. 121° 56.000’ W. long.; and
36° 51.000’ N. lat. 121° 56.000’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the commercial and recreational take of pelagic finfish [subsection 632(a)(3)] is allowed. Not more than five percent by weight of any commercial pelagic finfish catch landed or possessed shall be other incidentally taken species.

(74) Portuguese Ledge State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed:
~~36° 43.00' N. lat. 121° 56.00' W. long.;~~
~~36° 43.00' N. lat. 122° 01.30' W. long.;~~
~~36° 41.00' N. lat. 122° 00.80' W. long.;~~
~~36° 41.00' N. lat. 121° 56.00' W. long.; and~~
~~36° 43.00' N. lat. 121° 56.00' W. long.~~
36° 43.000’ N. lat. 121° 56.000’ W. long.;
36° 43.000’ N. lat. 122° 01.294’ W. long.;
36° 41.000’ N. lat. 122° 00.706’ W. long.;
36° 41.000’ N. lat. 121° 56.000’ W. long.; and
36° 43.000’ N. lat. 121° 56.000’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the commercial and recreational take of pelagic finfish [subsection 632(a)(3)] is allowed. Not more than five percent by weight of any commercial pelagic finfish catch landed or possessed shall be other incidentally taken species.

(75) Edward F. Ricketts State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~36° 36.50' N. lat. 121° 53.37' W. long.;~~
~~36° 37.25' N. lat. 121° 53.78' W. long.; and~~
~~36° 37.10' N. lat. 121° 54.09' W. long.~~
36° 36.508’ N. lat. 121° 53.379’ W. long.;
36° 37.250’ N. lat. 121° 53.780’ W. long.; and
36° 37.100’ N. lat. 121° 54.093’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of finfish by hook-and-line is allowed.
2. The commercial take of giant kelp (*Macrocystis pyrifera*) and bull kelp (*Nereocystis spp*.) is allowed by hand in the area defined by subsection 165(c)(4)(D) under the following conditions:
a. A kelp harvester with a valid license issued pursuant to Section 165 may take no more than 12 tons of kelp from the portion of Administrative Kelp Bed 220 within the Edward F. Ricketts State Marine Conservation Area in any calendar month.

b. Duplicate landing records must be kept on board the harvest vessel in accordance with the requirements of Section 165.

(76) Lovers Point - Julia Platt State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~36° 37.10' N. lat. 121° 54.09' W. long.;~~
~~36° 37.25' N. lat. 121° 53.78' W. long.;~~
~~36° 37.38' N. lat. 121° 53.85' W. long.;~~
~~36° 37.60' N. lat. 121° 54.75' W. long.; and~~
~~36° 37.60' N. lat. 121° 54.91' W. long.~~
36° 37.100' N. lat. 121° 54.093' W. long.;
36° 37.250' N. lat. 121° 53.780' W. long.;
36° 37.380' N. lat. 121 ° 53.850' W. long.;
36° 37.600' N. lat. 121° 54.750' W. long.; and
36° 37.600' N. lat. 121° 54.919' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(77) Pacific Grove Marine Gardens State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~36° 37.60' N. lat. 121° 54.91' W. long.;~~
~~36° 37.60' N. lat. 121° 54.75' W. long.;~~
~~36° 38.70' N. lat. 121° 55.40' W. long.;~~
~~36° 38.90' N. lat. 121° 56.60' W. long.; and~~
36° 37.600' N. lat. 121° 54.919' W. long.;
36° 37.600' N. lat. 121° 54.750' W. long.;
36° 38.700' N. lat. 121° 55.400' W. long.;
36° 38.900' N. lat. 121° 56.600' W. long.;
36° 38.314' N. lat. 121° 56.292' W. long.; and
~~36° 38.22' N. lat. 121° 56.15' W. long.~~
36° 38.226' N. lat. 121° 56.159' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of finfish is allowed.
2. The commercial take of giant kelp (*Macrocystis pyrifera*) and bull kelp (*Nereocystis spp*.) by hand is allowed under the following conditions:
a. A kelp harvester with a valid license issued pursuant to Section 165 may take no more than 44 tons of kelp from the portion of Administrative Kelp Bed 220 within the Pacific Grove Marine Gardens State Marine Conservation Area in any calendar month.
b. Duplicate landing records must be kept on board the harvest vessel in accordance with the requirements of Section 165.

(78) Asilomar State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~36° 38.22' N. lat. 121° 56.15' W. long.;~~
36° 38.226' N. lat. 121° 56.159' W. long.;

36° 38.314’ N. lat. 121° 56.292’ W. long.;
~~36° 38.90' N. lat. 121° 56.60' W. long.; and~~
~~36° 36.60' N. lat. 121° 57.50' W. long.~~
36° 38.900’ N. lat. 121° 56.600’ W. long.; and
36° 36.554’ N. lat. 121° 57.518’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(79) Carmel Pinnacles State Marine Reserve.
(A) This area is bounded by ~~the mean high tide line and~~ straight lines connecting the following points in the order listed:
~~36° 33.65' N. lat. 121° 57.60' W. long.;~~
~~36° 33.65' N. lat. 121° 58.50' W. long.;~~
~~36° 33.10' N. lat. 121° 58.50' W. long.;~~
~~36° 33.10' N. lat. 121° 57.60' W. long.; and~~
~~36° 33.65' N. lat. 121° 57.60' W. long.~~
36° 33.650’ N. lat. 121° 57.600’ W. long.;
36° 33.650’ N. lat. 121° 58.500’ W. long.;
36° 33.100’ N. lat. 121° 58.500’ W. long.;
36° 33.100’ N. lat. 121° 57.600’ W. long.; and
36° 33.650’ N. lat. 121° 57.600’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(80) Carmel Bay State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~36° 33.65' N. lat. 121° 57.10' W. long.;~~
~~36° 31.70' N. lat. 121° 56.30' W. long.; and~~
~~36° 31.70' N. lat. 121° 55.55' W. long.~~
36° 33.663’ N. lat. 121° 57.117’ W. long.;
36° 31.700’ N. lat. 121° 56.300’ W. long.; and
36° 31.700’ N. lat. 121° 55.550’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of finfish is allowed.
2. The commercial take of giant kelp (*Macrocystis pyrifera*) and bull kelp (*Nereocystis spp*.) by hand is allowed under the following conditions:
a. A kelp harvester with a valid license issued pursuant to Section 165 may take no more than 44 tons of kelp from the portion of Administrative Kelp Bed 219 within the Carmel Bay State Marine Conservation Area in any calendar month.
b. Duplicate landing records must be kept on board the harvest vessel in accordance with the requirements of Section 165.

(81) Point Lobos State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~36° 31.70' N. lat. 121° 55.55' W. long.;~~
~~36° 31.70' N. lat. 121° 58.25' W. long.;~~

~~36° 28.88' N. lat. 121° 58.25' W. long.; and~~
~~36° 28.88' N. lat. 121° 56.30' W. long.~~
36° 31.700’ N. lat. 121° 55.550’ W. long.;
36° 31.700’ N. lat. 121° 58.250’ W. long.;
36° 28.880’ N. lat. 121° 58.250’ W. long.; and
36° 28.880’ N. lat. 121° 56.285’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.
(C) Within the portion of the Point Lobos State Marine Reserve which also falls within the boundary of the Point Lobos State Reserve (State Park Unit), restrictions on boating and diving activities exist. Contact the California Department of Parks and Recreation for current restrictions.

(82) Point Lobos State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
~~36° 31.70' N. lat. 121° 58.25' W. long.;~~
~~36° 31.70' N. lat. 122° 01.30' W. long.;~~
36° 31.700’ N. lat. 121° 58.250’ W. long.;
36° 31.700’ N. lat. 122° 01.267’ W. long.; thence southward along the three nautical mile offshore boundary to
~~36° 28.88' N. lat. 122° 00.55' W. long.;~~
~~36° 28.88' N. lat. 121° 58.25' W. long.; and~~
~~36° 31.70' N. lat. 121° 58.25' W. long.~~
36° 28.880’ N. lat. 122° 00.490’ W. long.;
36° 28.880’ N. lat. 121° 58.250’ W. long.; and
36° 31.700’ N. lat. 121° 58.250’ W. long.
(B) ~~Take of all living marine resources is prohibited except the~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational ~~and commercial~~ take of ~~salmon, albacore, and the~~salmon and albacore is allowed.
2. The commercial take of salmon, albacore, and spot prawn is allowed.

(83) Point Sur State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~36° 18.40' N. lat. 121° 54.10' W. long.;~~
~~36° 18.40' N. lat. 121° 56.00' W. long.;~~
~~36° 15.00' N. lat. 121° 52.50' W. long.; and~~
~~36° 15.00' N. lat. 121° 50.25' W. long.~~
36° 18.400’ N. lat. 121° 54.150’ W. long.;
36° 18.400’ N. lat. 121° 56.000’ W. long.;
36° 15.000’ N. lat. 121° 52.500’ W. long.; and
36° 15.000’ N. lat. 121° 50.250’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(84) Point Sur State Marine Conservation Area.

(A) This area is bounded by ~~the mean high tide line and~~ straight lines connecting the following points in the order listed except where noted:
~~36° 18.40' N. lat. 121° 56.00' W. long.;~~
~~36° 18.40' N. lat. 121° 58.33' W. long.;~~
36° 18.400' N. lat. 121° 56.000' W. long.;
36° 18.400' N. lat. 121° 57.932' W. long.; thence southward along the three nautical mile offshore boundary to
~~36° 15.00' N. lat. 121° 55.10' W. long.;~~
~~36° 15.00' N. lat. 121° 52.50' W. long.; and~~
~~36° 18.40' N. lat. 121° 56.00' W. long.~~
36° 15.000' N. lat. 121° 55.955' W. long.;
36° 15.000' N. lat. 121° 52.500' W. long.; and
36° 18.400' N. lat. 121° 56.000' W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the commercial and recreational take of salmon and albacore is allowed.

(85) Big Creek State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~36° 07.20' N. lat. 121° 38.00' W. long.;~~
~~36° 07.20' N. lat. 121° 39.00' W. long.;~~
~~36° 05.20' N. lat. 121° 38.00' W. long.;~~
~~36° 05.20' N. lat. 121° 41.25' W. long.;~~
36° 07.200' N. lat. 121° 37.968' W. long.;
36° 07.200' N. lat. 121° 39.000' W. long.;
36° 05.200' N. lat. 121° 38.000' W. long.;
36° 05.200' N. lat. 121° 41.222' W. long.; thence southward along the three nautical mile offshore boundary to
~~36° 02.65' N. lat. 121° 39.70' W. long.; and~~
~~36° 02.65' N. lat. 121° 35.13' W. long.~~
36° 02.650' N. lat. 121° 39.654' W. long.; and
36° 02.650' N. lat. 121° 35.130' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.
(C) Anchoring. Except as pursuant to Federal law or emergency caused by hazardous weather, it is unlawful to anchor or moor a vessel in waters shallower than 10 fathoms in the Big Creek State Marine Reserve.

(86) Big Creek State Marine Conservation Area.
(A) This area is bounded by the three nautical mile offshore boundary and straight lines connecting the following points in the order listed except where noted:
~~36° 07.20' N. lat. 121° 39.00' W. long.;~~
~~36° 07.20' N. lat. 121° 42.90' W. long.;~~
36° 07.200' N. lat. 121° 39.000' W. long.;
36° 07.200' N. lat. 121° 42.869' W. long.; thence southward along the three nautical mile offshore boundary to
~~36° 05.20' N. lat. 121° 41.25' W. long.;~~
~~36° 05.20' N. lat. 121° 38.00' W. long.; and~~

~~36° 07.20' N. lat. 121° 39.00' W. long.~~
36° 05.200’ N. lat. 121° 41.222’ W. long.;
36° 05.200’ N. lat. 121° 38.000’ W. long.; and
36° 07.200’ N. lat. 121° 39.000’ W. long.
(B) ~~Take of all living marine resources is prohibited except the commercial and~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of ~~salmon, albacore, and the~~salmon and albacore is allowed.
2. The commercial take of salmon, albacore, and spot prawn is allowed.

(87) Piedras Blancas State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~35° 42.85' N. lat. 121° 18.95' W. long.;~~
~~35° 42.85' N. lat. 121° 21.00' W. long.;~~
~~35° 39.15' N. lat. 121° 18.50' W. long.; and~~
~~35° 39.15' N. lat. 121° 14.45' W. long.~~
35° 42.850’ N. lat. 121° 18.950’ W. long.;
35° 42.850’ N. lat. 121° 21.000’ W. long.;
35° 39.150’ N. lat. 121° 18.500’ W. long.; and
35° 39.150’ N. lat. 121° 14.519’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(88) Piedras Blancas State Marine Conservation Area.
(A) This area is bounded by ~~the mean high tide line and~~ straight lines connecting the following points in the order listed except where noted:
~~35° 42.85' N. lat. 121° 21.00' W. long.;~~
~~35° 42.85' N. lat. 121° 22.85' W. long.;~~
35° 42.850’ N. lat. 121° 21.000’ W. long.;
35° 42.850’ N. lat. 121° 22.763’ W. long.; thence southward along the three nautical mile offshore boundary to
~~35° 39.15' N. lat. 121° 20.90' W. long.;~~
~~35° 39.15' N. lat. 121° 18.50' W. long.; and~~
~~35° 42.85' N. lat. 121° 21.00' W. long.~~
35° 39.150’ N. lat. 121° 20.913’ W. long.;
35° 39.150’ N. lat. 121° 18.500’ W. long.; and
35° 42.850’ N. lat. 121° 21.000’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the commercial and recreational take of salmon and albacore is allowed.

(89) Cambria State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~35° 37.10' N. lat. 121° 09.20' W. long.;~~
~~35° 37.10' N. lat. 121° 10.70' W. long.;~~
~~35° 32.85' N. lat. 121° 06.70' W. long.; and~~
~~35° 32.85' N. lat. 121° 05.85' W. long.~~

35° 37.100’ N. lat. 121° 09.225’ W. long.;
35° 37.100’ N. lat. 121° 10.700’ W. long.;
35° 32.850’ N. lat. 121° 06.700’ W. long.; and
35° 32.850’ N. lat. 121° 05.855’ W. long.
(B) ~~The commercial take of all living marine resources is prohibited.~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: ~~Recreational~~recreational take is allowed.

(90) White Rock ~~(Cambria)~~ State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~35° 32.85' N. lat. 121° 05.85' W. long.;~~
~~35° 32.85' N. lat. 121° 06.70' W. long.;~~
~~35° 30.50' N. lat. 121° 05.00' W. long.; and~~
~~35° 30.50' N. lat. 121° 03.40' W. long.~~
35° 32.850’ N. lat. 121° 05.855’ W. long.;
35° 32.850’ N. lat. 121° 06.700’ W. long.;
35° 30.500’ N. lat. 121° 05.000’ W. long.; and
35° 30.500’ N. lat. 121° 03.423’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the commercial take of giant kelp (*Macrocystis pyrifera*) and bull kelp (*Nereocystis spp*.) is allowed under the following conditions:
1. A kelp harvester with a valid license issued pursuant to Section 165 and holding a valid lease to Administrative Kelp Bed 208 may take no more than 125 tons of kelp from the portion of Administrative Kelp Bed 208 within the White Rock ~~(Cambria)~~ State Marine Conservation Area in any calendar month.
2. Duplicate landing records must be kept on board the harvest vessel in accordance with the requirements of Section 165.

(91) Morro Bay State Marine Recreational Management Area.
(A) This area includes the area below mean high tide within Morro Bay east of the Morro Bay entrance breakwater and west of longitude ~~120° 50.34' W.~~120° 50.340’ W.
(B) Recreational hunting of waterfowl is allowed unless otherwise restricted by hunting regulations (sections 502, 550, 551, and 552).
(C) ~~Take of all living marine resources is prohibited except the following activities are~~ Area restrictions defined in subsection 632(a)(1)(D) apply, with the following specified exceptions allowed north of latitude ~~35° 19.70' N~~ 35° 19.700' N:
1. The recreational take of finfish.
2. Aquaculture ~~of oysters~~ pursuant to a valid ~~State~~state water bottom lease and permit.
3. Storing finfish taken outside the Morro Bay State Marine Recreational Management Area in a receiver for bait purposes.
4. Dredging for the purpose of harbor and channel operations and pursuant to required and valid permits and approvals.
5. Harbor operations and maintenance and cleaning of vessel hulls and other man-made structures, including removal of living marine resources for these purposes.

(92) Morro Bay State Marine Reserve.

(A) This area includes the area below mean high tide line within Morro Bay east of longitude ~~120° 50.34' W~~120° 50.340' W.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(93) Point Buchon State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~35° 15.25' N. lat. 120° 54.00' W. long.;~~
~~35° 15.25' N. lat. 120° 56.00' W. long.;~~
~~35° 11.00' N. lat. 120° 52.40' W. long.; and~~
~~35° 13.30' N. lat. 120° 52.40' W. long.~~
35° 15.250' N. lat. 120° 53.817' W. long.;
35° 15.250' N. lat. 120° 56.000' W. long.;
35° 11.000' N. lat. 120° 52.400' W. long.; and
35° 13.348' N. lat. 120° 52.400' W. long.
(B) ~~Take of all living marine resources is prohibited~~ Area restrictions defined in subsection 632(a)(1)(A) apply.

(94) Point Buchon State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
~~35° 15.25' N. lat. 120° 56.00' W. long.;~~
~~35° 15.25' N. lat. 120° 57.80' W. long.;~~
35° 15.250' N. lat. 120° 56.000' W. long.;
35° 15.250' N. lat. 120° 57.878' W. long.; thence southward along the three nautical mile offshore boundary to
~~35° 11.00' N. lat. 120° 55.20' W. long.;~~
~~35° 11.00' N. lat. 120° 52.40' W. long.; and~~
~~35° 15.25' N. lat. 120° 56.00' W. long.~~
35° 11.000' N. lat. 120° 55.149' W. long.;
35° 11.000' N. lat. 120° 52.400' W. long.; and
35° 15.250' N. lat. 120° 56.000' W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the commercial and recreational take of salmon and albacore is allowed.

(95) Vandenberg State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~34° 44.65' N. lat. 120° 37.75' W. long.;~~
~~34° 44.65' N. lat. 120° 40.00' W. long.;~~
~~34° 33.25' N. lat. 120° 40.00' W. long.; and~~
~~34° 33.25' N. lat. 120° 37.25' W. long.~~
34° 44.650' N. lat. 120° 37.750' W. long.;
34° 44.650' N. lat. 120° 40.000' W. long.;
34° 33.250' N. lat. 120° 40.000' W. long.; and
34° 33.250' N. lat. 120° 37.407' W. long.

(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(A) apply, with the following specified exceptions: take incidental to base operations and commercial space launch operations identified by the Vandenberg Air Force Base Commander as mission critical is allowed.
(C) Public Entry. Public entry into the Vandenberg State Marine Reserve may be restricted at the discretion of the department to protect wildlife, aquatic life, or habitat, or by the Commander of Vandenberg Air Force Base to protect and provide safety for base operations.
(D) The Department shall enter into a Memorandum of Understanding (MOU) with the Commander of Vandenberg Air Force Base for the mutually beneficial management and administration of the Vandenberg State Marine Reserve. The MOU shall include, but not be limited to, the identification of Vandenberg Air Force Base's national defense mission activities that are unrestricted by the subject regulations and details on management and administrative roles and responsibilities.

(96) Point Conception State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~34° 27.00' N. lat. 120° 28.28' W. long.;~~
~~34° 27.00' N. lat. 120° 32.15' W. long.;~~
34° 27.000’ N. lat. 120° 28.280’ W. long.;
34° 27.000’ N. lat. 120° 32.151’ W. long.; thence southeastward along the three nautical mile offshore boundary to
~~34° 23.96' N. lat. 120° 25.00' W. long.; and~~
~~34° 27.19' N. lat. 120° 25.00' W. long.~~
34° 23.961’ N. lat. 120° 25.000’ W. long.; and
34° 27.211’ N. lat. 120° 25.000’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(97) Kashtayit State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~34° 28.13' N. lat. 120° 14.46' W. long.;~~
~~34° 27.30' N. lat. 120° 14.46' W. long.;~~
~~34° 27.30' N. lat. 120° 12.47' W. long.; and~~
~~34° 28.23' N. lat. 120° 12.47' W. long.~~
34° 28.130’ N. lat. 120° 14.460’ W. long.;
34° 27.300’ N. lat. 120° 14.460’ W. long.;
34° 27.300’ N. lat. 120° 12.470’ W. long.; and
34° 28.230’ N. lat. 120° 12.470’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. ~~Only the following species may be taken recreationally:~~The recreational take of finfish [subsection 632(a)(2)], invertebrates except rock scallops and mussels, and giant kelp (*Macrocystis pyrifera*) by hand harvest is allowed.
2. Take pursuant to activities authorized under subsection 632(b)(97)(C) is allowed.

(C) Maintenance of artificial structures and operation and maintenance of existing facilities is allowed inside the conservation area pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(98) Naples State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~34° 26.51' N. lat. 119° 58.00' W. long.;~~
~~34° 25.00' N. lat. 119° 58.00' W. long.;~~
~~34° 25.00' N. lat. 119° 56.00' W. long.; and~~
~~34° 26.13' N. lat. 119° 56.00' W. long.~~
34° 26.517' N. lat. 119° 58.000' W. long.;
34° 25.000' N. lat. 119° 58.000' W. long.;
34° 25.000' N. lat. 119° 56.000' W. long.; and
34° 26.140' N. lat. 119° 56.000' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take by spearfishing [Section 1.76] of white seabass and pelagic finfish [subsection 632(a)(3)] is allowed.
2. The commercial take of giant kelp (*Macrocystis pyrifera*) by hand harvest or by mechanical harvest is allowed.
3. Take pursuant to activities authorized under subsection 632(b)(98)(C) is allowed.
(C) Operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(99) Campus Point State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~34° 25.20' N. lat. 119° 53.60' W. long.;~~
~~34° 21.48' N. lat. 119° 53.60' W. long.;~~
34° 25.207' N. lat. 119° 53.600' W. long.;
34° 21.475' N. lat. 119° 53.600' W. long.; thence eastward along the three nautical mile offshore boundary to
~~34° 21.21' N. lat. 119° 50.65' W. long.; and~~
~~34° 24.30' N. lat. 119° 50.65' W. long.~~
34° 21.212' N. lat. 119° 50.650' W. long.; and
34° 24.300' N. lat. 119° 50.650' W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(99)(C) is allowed.
(C) Operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(100) Goleta Slough State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line within Goleta Slough ~~northward of latitude 34° 25.02' N~~.

(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(100)(D) is allowed.
(C) In waters below the mean high tide line inside the Goleta Slough Ecological Reserve as defined within Section 630, the following restrictions apply:
1. Boating, swimming, wading, and diving are prohibited.
2. No person shall enter this area and remain therein except on established trails, paths or other designated areas except department employees or designated employees of Santa Barbara Airport, City of Santa Barbara, Goleta Sanitary District and Goleta Valley Vector Control District for the purposes of carrying out official duties.
(D) Routine maintenance, dredging, habitat restoration, research and education, maintenance of artificial structures, and operation and maintenance of existing facilities in the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

(101) Richardson Rock ~~(San Miguel Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line of Richardson Rock and straight lines connecting the following points in the order listed except where noted:
34° 07.905' N. lat. 120° 28.200' W. long.;
34° 02.211' N. lat. 120° 28.200' W. long.;
34° 02.211' N. lat. 120° 31.467' W. long.; thence northward along the three nautical mile offshore boundary to
34° 07.905' N. lat. 120° 28.200' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(102) San Miguel Island Special Closure. Special restrictions on boating and access apply to San Miguel Island as follows.
(A) Boating is allowed at San Miguel Island except west of a line drawn between Judith Rock (~~34° 01.50' N. lat. 120° 25.30' W. long.~~34° 01.500’ N. lat. 120° 25.300’ W. long.) and Castle Rock (~~34° 03.30' N. lat. 120° 26.30' W. long.~~34° 03.300’ N. lat. 120° 26.300’ W. long.) where boats are prohibited closer than 300 yards from shore.
1. Notwithstanding the 300-yard boating closure between Judith Rock and Castle Rock, the following shall apply:
a. Boats may approach San Miguel Island no nearer than 100 yards from shore during the period(s) from March 15 through April 30, and October 1 through December 15; and
b. Boats operated by commercial sea urchin divers may enter waters of the 300- yard area between the western boundary of the Judith Rock State Marine Reserve at 120° 26.60' W. long. and Castle Rock for the purpose of fishing sea urchins during the period(s) from March 15 through April 30, and October 1 through December 15.
2. The department may rescind permission for boats to enter waters within 300 yards between Judith Rock and Castle Rock upon finding that impairment to the island marine mammal resource is imminent. Immediately following such closure, the department will request the commission to hear, at its regularly scheduled meeting, presentation of documentation supporting the need for such closure.
(B) Other Requirements:
1. Boats traveling within 300 yards of the shoreline or anchorages shall operate with a minimum amount of noise and shall not exceed speeds of five miles per hour.

2. Except as permitted by federal law or emergency caused by hazardous weather, boats may be anchored overnight only at Tyler Bight and Cuyler Harbor.
3. Landing is allowed on San Miguel Island only at the designated landing beach in Cuyler Harbor.
4. No person shall have access to all other offshore rocks and islands at San Miguel Island.

(103) Harris Point ~~(San Miguel Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
34° 03.160' N. lat. 120° 23.300' W. long.;
34° 09.285' N. lat. 120° 23.300' W. long.; thence southeastward along the three nautical mile offshore boundary to
34° 06.322' N. lat. 120° 18.400' W. long.; and
34° 01.755' N. lat. 120° 18.400' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.
(C) An exemption to the reserve, where commercial and recreational take of living marine resources is allowed, exists between the mean high tide line in Cuyler Harbor and a straight line between the following points:
34° 03.554' N. lat. 120° 21.311' W. long.; and
34° 02.908' N. lat. 120° 20.161' W. long.

(104) Judith Rock ~~(San Miguel Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
34° 01.802' N. lat. 120° 26.600' W. long.;
~~33° 58.508' N. lat. 120° 26.600' W. long.;~~
33° 58.513' N. lat. 120° 26.600' W. long.; thence eastward along the three nautical mile offshore boundary to
~~33° 58.510' N. lat. 120° 25.300' W. long.; and~~
~~34° 01.618' N. lat. 120° 25.300' W. long.~~
33° 58.518' N. lat. 120° 25.300' W. long.; and
34° 01.689' N. lat. 120° 25.300' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(105) Carrington Point ~~(Santa Rosa Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~34° 01.296' N. lat. 120° 05.200' W. long.;~~
34° 01.280' N. lat. 120° 05.200' W. long.;
34° 04.000' N. lat. 120° 05.200' W. long.;
34° 04.000' N. lat. 120° 01.000' W. long.;
34° 00.500' N. lat. 120° 01.000' W. long.; and
34° 00.500' N. lat. 120° 02.930' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(106) Skunk Point ~~(Santa Rosa Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~33° 59.000' N. lat. 119° 58.808' W. long.;~~
33° 59.000' N. lat. 119° 58.985' W. long.;
33° 59.000' N. lat. 119° 58.000' W. long.;
33° 57.100' N. lat. 119° 58.000' W. long.; and
33° 57.100' N. lat. 119° 58.257' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(107) South Point ~~(Santa Rosa Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
33° 55.014' N. lat. 120° 10.000' W. long.
33° 51.506' N. lat. 120° 10.000' W. long.; thence eastward along the three nautical mile offshore boundary to
33° 50.657' N. lat. 120° 06.500' W. long.;
33° 53.800' N. lat. 120° 06.500' W. long.; and
33° 53.800' N. lat. 120° 06.544' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(108) Painted Cave ~~(Santa Cruz Island)~~ State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
34° 04.492' N. lat. 119° 53.000' W. long.;
34° 05.200' N. lat. 119° 53.000' W. long.; thence eastward along a line one nautical mile offshore to
34° 05.000' N. lat. 119° 51.000' W. long.; and
34° 04.034' N. lat. 119° 51.000' W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the recreational take of spiny lobster and pelagic finfish [subsection 632(a)(3)] is allowed.

(109) Gull Island ~~(Santa Cruz Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
33° 58.065' N. lat. 119° 50.967' W. long.;
33° 58.000' N. lat. 119° 51.000' W. long.;
33° 58.000' N. lat. 119° 53.000' W. long.;
33° 55.449' N. lat. 119° 53.000' W. long.; thence eastward along the three nautical mile offshore boundary to
33° 54.257' N. lat. 119° 48.000' W. long.; and
~~33° 57.756' N. lat. 119° 48.000' W. long.~~
33° 57.769' N. lat. 119° 48.000' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(110) Scorpion ~~(Santa Cruz Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
34° 02.958' N. lat. 119° 35.500' W. long.;
34° 06.202' N. lat. 119° 35.500' W. long.; thence eastward along the three nautical mile offshore boundary to
34° 06.245' N. lat. 119° 32.800' W. long.; and
34° 02.700' N. lat. 119° 32.800' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(111) Anacapa Island Special Closure.
(A) No net or trap may be used in waters less than 20 feet deep off the Anacapa Islands commonly referred to as Anacapa Island.
(B) A brown pelican fledgling area is designated from the mean high tide mark seaward to a water depth of 20 fathoms (120 feet) on the north side of West Anacapa Island between a line extending 000° True off Portuguese Rock (~~34° 00.91' N. lat. 119° 25.26' W. long.~~34° 00.910' N. lat. 119° 25.260' W. long.) to a line extending 000° True off the western edge of Frenchy's Cove (~~34° 00.417' N. lat. 119° 24.600' W. long.~~34° 00.411' N. lat. 119° 24.600' W. long.), a distance of approximately 4,000 feet. No person except department employees or employees of the National Park Service in the performance of their official duties shall enter this area during the period January 1 to October 31.

(112) Anacapa Island State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
34° 00.828' N. lat. 119° 26.623' W. long.;
34° 00.800' N. lat. 119° 26.700' W. long.;
34° 03.940' N. lat. 119° 26.700' W. long.; thence eastward along the three nautical mile offshore boundary to
34° 04.002' N. lat. 119° 24.600' W. long.; and
~~34° 00.417' N. lat. 119° 24.600' W. long.~~
34° 00.411' N. lat. 119° 24.600' W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the recreational take of spiny lobster and pelagic finfish [subsection 632(a)(3)] and the commercial take of spiny lobster is allowed.

(113) Anacapa Island State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~34° 00.417' N. lat. 119° 24.600' W. long.;~~
34° 00.411' N. lat. 119° 24.600' W. long.;
34° 04.002' N. lat. 119° 24.600' W. long.; thence eastward along the three nautical mile offshore boundary to
34° 04.033' N. lat. 119° 21.400' W. long.;
34° 01.000' N. lat. 119° 21.400' W. long.; and
~~34° 00.960' N. lat. 119° 21.449' W. long.~~

34° 00.960' N. lat. 119° 21.463' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(114) Footprint ~~(Anacapa Channel)~~ State Marine Reserve.
(A) This area is bounded by the straight lines connecting the following points in the order listed except where noted:
33° 59.300' N. lat. 119° 30.965' W. long.;
33° 57.510' N. lat. 119° 30.965' W. long.; thence eastward along the three nautical mile offshore boundary to
33° 57.264' N. lat. 119° 25.987' W. long.;
33° 59.300' N. lat. 119° 25.987' W. long.; and
33° 59.300' N. lat. 119° 30.965' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(115) Begg Rock ~~(San Nicolas Island Quad)~~ State Marine Reserve.
(A) This area includes all state waters below the mean high tide line surrounding Begg Rock, located in the vicinity of ~~33° 21.71' N. lat. 119° 41.76' W. long.~~33° 21.743' N. lat. 119° 41.718' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(116) Santa Barbara Island State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~33° 28.500' N. lat. 119° 01.847' W. long.;~~
33° 28.500' N. lat. 119° 01.813' W. long.;
33° 28.500' N. lat. 118° 58.051' W. long.; thence along the three nautical mile offshore boundary to
33° 24.842' N. lat. 119° 02.200' W. long.; and
~~33° 27.973' N. lat. 119° 02.200' W. long.~~
33° 27.911' N. lat. 119° 02.200' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(117) Point Dume State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~34° 02.28' N. lat. 118° 53.00' W. long.;~~
~~33° 59.14' N. lat. 118° 53.00' W. long.;~~
34° 02.306' N. lat. 118° 53.000' W. long.;
33° 59.140' N. lat. 118° 53.000' W. long.; thence southeastward along the three nautical mile offshore boundary to
~~33° 56.96' N. lat. 118° 49.20' W. long.; and~~
~~34° 00.76' N. lat. 118° 49.20' W. long.~~
33° 56.960' N. lat. 118° 49.200' W. long.; and
34° 00.780' N. lat. 118° 49.200' W. long.

(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take by spearfishing [Section 1.76] of white seabass and pelagic finfish [subsection 632(a)(3)] is allowed.
2. The commercial take of swordfish by harpoon [subsection 107(f)(1)]; and coastal pelagic species [Section 1.39] by round haul net [Section 8750, Fish and Game Code], brail gear [Section 53.01(a)], and light boat [Section 53.01(k)] is allowed. Not more than five percent by weight of any commercial coastal pelagic species catch landed or possessed shall be other incidentally taken species.
3. Take pursuant to activities authorized under subsection 632(b)(117)(C) is allowed.
(C) Beach nourishment and other sediment management activities are allowed inside the conservation area pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(118) Point Dume State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~34° 00.76' N. lat. 118° 49.20' W. long.;~~
~~33° 56.96' N. lat. 118° 49.20' W. long.;~~
34° 00.780’ N. lat. 118° 49.200’ W. long.;
33° 56.960’ N. lat. 118° 49.200’ W. long.; thence eastward along the three nautical mile offshore boundary to
~~33° 57.06' N. lat. 118° 47.26' W. long.; and~~
~~34° 01.20' N. lat. 118° 47.26' W. long.~~
33° 57.061’ N. lat. 118° 47.260’ W. long.; and
34° 01.178’ N. lat. 118° 47.260’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(119) Point Vicente State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~33° 44.80' N. lat. 118° 24.82' W. long.;~~
~~33° 44.80' N. lat. 118° 28.93' W. long.;~~
33° 44.800’ N. lat. 118° 24.807’ W. long.;
33° 44.800’ N. lat. 118° 28.931’ W. long.; thence southeastward along the three nautical mile offshore boundary to
~~33° 41.16' N. lat. 118° 23.80' W. long.; and~~
~~33° 44.19' N. lat. 118° 23.80' W. long.~~
33° 41.155’ N. lat. 118° 23.800’ W. long.; and
33° 44.198’ N. lat. 118° 23.800’ W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(119)(C) is allowed.
(C) Remediation activities associated with the Palos Verdes Shelf Operable Unit of the Montrose Chemical Superfund Site are allowed inside the conservation area pursuant to the Interim Record of Decision issued by the United States Environmental Protection Agency and any subsequent Records of Decision.

(120) Abalone Cove State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~33° 44.19' N. lat. 118° 23.80' W. long.;~~
~~33° 41.16' N. lat. 118° 23.80' W. long.;~~
33° 44.198' N. lat. 118° 23.800' W. long.;
33° 41.155' N. lat. 118° 23.800' W. long.; thence southeastward along the three nautical mile offshore boundary to
~~33° 40.85' N. lat. 118° 22.50' W. long.; and~~
~~33° 44.24' N. lat. 118° 22.50' W. long.~~
33° 40.851' N. lat. 118° 22.500' W. long.; and
33° 44.240' N. lat. 118° 22.500' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take by spearfishing~~; and market squid by hand-held dip net [Section 1.42]~~ [Section 1.76] of white seabass and pelagic finfish [subsection 632(a)(3)]; and market squid by hand-held dip net [Section 1.42] is allowed.
2. The commercial take of swordfish by harpoon [subsection 107(f)(1)]; and coastal pelagic species [Section 1.39] and Pacific bonito by round haul net [Section 8750, Fish and Game Code], brail gear [Section 53.01(a)], and light boat [Section 53.01(k)] is allowed. Not more than five percent by weight of any commercial coastal pelagic species or Pacific bonito catch landed or possessed shall be other incidentally taken species.
3. Take pursuant to activities authorized under subsection 632(b)(120)(C) is allowed.
(C) Remediation activities associated with the Palos Verdes Shelf Operable Unit of the Montrose Chemical Superfund Site are allowed inside the conservation area pursuant to the Interim Record of Decision issued by the United States Environmental Protection Agency and any subsequent Records of Decision.

(121) Bolsa Bay State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line within Bolsa Bay estuary southward of a line that approximates the Warner Avenue bridge located between the following two points:
~~33° 42.70' N. lat. 118° 03.63' W. long.; and~~
~~33° 42.70' N. lat. 118° 03.61' W. long.;~~
33° 42.700' N. lat. 118° 03.633' W. long.; and
33° 42.700' N. lat. 118° 03.604' W. long.;
and northward of a line that approximates the pedestrian bridge located between the following two points:
~~33° 42.22' N. lat. 118° 03.17' W. long.; and~~
~~33° 42.19' N. lat. 118° 03.18' W. long.~~
33° 42.219' N. lat. 118° 03.167' W. long.; and
33° 42.177' N. lat. 118° 03.186' W. long.
(B) ~~Take of all living marine resources is prohibited except the~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of finfish [subsection 632(a)(2)] by hook and line from shore in designated areas ~~only,or take~~only is allowed.
2. Take pursuant to activities authorized under subsection 632(b)(121)(F) is allowed.
(C) Boating, swimming, wading, and diving are prohibited within the conservation area.

(D) No person, except state and local law enforcement officers, fire suppression agencies and employees of the department in the performance of their official duties or persons possessing written permission from the department or employees of Signal Corporation and its invitees for the purpose of carrying out oil and gas operations, shall enter this conservation area and remain therein except on established trails, paths, or other designated areas.
(E) No person shall enter this conservation area between the hours of 8:00 p.m. and 6:00 a.m.
(F) Routine operation and maintenance, habitat restoration, maintenance dredging, research and education, and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

(122) Bolsa Chica Basin State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line within the Bolsa Chica Basin estuary northeastward of the Pacific Coast Highway Bridge, approximated by a straight line between the following two points:
~~33° 41.02' N. lat. 118° 02.15' W. long.; and~~
~~33° 40.98' N. lat. 118° 02.11' W. long.;~~
33° 41.028’ N. lat. 118° 02.153’ W. long.; and
33° 40.981’ N. lat. 118° 02.109’ W. long.;
and southeastward of a straight line between the following two points:
~~33° 42.22' N. lat. 118° 03.17' W. long.; and~~
~~33° 42.19' N. lat. 118° 03.18' W. long.~~
33° 42.219’ N. lat. 118° 03.167’ W. long.; and
33° 42.177’ N. lat. 118° 03.186’ W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(122)(F) is allowed.
(C) Boating, swimming, wading, and diving are prohibited within the conservation area.
(D) No person, except state and local law enforcement officers, fire suppression agencies and employees of the department in the performance of their official duties or persons possessing written permission from the department or employees of Signal Corporation and its invitees for the purpose of carrying out oil and gas operations, shall enter this conservation area and remain therein except on established trails, paths, or other designated areas.
(E) No person shall enter this conservation area between the hours of 8:00 p.m. and 6:00 a.m.
(F) Routine operation and maintenance, habitat restoration, maintenance dredging, research and education, and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

(123) Arrow Point to Lion Head Point ~~(Catalina Island)~~ State Marine Conservation Area.
(A) This area is bounded by the mean high tide line to a distance of 1000 feet seaward of the mean lower low tide line of any shoreline southeastward of a line connecting the following two points:
~~33° 28.660' N. lat. 118° 32.310' W. long.; and~~
33° 28.652' N. lat. 118° 32.310' W. long.; and

33° 28.820' N. lat. 118° 32.310' W. long.
~~And~~and northwestward of a line connecting the following two points:
33° 27.240' N. lat. 118° 29.900' W. long.; and
~~33° 27.170' N. lat. 118° 30.100' W. long.~~
33° 27.174' N. lat. 118° 30.089' W. long.
(B) Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. All recreational take is allowed in accordance with current regulations, except the ~~Recreational~~recreational take of invertebrates is prohibited. ~~Take of other living marine resources is allowed.~~
2. All commercial take is allowed in accordance with current regulations.

(124) Blue Cavern ~~(Catalina Island)~~ Onshore State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~33° 25.96' N. lat. 118° 27.00' W. long.; and~~
~~33° 27.50' N. lat. 118° 27.00' W. long;~~
~~33° 27.50' N. lat. 118° 29.30' W. long.; and~~
~~33° 26.64' N. lat. 118° 29.30' W. long.~~
33° 25.960’ N. lat. 118° 27.000’ W. long.; and
33° 27.500’ N. lat. 118° 27.000’ W. long;
33° 27.500’ N. lat. 118° 29.300’ W. long.; and
33° 26.640’ N. lat. 118° 29.300’ W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsections 632(b)(124)(D) and 632(b)(124)(E) is allowed.
(C) Except as pursuant to Federal law, emergency caused by hazardous weather, or as provided in subsection 632(b)(124)(D), it is unlawful to anchor or moor a vessel in the formerly designated Catalina Marine Science Center Marine Life Refuge (Section 10932, Fish and Game Code).
(D) The director of the Catalina Marine Science Center Marine Life Refuge, or any person that the director of the refuge has authorized may anchor or moor a vessel or take, for scientific purposes, any fish or specimen of marine plant life in the formerly designated Catalina Marine Science Center Marine Life Refuge under the conditions prescribed in a scientific collecting permit issued by the department (Section 10655, Fish and Game Code).
(E) Maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(125) Blue Cavern ~~(Catalina Island)~~ Offshore State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
~~33° 27.50' N. lat. 118° 27.00' W. long.;~~
~~33° 29.97' N. lat. 118° 27.00' W. long.;~~
33° 27.500’ N. lat. 118° 27.000’ W. long.;
33° 29.970’ N. lat. 118° 27.000’ W. long.; thence northwestward along the three nautical mile offshore boundary to
~~33° 30.81' N. lat. 118° 29.30' W. long.;~~

~~33° 27.50' N. lat. 118° 29.30' W. long.; and~~
~~33° 27.50' N. lat. 118° 27.00' W. long.~~
33° 30.810’ N. lat. 118° 29.300’ W. long.;
33° 27.500’ N. lat. 118° 29.300’ W. long.; and
33° 27.500’ N. lat. 118° 27.000’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of pelagic finfish [subsection 632(a)(3)], by hook and line or by spearfishing [Section 1.76], white seabass by spearfishing [Section 1.76] and market squid by hand-held dip net [Section 1.42] is allowed.
2. The commercial take of pelagic finfish [subsection 632(a)(3)] by hook and line and swordfish by harpoon [subsection 107(f)(1)] is allowed.

(126) Long Point ~~(Catalina Island)~~ State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~33° 24.38' N. lat. 118° 21.98' W. long.;~~
~~33° 25.50' N. lat. 118° 21.98' W. long.;~~
~~33° 25.50' N. lat. 118° 24.00' W. long.; and~~
~~33° 25.11' N. lat. 118° 24.00' W. long.~~
33° 24.380’ N. lat. 118° 21.980’ W. long.;
33° 25.500’ N. lat. 118° 21.980’ W. long.;
33° 25.500’ N. lat. 118° 24.000’ W. long.; and
33° 25.102’ N. lat. 118° 24.000’ W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(127) Casino Point ~~(Catalina Island)~~ State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~33° 20.90' N. lat. 118° 19.43' W. long.;~~
~~33° 20.90' N. lat. 118° 19.42' W. long.;~~
~~33° 20.92' N. lat. 118° 19.38' W. long.;~~
~~33° 20.95' N. lat. 118° 19.42' W. long.;~~
~~33° 20.97' N. lat. 118° 19.47' W. long.;~~
~~33° 21.00' N. lat. 118° 19.52' W. long.; and~~
~~33° 20.96' N. lat. 118° 19.56' W. long.~~
33° 20.900’ N. lat. 118° 19.430’ W. long.;
33° 20.900’ N. lat. 118° 19.420’ W. long.;
33° 20.920’ N. lat. 118° 19.380’ W. long.;
33° 20.950’ N. lat. 118° 19.420’ W. long.;
33° 20.970’ N. lat. 118° 19.470’ W. long.;
33° 21.000’ N. lat. 118° 19.520’ W. long.; and
33° 20.960’ N. lat. 118° 19.560’ W. long.
(B) ~~Take of all living marine resources is prohibited, except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(127)(C) is allowed.

(C) Maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.
(D) Feeding of fish for marine life viewing is allowed.

(128) Lover's Cove ~~(Catalina Island)~~ State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
33° 20.460' N. lat. 118° 18.900' W. long.;
33° 20.711' N. lat. 118° 18.900' W. long.; and
33° 20.711' N. lat. 118° 19.321' W. long.
(B) ~~Take of all living marine resources is prohibited, except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take by hook and line from the Cabrillo Mole is allowed.~~or take~~
2. Take pursuant to activities authorized under subsection 632(b)(128)(C) is allowed.
(C) Maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.
(D) Feeding of fish for marine life viewing is allowed.

(129) Farnsworth ~~(Catalina Island)~~ Onshore State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~33° 21.00' N. lat. 118° 29.08' W. long.;~~
~~33° 21.00' N. lat. 118° 30.00' W. long.;~~
~~33° 19.00' N. lat. 118° 29.00' W. long.;~~
~~33° 19.00' N. lat. 118° 27.90' W. long.; and~~
~~33° 19.56' N. lat. 118° 27.90' W. long.~~
33° 21.000’ N. lat. 118° 29.080’ W. long.;
33° 21.000’ N. lat. 118° 30.000’ W. long.;
33° 19.000’ N. lat. 118° 29.000’ W. long.;
33° 19.000’ N. lat. 118° 27.900’ W. long.; and
33° 19.560’ N. lat. 118° 27.900’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take by spearfishing [Section 1.76] of white seabass and pelagic finfish [subsection 632(a)(3)]; marlin, tunas, and dorado (dolphinfish) (*Coryphaena hippurus*) by trolling [subsection 27.80(a)(3)]; and market squid by hand-held dip net [Section 1.42] is allowed.
2. The commercial take of swordfish by harpoon [subsection 107(f)(1)]; and coastal pelagic species [Section 1.39] by round haul net [Section 8750, Fish and Game Code], brail gear [Section 53.01(a)], and light boat [Section 53.01(k)] is allowed. Not more than five percent by weight of any commercial coastal pelagic species catch landed or possessed shall be other incidentally taken species.

(130) Farnsworth ~~(Catalina Island)~~ Offshore State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
~~33° 21.00' N. lat. 118° 30.00' W. long.;~~

~~33° 21.00' N. lat. 118° 32.88' W. long.;~~
33° 21.000’ N. lat. 118° 30.000’ W. long.;
33° 21.000’ N. lat. 118° 32.878’ W. long.; thence southward along the three nautical mile offshore boundary to
~~33° 19.00' N. lat. 118° 31.98' W. long.;~~
~~33° 19.00' N. lat. 118° 29.00' W. long.; and~~
~~33° 21.00' N. lat. 118° 30.00' W. long.~~
33° 19.000’ N. lat. 118° 31.978’ W. long.;
33° 19.000’ N. lat. 118° 29.000’ W. long.; and
33° 21.000’ N. lat. 118° 30.000’ W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of pelagic finfish [subsection 632(a)(3)] by hook and line or by spearfishing [Section 1.76]; white seabass by spearfishing [Section 1.76]; marlin, tunas and dorado (dolphinfish) (*Coryphaena hippurus*) by trolling [subsection 27.80(a)(3)] and market squid by hand-held dip net [Section 1.42] is allowed.
2. The commercial take of swordfish by harpoon [subsection 107(f)(1)]; and coastal pelagic species [Section 1.39] by round haul net [Section 8750, Fish and Game Code], brail gear [Section 53.01(a)], and light boat [Section 53.01(k)] is allowed. Not more than five percent by weight of any commercial coastal pelagic species catch landed or possessed shall be other incidentally taken species.

(131) Cat Harbor ~~(Catalina Island)~~ State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line on the west side of Catalina Island northward of a straight line connecting Pin Rock (~~33° 25.50' N. lat. 118° 30.28' W. long.~~33° 25.486’ N. lat. 118° 30.294’ W. long.) and Cat Head Point (~~33° 25.32' N. lat. 118° 30.76' W. long.~~33° 25.320’ N. lat. 118° 30.760’ W. long.).
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of finfish [subsection 632(a)(2)] by hook and line or by spearfishing [Section 1.76], market squid by hook and line, and spiny lobster and sea urchin is allowed.
2. The commercial take of sea cucumbers by diving only, and spiny lobster and sea urchin is allowed.
3. Aquaculture of finfish [subsection 632(a)(2)] pursuant to any required state permits is allowed.
4. Take pursuant to activities authorized under subsection 632(b)(131)(C) is allowed.
(C) Maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(132) Upper Newport Bay State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line within Upper Newport Bay northeastward of Pacific Coast Highway approximated by a line between the following two points:
~~33° 37.02' N. lat. 117° 54.24' W. long.;~~
~~33° 37.02' N. lat. 117° 54.32' W. long.;~~
33° 37.014’ N. lat. 117° 54.237’ W. long.;

33° 37.014’ N. lat. 117° 54.336’ W. long.; and southwestward of Jamboree Road approximated by a line between the following two points:
~~33° 39.07' N. lat. 117° 52.02' W. long.; and~~
~~33° 39.03' N. lat. 117° 52.01' W. long.~~
33° 39.071’ N. lat. 117° 52.021’ W. long.; and
33° 39.027’ N. lat. 117° 52.014’ W. long.
(B) ~~Take of all living marine resources is prohibited except the~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of finfish [subsection 632(a)(2)] by hook and line from shore ~~only, or take~~only is allowed.
2. Take pursuant to activities authorized under subsection 632(b)(132)(D)~~, is~~is allowed.
(C) In waters below the mean high tide line inside the Upper Newport Bay Ecological Reserve, northeastward of a line connecting Shellmaker Island (~~33° 37.20' N. lat. 117° 53.51' W. long.~~33° 37.200’ N. lat. 117° 53.510’ W. long.) and North Star Beach (~~33° 37.38' N. lat. 117° 53.60' W. long.~~33° 37.380’ N. lat. 117° 53.600’ W. long.) the following restrictions apply:
(1) Swimming is allowed only in the area between North Star Beach and mid-channel.
(2) Boats are limited to speeds less than five miles per hour.
(3) Shoreline access is limited to established trails, paths, or other designated areas.
(D) Maintenance dredging, habitat restoration, research and education programs, maintenance of artificial structures, and operation and maintenance of existing facilities inside the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

(133) Crystal Cove State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~33° 35.373' N. lat. 117° 52.648' W. long.;~~
33° 35.372' N. lat. 117° 52.645' W. long.;
33° 35.065' N. lat. 117° 52.692' W. long.;
33° 32.400' N. lat. 117° 49.200' W. long.;~~ and~~
~~33° 33.233' N. lat. 117° 49.200' W. long.~~
33° 33.211' N. lat. 117° 49.200' W. long.; and
33° 33.224' N. lat. 117° 49.184' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of finfish [subsection 632(a)(2)] by hook and line or by spearfishing [Section 1.76], and spiny lobster and sea urchin is allowed.
2. The commercial take of sea urchin; spiny lobster by trap; and costal pelagic species [Section 1.39] by round haul net [Section 8750, Fish and Game Code], brail gear [Section 53.01(a)], and light boat [Section 53.01(k)] is allowed. Not more than five percent by weight of any commercial coastal pelagic species catch landed or possessed shall be other incidentally taken species.
3. Take pursuant to activities authorized under subsection 632(b)(133)(C) is allowed.
(C) Beach nourishment and other sediment management activities, and operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(D) Take of all living marine resources from inside tidepools is prohibited. For purposes of this section, tidepools are defined as the area encompassing the rocky pools that are filled with seawater due to retracting tides between the mean higher high tide line and the mean lower low tide line.

(134) Laguna Beach State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
33° 33.224' N. lat. 117° 49.184' W. long.;
~~33° 33.233' N. lat. 117° 49.200' W. long.;~~
~~33° 30.800' N. lat. 117° 49.200' W. long.; and~~
~~33° 30.800' N. lat. 117° 45.631' W. long.~~
33° 33.211' N. lat. 117° 49.200' W. long.;
33° 30.713' N. lat. 117° 49.200' W. long.; and
33° 30.713' N. lat. 117° 45.264' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(135) Laguna Beach State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~33° 30.800' N. lat. 117° 45.631' W. long.;~~
~~33° 30.800' N. lat. 117° 49.200' W. long.;~~
33° 30.713' N. lat. 117° 45.264' W. long.;
33° 30.713' N. lat. 117° 49.200' W. long.;
33° 30.050' N. lat. 117° 49.200' W. long.; and
~~33° 30.050' N. lat. 117° 44.771' W. long.~~
33° 30.050' N. lat. 117° 44.762' W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(135)(C) is allowed.
(C) Operation and maintenance of artificial structures and facilities, beach grooming, maintenance dredging, and habitat restoration inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(136) Dana Point State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting and the following points in the order listed:
~~33° 30.050' N. lat. 117° 44.771' W. long.;~~
33° 30.050' N. lat. 117° 44.762' W. long.;
33° 30.050' N. lat. 117° 46.000' W. long.;
33° 30.000' N. lat. 117° 46.000' W. long.;
33° 27.300' N. lat. 117° 43.300' W. long.;
33° 27.478' N. lat. 117° 42.276' W. long.; and
33° 27.622' N. lat. 117° 42.425' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:

1. The recreational take of finfish [subsection 632(a)(2)] by hook and line or by spearfishing [Section 1.76], and spiny lobster and sea urchin is allowed.
2. The commercial take of sea urchin, spiny lobster by trap, and costal pelagic species [Section 1.39] by round haul net [Section 8750, Fish and Game Code], brail gear [Section 53.01(a)], and light boat [Section 53.01(k)] is allowed. Not more than five percent by weight of any commercial coastal pelagic species catch landed or possessed shall be other incidentally taken species.
3. Take pursuant to activities authorized under subsection 632(b)(136)(C) is allowed.
(C) Operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.
(D) Take of all living marine resources from inside tidepools is prohibited. For purposes of this section, tidepools are defined as the area encompassing the rocky pools that are filled with seawater due to retracting tides between the mean higher high tide line and the mean lower low tide line.

(137) Batiquitos Lagoon State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line within Batiquitos Lagoon eastward of the Interstate Highway 5 Bridge, approximated by a line between the following two points:
~~33° 05.44' N. lat. 117° 18.12' W. long.; and~~
~~33° 05.46' N. lat. 117° 18.13' W. long.~~
33° 05.440’ N. lat. 117° 18.120’ W. long.; and
33° 05.460’ N. lat. 117° 18.130’ W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(137)(D) is allowed.
(C) Boating, swimming, wading, and diving are prohibited within the conservation area.
(D) Operation and maintenance, habitat restoration, research and education, maintenance dredging and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

(138) Swami's State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
33° 02.900' N. lat. 117° 17.927' W. long.;
33° 02.900' N. lat. 117° 21.743' W. long.; thence southward along the three nautical mile offshore boundary to
33° 00.000' N. lat. 117° 20.398' W. long.; and
33° 00.000' N. lat. 117° 16.698' W. long.; thence northward along the mean high tide line onshore boundary to
33° 00.962' N. lat. 117° 16.850' W. long.; and
33° 00.980' N. lat. 117° 16.857' W. long.
(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. Recreational take by hook and line from shore is allowed.

2. The recreational take by spearfishing [Section 1.76] of white seabass and pelagic finfish [subsection 632(a)(3)] is allowed.
3. Take pursuant to activities authorized under subsection 632(b)(138)(C) is allowed.
(C) Beach nourishment and other sediment management activities and operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(139) San Elijo Lagoon State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line within San Elijo Lagoon southeastward of a straight line between the following two points:
33° 00.980' N. lat. 117° 16.857' W. long.; and
33° 00.962' N. lat. 117° 16.850' W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(139)(D) is allowed.
(C) Boating, swimming, wading, and diving are prohibited within the conservation area.
(D) Operation and maintenance, maintenance dredging, habitat restoration including sediment deposition, research and education, and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or activities pursuant to Section 630, or as otherwise authorized by the department.

(140) San Dieguito Lagoon State Marine Conservation Area.
(A) This area consists of waters below the mean high tide line within the San Dieguito Lagoon Ecological Reserve southeastward of a straight line between the following two points:
32° 58.066' N. lat. 117° 15.579' W. long.; and
32° 58.072' N. lat. 117° 15.548' W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the recreational take of finfish by hook and line from shore is allowed.
(C) Boating, swimming, wading, and diving are prohibited within the conservation area.
(D) No person, except state and local law enforcement officers, fire suppression agencies and employees of the department in the performance of their official duties or persons possessing written permission from the department, shall be permitted on the California least tern nesting island.
(E) No person, except state and local law enforcement officers, fire suppression agencies and employees of the department in the performance of their official duties or persons possessing written permission from the department, shall enter this conservation area between 8:00 p.m. and 5:00 a.m.
(F) The County of San Diego, after consultation with the department, may carry out management activities for fish and wildlife, flood control and vector control. Authorized operation and maintenance activities shall include, but shall not be limited to, use of chemicals, vegetation control, water control and use of associated equipment.
(G) Collections of fish, wildlife, water and soil may be made by the department for the purposes of fish and wildlife management or by San Diego County for the purposes of water quality testing and vector control.

(141) San Diego-Scripps Coastal State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
32° 53.000' N. lat. 117° 15.166' W. long.;
32° 53.000' N. lat. 117° 16.400' W. long.;
32° 51.964' N. lat. 117° 16.400' W. long.; and
~~32° 51.964' N. lat. 117° 15.233' W. long.~~
32° 51.964' N. lat. 117° 15.252' W. long.
(B) ~~Take of all living marine resources is prohibited except the~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of coastal pelagic species [Section 1.39], except market squid, by hook and line only is allowed.~~and take~~
2. Take pursuant to activities authorized under subsection 632(b)(141)(D) is allowed.
(C) Licensees of the Regents of the University of California and all officers, employees, and students of such university may take, for scientific purposes, invertebrates, fish, or specimens of marine plant or algae under the conditions prescribed in a scientific collecting permit issued by the department.
(D) Operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(142) Matlahuayl State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~32° 51.964' N. lat. 117° 15.233' W. long.;~~
32° 51.964' N. lat. 117° 15.252' W. long.;
32° 51.964' N. lat. 117° 16.400' W. long.; and
32° 51.067' N. lat. 117° 16.400' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.
(C) Boats may be launched and retrieved only in designated areas and may be anchored within the reserve only during daylight hours.

(143) South La Jolla State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
32° 49.573' N. lat. 117° 16.781' W. long.;
32° 49.573' N. lat. 117° 19.000' W. long.;
32° 47.945' N. lat. 117° 19.000' W. long.; and
32° 47.945' N. lat. 117° 15.495' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(144) South La Jolla State Marine Conservation Area.
(A) This area is bounded by straight lines connecting the following points in the order listed except where noted:
32° 49.573' N. lat. 117° 19.000' W. long.;

32° 49.573' N. lat. 117° 20.528' W. long.; thence southward along the three nautical mile offshore boundary to
32° 47.945' N. lat. 117° 20.068' W. long.;
32° 47.945' N. lat. 117° 19.000' W. long.; and
32° 49.573' N. lat. 117° 19.000' W. long.
(B) ~~Take of all living marine resources is prohibited except~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: the recreational take of pelagic finfish [subsection 632(a)(3)] by hook and line only is allowed.

(145) Famosa Slough State Marine Conservation Area.
(A) This area includes the waters below the mean high tide line within Famosa Slough estuary southward of the San Diego River channel, located at approximately ~~32° 45.43' N. lat. 117° 13.75' W. long.~~32° 45.430' N. lat. 117° 13.750' W. long.
(B) ~~Take of all living marine resources is prohibited except for~~ Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions: take pursuant to activities authorized under subsection 632(b)(145)(C) is allowed.
(C) Habitat restoration, maintenance dredging and operation and maintenance of artificial structures is allowed inside the conservation area pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

(146) Cabrillo State Marine Reserve.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:
~~32° 40.60' N. lat. 117° 14.82' W. long.;~~
~~32° 40.60' N. lat. 117° 15.00' W. long.;~~
~~32° 39.70' N. lat. 117° 15.00' W. long.;~~
~~32° 39.70' N. lat. 117° 14.30' W. long.; and~~
~~32° 40.00' N. lat. 117° 14.30' W. long.~~
32° 40.600' N. lat. 117° 14.820' W. long.;
32° 40.600' N. lat. 117° 15.000' W. long.;
32° 39.700' N. lat. 117° 15.000' W. long.;
32° 39.700' N. lat. 117° 14.300' W. long.; and
32° 40.000' N. lat. 117° 14.300' W. long.
(B) ~~Take of all living marine resources is prohibited~~Area restrictions defined in subsection 632(a)(1)(A) apply.

(147) Tijuana River Mouth State Marine Conservation Area.
(A) This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed except where noted:
~~32° 34.00' N. lat. 117° 07.98' W. long.;~~
~~32° 34.00' N. lat. 117° 09.00' W. long.;~~
~~32° 31.97' N. lat. 117° 09.00' W. long.;~~
32° 34.000' N. lat. 117° 07.980' W. long.;
32° 34.000' N. lat. 117° 09.000' W. long.;
32° 31.970' N. lat. 117° 09.000' W. long.; thence eastward along the U.S./Mexico Border to
~~32° 32.06' N. lat. 117° 07.48' W. long.~~
32° 32.064' N. lat. 117° 07.428' W. long.

(B) ~~Take of all living marine resources is prohibited except~~Area restrictions defined in subsection 632(a)(1)(C) apply, with the following specified exceptions:
1. The recreational take of coastal pelagic species [Section 1.39], except market squid, by hand-held dip net [Section 1.42] only is allowed.
2. The commercial take of coastal pelagic species [Section 1.39], except market squid, by round haul net [Section 8750, Fish and Game Code] is allowed. Not more than five percent by weight of any commercial coastal pelagic species catch landed or possessed shall be other incidentally taken species, including market squid.
3. Take pursuant to activities authorized under subsection 632(b)(147)(C) is allowed.
(C) Beach nourishment and other sediment management activities and operation and maintenance of artificial structures inside the conservation area is allowed pursuant to any required federal, state and local permits, or as otherwise authorized by the department.

Note: Authority cited: Sections 200, 202, 205(c), 220, 240, 1590, 1591, 2860, 2861 and 6750, Fish and Game Code; and Sections 36725(a) and 36725(e), Public Resources Code. Reference: Sections 200, 202, 205(c), 220, 240, 2861, 5521, 6653, 8420(e) and 8500, Fish and Game Code; and Sections 36700(e), 36710(e), 36725(a) and 36725(e), Public Resources Code.

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Table 1. Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations.

Table 1 is meant to complement the proposed language changes outlined in the Initial Statement of Reasons (ISOR). Each column identifies a specific type of regulatory amendment detailed in the ISOR, and an "X" denotes a proposed regulation amendment applies to the identified area: marine managed area or special closure. Areas are arranged geographically from north to south. Abbreviations: state marine reserve (SMR), state marine park (SMP), state marine conservation area (SMCA), state marine recreational management area (SMRMA), and special closure (SC).

Region	Area	No Language Change	Allowable Activities	Clarify Take	Aquaculture	Troll Gear	Designation	Name Change
North	(1) Pyramid Point SMCA		X					
North	(2) Point St. George Reef Offshore SMCA		X			X		
North	(3) Southwest Seal Rock SC	X						
North	(4) Castle Rock SC	X						
North	(5) False Klamath Rock SC	X						
North	(6) Reading Rock SMCA		X			X		
North	(7) Reading Rock SMR		X					
North	(8) Samoa SMCA		X			X		
North	(9) South Humboldt Bay SMRMA		X					
North	(10) Sugarloaf Island SC	X						
North	(11) South Cape Mendocino SMR		X					
North	(12) Steamboat Rock SC	X						
North	(13) Mattole Canyon SMR		X					
North	(14) Sea Lion Gulch SMR		X					
North	(15) Big Flat SMCA		X			X		
North	(16) Double Cone Rock SMCA		X			X		
North	(17) Rockport Rocks SC	X						
North	(18) Vizcaino Rock SC	X						
North	(19) Ten Mile SMR		X					
North	(20) Ten Mile Beach SMCA		X					
North	(21) Ten Mile Estuary SMCA		X					
North	(22) MacKerricher SMCA		X	X				
North	(23) Point Cabrillo SMR		X					

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Table 1. Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Language Change	Allowable Activities	Clarify Take	Aquaculture	Troll Gear	Designation	Name Change
North	(24) Russian Gulch SMCA		X	X				
North	(25) Big River Estuary SMCA		X					
North	(26) Van Damme SMCA		X	X				
North	(27) Navarro River Estuary SMCA		X					
North Central	(28) Point Arena SMR		X					
North Central	(29) Point Arena SMCA		X			X		
North Central	(30) Sea Lion Cove SMCA		X	X				
North Central	(31) Saunders Reef SMCA		X			X		
North Central	(32) Del Mar Landing SMR		X					
North Central	(33) Stewarts Point SMCA		X					
North Central	(34) Stewarts Point SMR		X					
North Central	(35) Salt Point SMCA		X	X				
North Central	(36) Gerstle Cove SMR		X					
North Central	(37) Russian River SMRMA		X					
North Central	(38) Russian River SMCA		X	X				
North Central	(39) Bodega Head SMR		X	X				
North Central	(40) Bodega Head SMCA		X			X		
North Central	(41) Estero Americano SMRMA		X					
North Central	(42) Estero de San Antonio SMRMA		X					
North Central	(43) Point Reyes SMR		X					
North Central	(44) Point Reyes SMCA		X			X		
North Central	(45) Point Reyes Headlands SC	X						
North Central	(46) Estero de Limantour SMR		X					
North Central	(47) Drakes Estero SMCA		X	X	X			
North Central	(48) Point Resistance Rock SC	X						
North Central	(49) Double Point/Stormy	X						

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Table 1. Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Language Change	Allowable Activities	Clarify Take	Aquaculture	Troll Gear	Designation	Name Change
	Stack Rock SC							
North Central	(50) Duxbury Reef SMCA		X	X				
North Central	(51) North Farallon Islands SMR		X					
North Central	(52) North Farallon Islands SC	X						
North Central	(53) Southeast Farallon Island SMR		X					
North Central	(54) Southeast Farallon Island SMCA		X			X		
North Central	(55) Southeast Farallon Island SC	X						
North Central	(56) Fagan Marsh SMP		X	X				
North Central	(57) Peytonia Slough SMP		X	X				
North Central	(58) Corte Madera Marsh SMP		X	X				
North Central	(59) Marin Islands SMP		X	X				
North Central	(60) Albany Mudflats SMP		X	X				
North Central	(61) Robert W. Crown SMCA		X	X				
North Central	(62) Redwood Shores SMP		X	X				
North Central	(63) Bair Island SMP		X	X				
North Central	(64) Egg (Devil's Slide) Rock to Devil's Slide SC	X						
North Central	(65) Montara SMR		X					
North Central	(66) Pillar Point SMCA		X					
Central	(67) Año Nuevo SMR ~~SMCA~~		X				X	
Central	(68) Greyhound Rock SMCA		X	X				
Central	(69) Natural Bridges SMR		X					
Central	(70) Elkhorn Slough SMR		X					
Central	(71) Elkhorn Slough SMCA		X	X				
Central	(72) Moro Cojo Slough SMR		X					
Central	(73) Soquel Canyon SMCA		X					

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Table 1. Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Language Change	Allowable Activities	Clarify Take	Aquaculture	Troll Gear	Designation	Name Change
Central	(74) Portuguese Ledge SMCA		X					
Central	(75) Edward F. Ricketts SMCA		X					
Central	(76) Lovers Point - Julia Platt SMR		X					
Central	(77) Pacific Grove Marine Gardens SMCA		X					
Central	(78) Asilomar SMR		X					
Central	(79) Carmel Pinnacles SMR		X					
Central	(80) Carmel Bay SMCA		X					
Central	(81) Point Lobos SMR		X					
Central	(82) Point Lobos SMCA		X	X				
Central	(83) Point Sur SMR		X					
Central	(84) Point Sur SMCA		X	X				
Central	(85) Big Creek SMR		X					
Central	(86) Big Creek SMCA		X	X				
Central	(87) Piedras Blancas SMR		X					
Central	(88) Piedras Blancas SMCA		X	X				
Central	(89) Cambria SMCA		X					
Central	(90) White Rock ~~(Cambria)~~ SMCA		X	X				X
Central	(91) Morro Bay SMRMA		X		X			
Central	(92) Morro Bay SMR		X					
Central	(93) Point Buchon SMR		X					
Central	(94) Point Buchon SMCA		X	X				
Central	(95) Vandenberg SMR		X	X				
South	(96) Point Conception SMR		X					
South	(97) Kashtayit SMCA		X	X				
South	(98) Naples SMCA		X					
South	(99) Campus Point SMCA		X	X				
South	(100) Goleta Slough SMCA		X	X				

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Table 1. Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Language Change	Allowable Activities	Clarify Take	Aquaculture	Troll Gear	Designation	Name Change
South	(101) Richardson Rock ~~(San Miguel Island)~~ SMR		X					X
South	(102) San Miguel Island SC	X						
South	(103) Harris Point ~~(San Miguel Island)~~ SMR		X					X
South	(104) Judith Rock ~~(San Miguel Island)~~ SMR		X					X
South	(105) Carrington Point ~~(Santa Rosa Island)~~ SMR		X					X
South	(106) Skunk Point ~~(Santa Rosa Island)~~ SMR		X					X
South	(107) South Point ~~(Santa Rosa Island)~~ SMR		X					X
South	(108) Painted Cave ~~(Santa Cruz Island)~~ SMCA		X	X				X
South	(109) Gull Island ~~(Santa Cruz Island)~~ SMR		X					X
South	(110) Scorpion ~~(Santa Cruz Island)~~ SMR		X					X
South	(111) Anacapa Island SC	X						
South	(112) Anacapa Island SMCA		X	X				
South	(113) Anacapa Island SMR		X					
South	(114) Footprint ~~(Anacapa Channel)~~ SMR		X					X
South	(115) Begg Rock ~~(San Nicolas Island Quad)~~ SMR		X					X
South	(116) Santa Barbara Island SMR		X					
South	(117) Point Dume SMCA		X					
South	(118) Point Dume SMR		X					
South	(119) Point Vicente SMCA		X	X				
South	(120) Abalone Cove SMCA		X					

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Table 1. Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Language Change	Allowable Activities	Clarify Take	Aquaculture	Troll Gear	Designation	Name Change
South	(121) Bolsa Bay SMCA		X	X				
South	(122) Bolsa Chica Basin SMCA		X	X				
South	(123) Arrow Point to Lion Head Point ~~(Catalina Island)~~ SMCA		X	X				X
South	(124) Blue Cavern ~~(Catalina Island)~~ Onshore SMCA		X	X				X
South	(125) Blue Cavern ~~(Catalina Island)~~ Offshore SMCA		X					X
South	(126) Long Point ~~(Catalina Island)~~ SMR		X					X
South	(127) Casino Point ~~(Catalina Island)~~ SMCA		X	X				X
South	(128) Lover's Cove ~~(Catalina Island)~~ SMCA		X	X				X
South	(129) Farnsworth ~~(Catalina Island)~~ Onshore SMCA		X					X
South	(130) Farnsworth ~~(Catalina Island)~~ Offshore SMCA		X					X
South	(131) Cat Harbor ~~(Catalina Island)~~ SMCA		X					X
South	(132) Upper Newport Bay SMCA		X	X				
South	(133) Crystal Cove SMCA		X					
South	(134) Laguna Beach SMR		X					
South	(135) Laguna Beach SMCA		X	X				
South	(136) Dana Point SMCA		X					
South	(137) Batiquitos Lagoon SMCA		X	X				
South	(138) Swami's SMCA		X					
South	(139) San Elijo Lagoon		X	X				

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Table 1. Summary of proposed language amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Language Change	Allowable Activities	Clarify Take	Aquaculture	Troll Gear	Designation	Name Change
	SMCA							
South	(140) San Dieguito Lagoon SMCA		X	X				
South	(141) San Diego-Scripps Coastal SMCA		X	X				
South	(142) Matlahuayl SMR		X					
South	(143) South La Jolla SMR		X					
South	(144) South La Jolla SMCA		X					
South	(145) Famosa Slough SMCA		X	X				
South	(146) Cabrillo SMR		X					
South	(147) Tijuana River Mouth SMCA		X					

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Table 2. Summary of proposed boundary refinement amendments to Title 14, Section 632, California Code of Regulations.

Table 2 is meant to complement the proposed boundary refinements outlined in the Initial Statement of Reasons (ISOR). Each column identifies a specific type of regulatory amendment detailed in the ISOR, and an "X" denotes a proposed regulation amendment applies to the identified area: marine managed area or special closure. Areas are arranged geographically from north to south. Abbreviations: state marine reserve (SMR), state marine park (SMP), state marine conservation area (SMCA), state marine recreational management area (SMRMA), special closure (SC), and National Oceanic and Atmospheric Administration (NOAA).

Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
North	(1) Pyramid Point SMCA	X							0.00%	0.00
North	(2) Point St. George Reef Offshore SMCA	X							0.00%	0.00
North	(3) Southwest Seal Rock SC	X							0.00%	0.00
North	(4) Castle Rock SC	X							0.00%	0.00
North	(5) False Klamath Rock SC	X							0.00%	0.00
North	(6) Reading Rock SMCA			X					0.00%	0.00
North	(7) Reading Rock SMR	X							0.00%	0.00
North	(8) Samoa SMCA	X							0.00%	0.00
North	(9) South Humboldt Bay SMRMA	X							0.00%	0.00
North	(10) Sugarloaf Island SC	X							0.00%	0.00
North	(11) South Cape Mendocino SMR			X					0.00%	0.00
North	(12) Steamboat Rock SC	X							0.00%	0.00

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Table 2. Summary of proposed boundary refinement amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
North	(13) Mattole Canyon SMR	X							0.00%	0.00
North	(14) Sea Lion Gulch SMR	X							0.00%	0.00
North	(15) Big Flat SMCA	X							0.00%	0.00
North	(16) Double Cone Rock SMCA	X							0.00%	0.00
North	(17) Rockport Rocks SC	X							0.00%	0.00
North	(18) Vizcaino Rock SC	X							0.00%	0.00
North	(19) Ten Mile SMR	X							0.00%	0.00
North	(20) Ten Mile Beach SMCA			X					0.00%	0.00
North	(21) Ten Mile Estuary SMCA	X							0.00%	0.00
North	(22) MacKerricher SMCA			X					0.01%	0.00
North	(23) Point Cabrillo SMR	X							0.00%	0.00
North	(24) Russian Gulch SMCA	X							0.00%	0.00
North	(25) Big River Estuary SMCA			X					0.07%	0.00
North	(26) Van Damme SMCA	X							0.00%	0.00
North	(27) Navarro River Estuary SMCA			X					-0.10%	0.00
North	(28) Point Arena		X						0.00%	0.00

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Table 2. Summary of proposed boundary refinement amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
Central	SMR									
North Central	(29) Point Arena SMCA		X				X		-0.01%	0.00
North Central	(30) Sea Lion Cove SMCA		X						0.00%	0.00
North Central	(31) Saunders Reef SMCA		X						0.00%	0.00
North Central	(32) Del Mar Landing SMR		X	X					0.01%	0.00
North Central	(33) Stewarts Point SMCA			X					0.00%	0.00
North Central	(34) Stewarts Point SMR		X	X			X	X	0.00%	0.00
North Central	(35) Salt Point SMCA		X						0.00%	0.00
North Central	(36) Gerstle Cove SMR		X						0.00%	0.00
North Central	(37) Russian River SMRMA		X						0.00%	0.00
North Central	(38) Russian River SMCA		X						0.00%	0.00
North Central	(39) Bodega Head SMR		X	X			X		-0.01%	0.00
North Central	(40) Bodega Head SMCA		X	X			X		-0.01%	0.00
North Central	(41) Estero Americano SMRMA		X						0.00%	0.00
North Central	(42) Estero de San Antonio SMRMA		X						0.00%	0.00

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Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
North Central	(43) Point Reyes SMR		X	X					0.01%	0.00
North Central	(44) Point Reyes SMCA		X				X		-0.01%	0.00
North Central	(45) Point Reyes Headlands SC		X						0.00%	0.00
North Central	(46) Estero de Limantour SMR		X	X					0.03%	0.00
North Central	(47) Drakes Estero SMCA		X	X					0.00%	0.00
North Central	(48) Point Resistance Rock SC		X	X					0.00%	0.00
North Central	(49) Double Point/Stormy Stack Rock SC		X						0.00%	0.00
North Central	(50) Duxbury Reef SMCA		X	X					0.00%	0.00
North Central	(51) North Farallon Islands SMR		X				X		0.00%	0.00
North Central	(52) North Farallon Islands SC		X	X					0.00%	0.00
North Central	(53) Southeast Farallon Island SMR		X						0.00%	0.00
North Central	(54) Southeast Farallon Island SMCA		X				X		0.01%	0.00
North Central	(55) Southeast Farallon Island SC		X						0.00%	0.00

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Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
North Central	(56) Fagan Marsh SMP	X							0.00%	0.00
North Central	(57) Peytonia Slough SMP	X							0.00%	0.00
North Central	(58) Corte Madera Marsh SMP	X							0.00%	0.00
North Central	(59) Marin Islands SMP	X							0.00%	0.00
North Central	(60) Albany Mudflats SMP	X							0.00%	0.00
North Central	(61) Robert W. Crown SMCA		X						0.00%	0.00
North Central	(62) Redwood Shores SMP	X							0.00%	0.00
North Central	(63) Bair Island SMP	X							0.00%	0.00
North Central	(64) Egg (Devil's Slide) Rock to Devil's Slide SC		X						0.00%	0.00
North Central	(65) Montara SMR		X	X			X		0.00%	0.00
North Central	(66) Pillar Point SMCA		X	X			X	X	0.00%	0.00
Central	(67) Año Nuevo SMR ~~SMCA~~		X	X				X	0.00%	0.00
Central	(68) Greyhound Rock SMCA		X	X			X	X	0.00%	0.00
Central	(69) Natural Bridges SMR		X	X					-0.07%	0.00
Central	(70) Elkhorn		X						0.00%	0.00

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Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
	Slough SMR									
Central	(71) Elkhorn Slough SMCA		X						0.00%	0.00
Central	(72) Moro Cojo Slough SMR	X							0.00%	0.00
Central	(73) Soquel Canyon SMCA		X				X		0.00%	0.00
Central	(74) Portuguese Ledge SMCA		X				X		0.00%	0.00
Central	(75) Edward F. Ricketts SMCA		X	X					-0.74%	0.00
Central	(76) Lovers Point - Julia Platt SMR		X	X					0.00%	0.00
Central	(77) Pacific Grove Marine Gardens SMCA		X	X				X	3.00%	+0.03
Central	(78) Asilomar SMR		X	X				X	-1.87%	-0.03
Central	(79) Carmel Pinnacles SMR		X		X				0.00%	0.00
Central	(80) Carmel Bay SMCA		X	X					0.54%	+0.01
Central	(81) Point Lobos SMR		X	X					0.00%	0.00
Central	(82) Point Lobos SMCA		X				X		0.00%	0.00
Central	(83) Point Sur SMR		X	X					0.00%	0.00
Central	(84) Point Sur SMCA		X		X		X		0.00%	0.00

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Table 2. Summary of proposed boundary refinement amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
Central	(85) Big Creek SMR		X	X			X		0.00%	0.00
Central	(86) Big Creek SMCA		X				X		0.01%	0.00
Central	(87) Piedras Blancas SMR		X	X					0.00%	0.00
Central	(88) Piedras Blancas SMCA		X		X		X		0.00%	0.00
Central	(89) Cambria SMCA		X	X					0.00%	0.00
Central	(90) White Rock (Cambria) SMCA		X	X					0.00%	0.00
Central	(91) Morro Bay SMRMA		X						0.00%	0.00
Central	(92) Morro Bay SMR		X						0.00%	0.00
Central	(93) Point Buchon SMR		X	X					0.00%	0.00
Central	(94) Point Buchon SMCA		X				X		0.00%	0.00
Central	(95) Vandenberg SMR		X	X					0.00%	0.00
South	(96) Point Conception SMR		X	X			X		0.00%	0.00
South	(97) Kashtayit SMCA		X						0.00%	0.00
South	(98) Naples SMCA		X	X					0.00%	0.00
South	(99) Campus Point SMCA		X	X			X		0.00%	0.00
South	(100) Goleta				X				0.00%	0.00

Attachment 2

Table 2. Summary of proposed boundary refinement amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
	Slough SMCA									
South	(101) Richardson Rock ~~(San Miguel Island)~~ SMR	X							0.00%	0.00
South	(102) San Miguel Island SC		X						0.00%	0.00
South	(103) Harris Point ~~(San Miguel Island)~~ SMR	X							0.00%	0.00
South	(104) Judith Rock ~~(San Miguel Island)~~ SMR			X			X		-0.39%	-0.02
South	(105) Carrington Point ~~(Santa Rosa Island)~~ SMR			X					0.00%	0.00
South	(106) Skunk Point ~~(Santa Rosa Island)~~ SMR			X					0.00%	0.00
South	(107) South Point ~~(Santa Rosa Island)~~ SMR	X							0.00%	0.00
South	(108) Painted Cave ~~(Santa Cruz Island)~~ SMCA	X							0.00%	0.00
South	(109) Gull Island ~~(Santa Cruz Island)~~ SMR			X					0.00%	0.00
South	(110) Scorpion ~~(Santa Cruz Island)~~ SMR	X							0.00%	0.00

Attachment 2

Table 2. Summary of proposed boundary refinement amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
South	(111) Anacapa Island SC		X	X					0.00%	0.00
South	(112) Anacapa Island SMCA			X					0.00%	0.00
South	(113) Anacapa Island SMR			X					0.00%	0.00
South	(114) Footprint ~~(Anacapa Channel)~~ SMR	X							0.00%	0.00
South	(115) Begg Rock ~~(San Nicolas Island Quad)~~ SMR		X	X					0.00%	0.00
South	(116) Santa Barbara Island SMR			X					0.00%	0.00
South	(117) Point Dume SMCA		X	X					0.00%	0.00
South	(118) Point Dume SMR		X	X			X		0.01%	0.00
South	(119) Point Vicente SMCA		X	X			X		0.00%	0.00
South	(120) Abalone Cove SMCA		X	X			X		0.00%	0.00
South	(121) Bolsa Bay SMCA		X	X					0.20%	0.00
South	(122) Bolsa Chica Basin SMCA		X	X					0.00%	0.00
South	(123) Arrow Point to Lion Head Point ~~(Catalina Island)~~ SMCA			X					0.00%	0.00

Attachment 2

Table 2. Summary of proposed boundary refinement amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
South	(124) Blue Cavern ~~(Catalina Island)~~ Onshore SMCA		X						0.00%	0.00
South	(125) Blue Cavern ~~(Catalina Island)~~ Offshore SMCA		X						0.00%	0.00
South	(126) Long Point ~~(Catalina Island)~~ SMR		X	X					0.00%	0.00
South	(127) Casino Point ~~(Catalina Island)~~ SMCA		X						0.00%	0.00
South	(128) Lover's Cove ~~(Catalina Island)~~ SMCA	X							0.00%	0.00
South	(129) Farnsworth ~~(Catalina Island)~~ Onshore SMCA		X						0.00%	0.00
South	(130) Farnsworth ~~(Catalina Island)~~ Offshore SMCA		X				X		0.00%	0.00
South	(131) Cat Harbor ~~(Catalina Island)~~ SMCA		X	X					0.86%	0.00
South	(132) Upper Newport Bay SMCA		X	X					0.04%	0.00
South	(133) Crystal Cove SMCA			X				X	-0.01%	0.00
South	(134) Laguna Beach SMR			X		X		X	6.08%	+0.38

Attachment 2

Table 2. Summary of proposed boundary refinement amendments to Title 14, Section 632, California Code of Regulations.

Region	Area	No Boundary Refinement	1/100th to 1/1000th	Point of Reference	Mean High Tide Line	Shift	NOAA State Line	Added Boundary Coordinate	Percent Area Change	Change in Area (sq. miles)
South	(135) Laguna Beach SMCA			X		X			-11.07%	-0.38
South	(136) Dana Point SMCA			X					0.00%	0.00
South	(137) Batiquitos Lagoon SMCA		X						0.00%	0.00
South	(138) Swami's SMCA	X							0.00%	0.00
South	(139) San Elijo Lagoon SMCA	X							0.00%	0.00
South	(140) San Dieguito Lagoon SMCA	X							0.00%	0.00
South	(141) San Diego-Scripps Coastal SMCA			X					0.00%	0.00
South	(142) Matlahuayl SMR			X					0.00%	0.00
South	(143) South La Jolla SMR	X							0.00%	0.00
South	(144) South La Jolla SMCA	X							0.00%	0.00
South	(145) Famosa Slough SMCA		X						0.00%	0.00
South	(146) Cabrillo SMR		X						0.00%	0.00
South	(147) Tijuana River Mouth SMCA		X	X					0.00%	0.00

Attachment 3

California State Marine Protected Areas
Proposed Boundary Refinements

June 4, 2015

Reading Rock SMCA

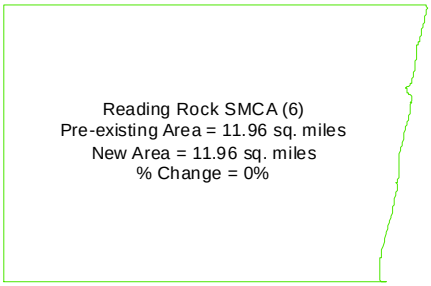
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



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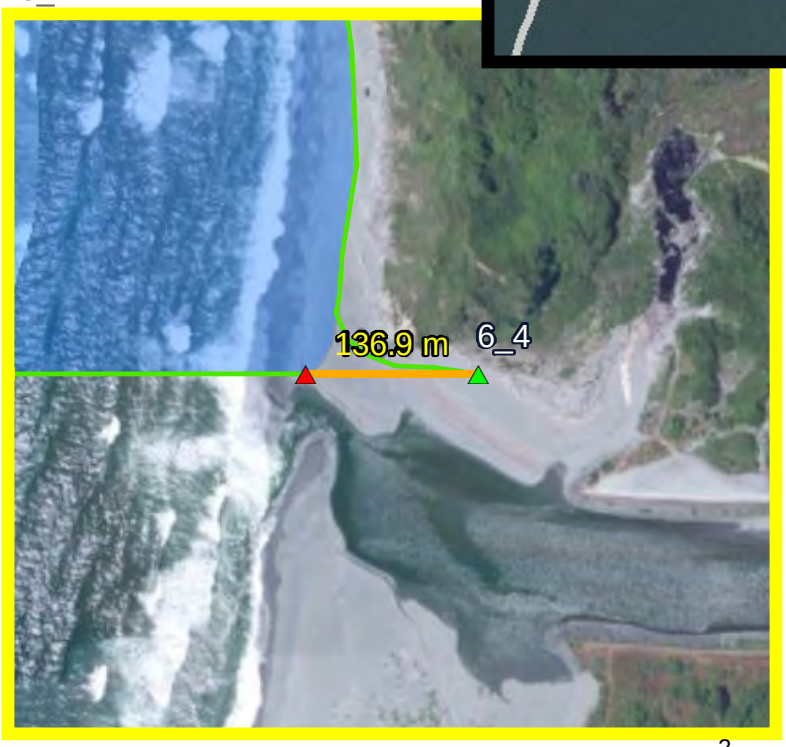

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2

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May 8, 2015

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South Cape Mendocino SMR

Legend

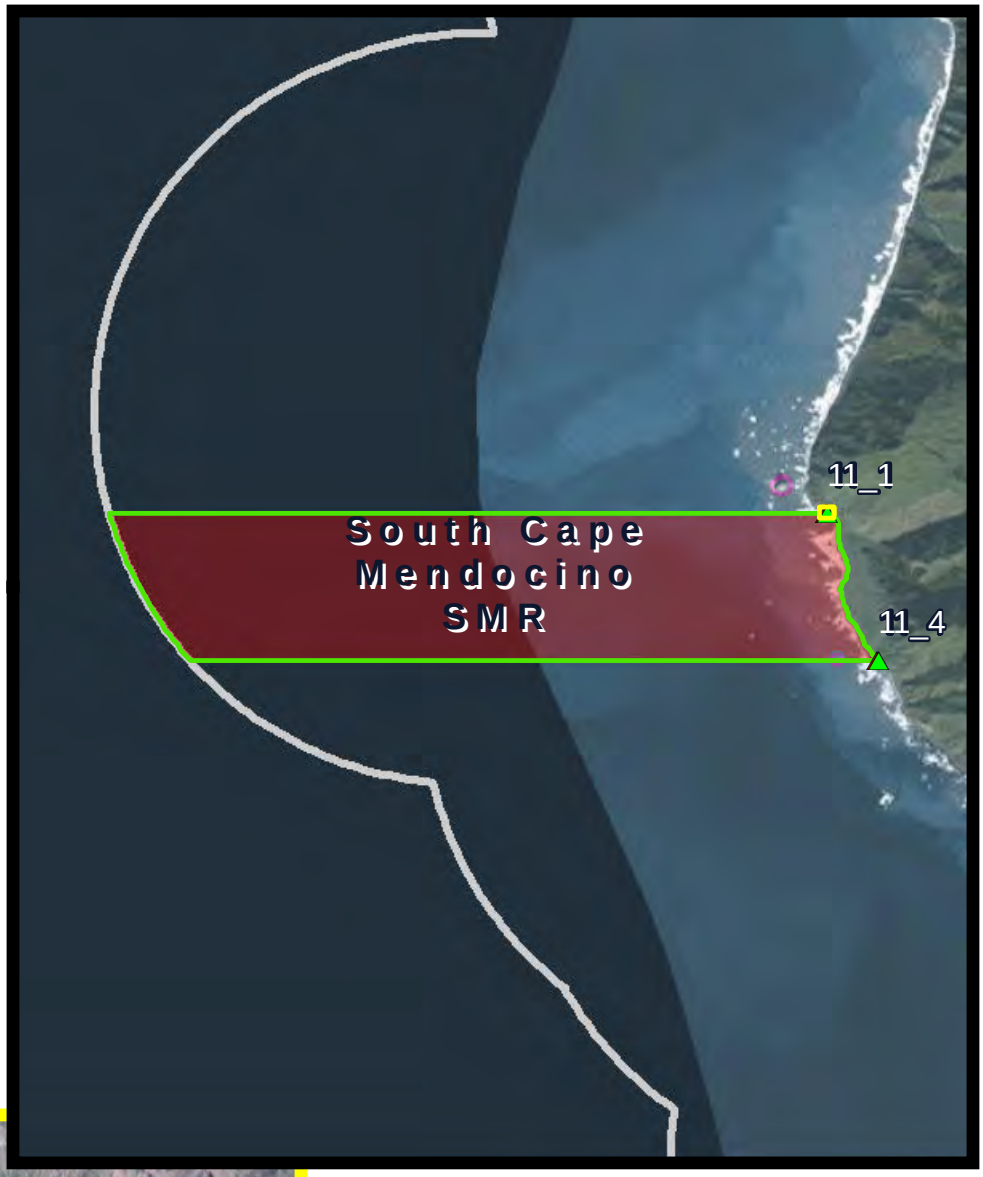
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- Special Closure

Summary of Proposed Refinements

South Cape Mendocino SMR (11)
Pre-existing Area = 9.08 sq. miles
New Area = 9.08 sq. miles
% Change = 0%



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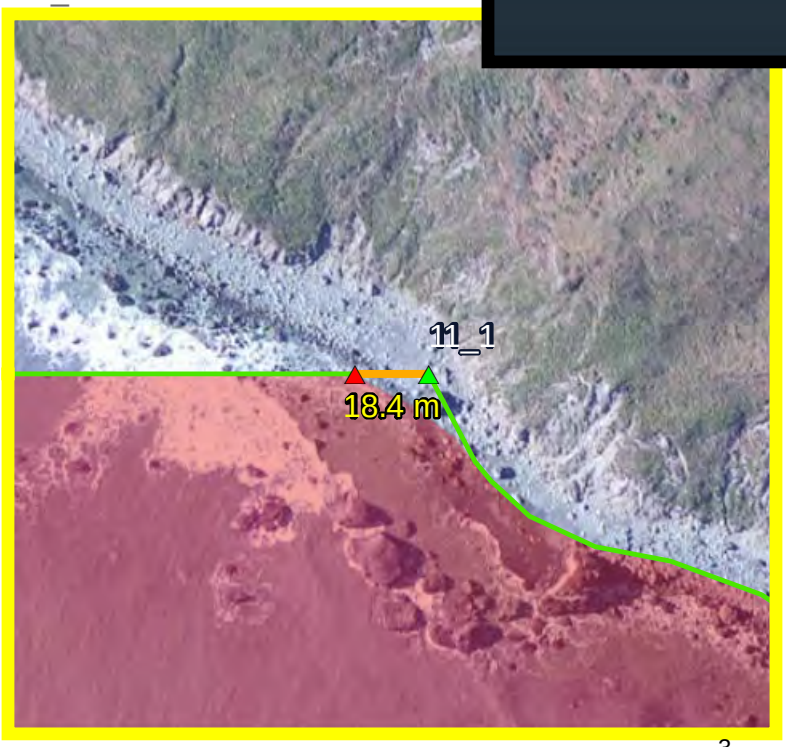

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South Cape Mendocino SMR

Legend

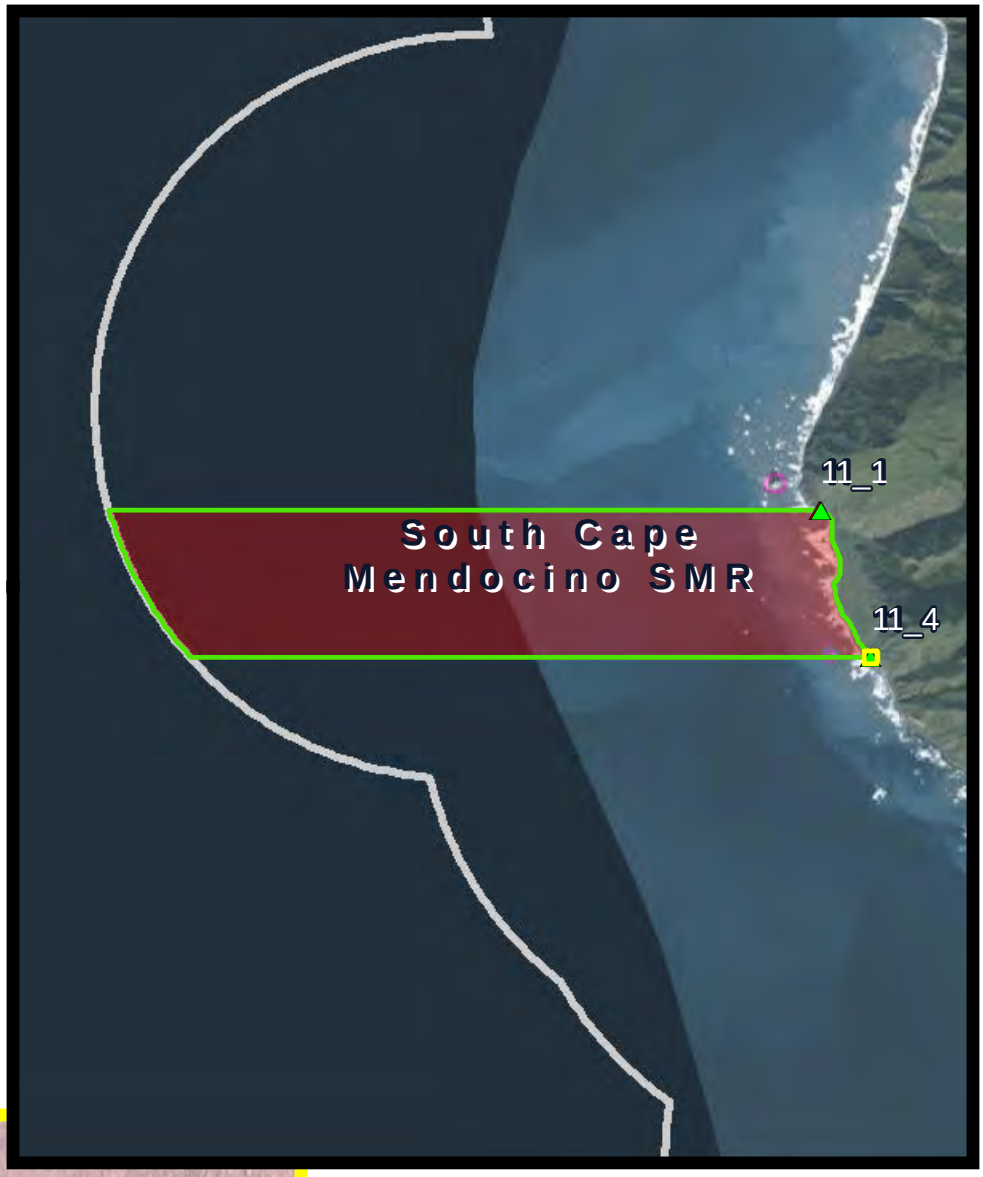
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- Special Closure

Summary of Proposed Refinements

South Cape Mendocino SMR (11)
Pre-existing Area = 9.08 sq. miles
New Area = 9.08 sq. miles
% Change = 0%



0 5,700 Meters

11_4

0 90 Meters

4

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Ten Mile Beach SMCA

Legend

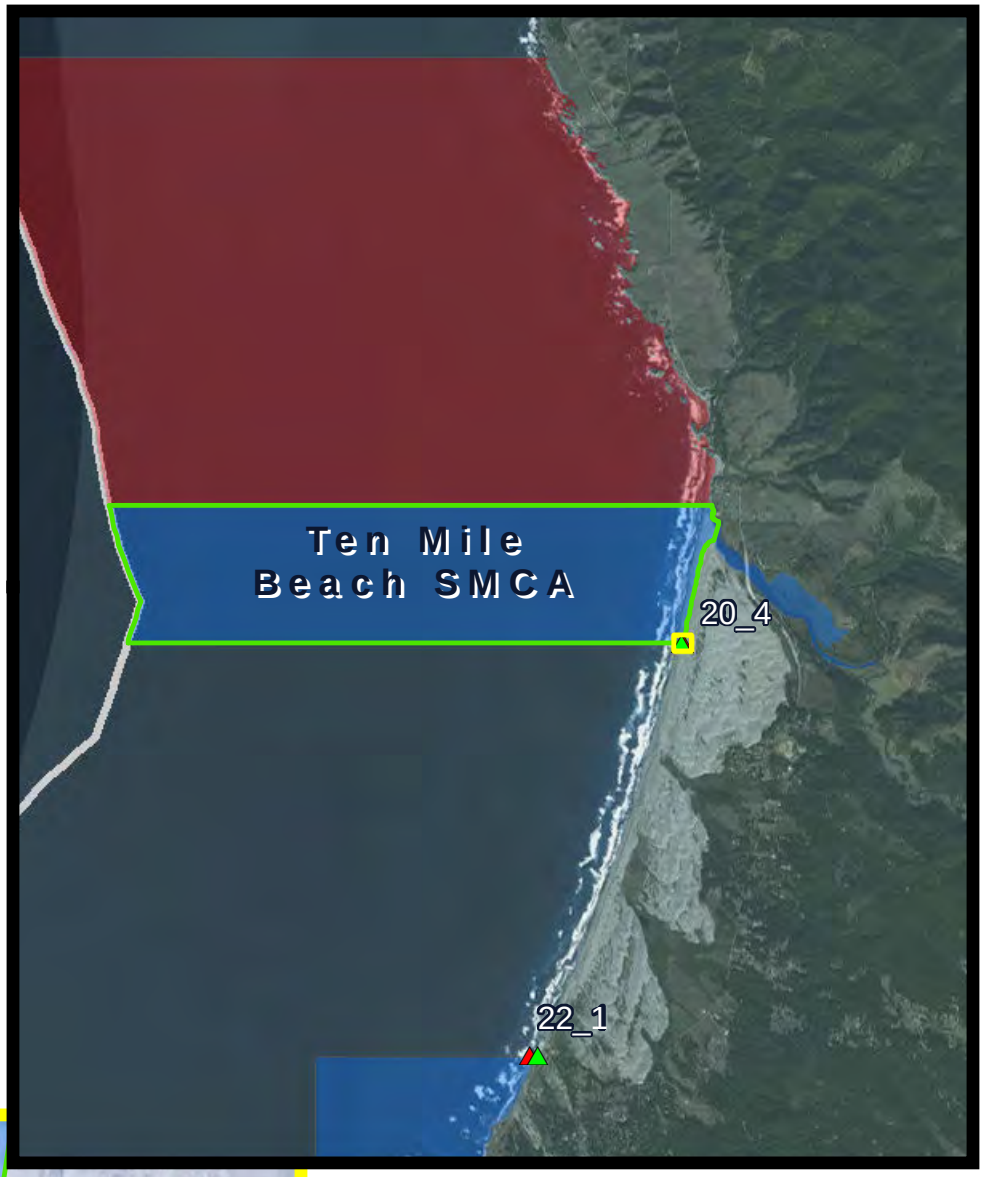
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Ten Mile Beach SMCA (20)
Pre-existing Area = 3.54 sq. miles
New Area = 3.54 sq. miles
% Change = 0%



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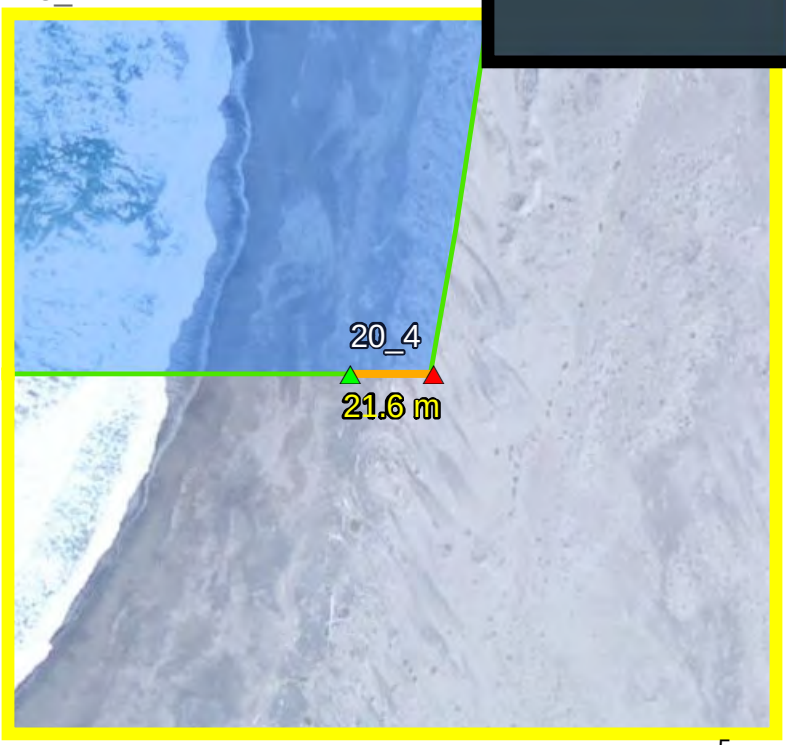

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MacKerricher SMCA

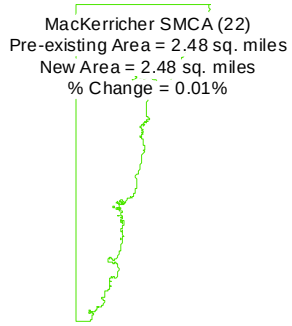
Legend

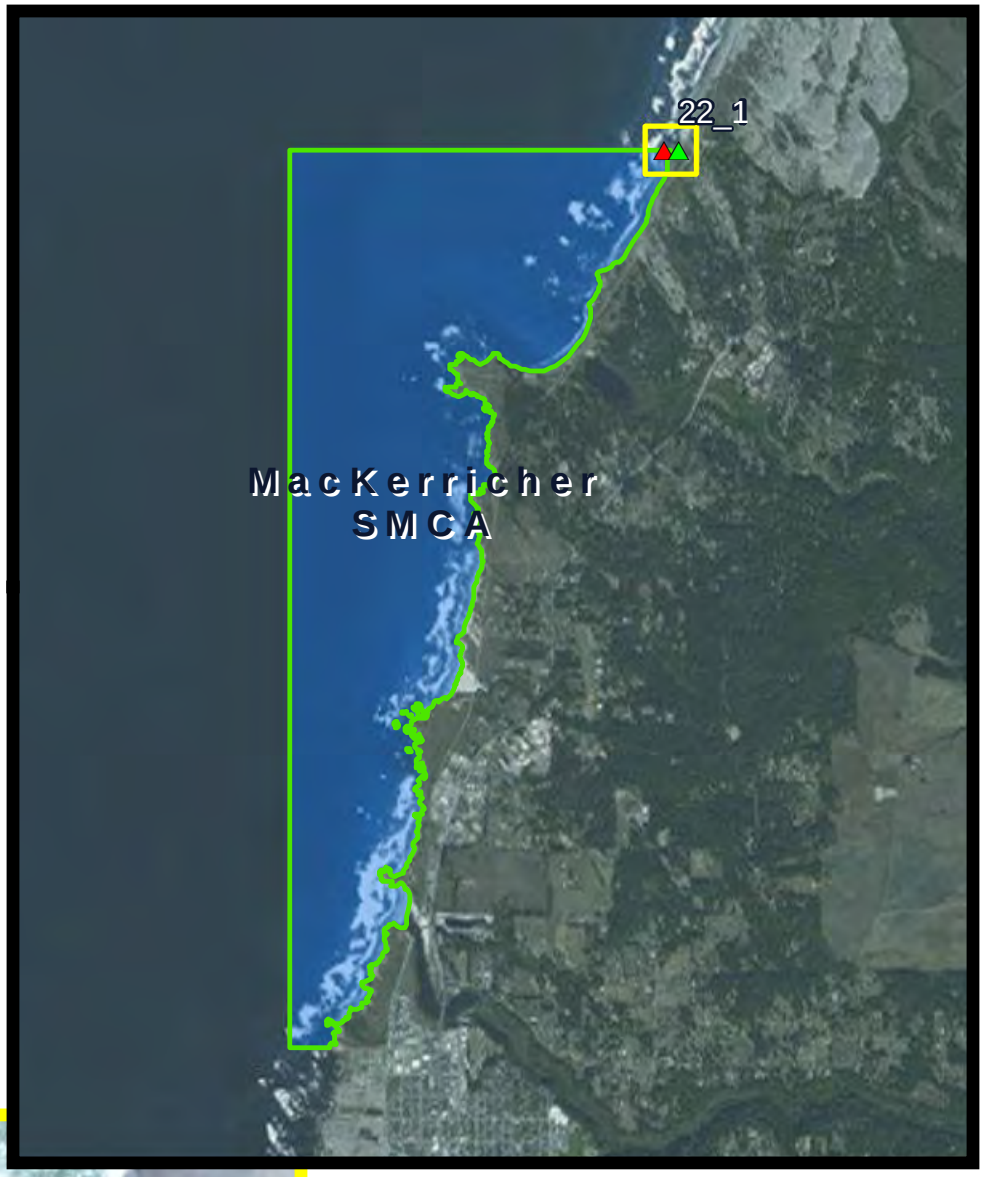
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





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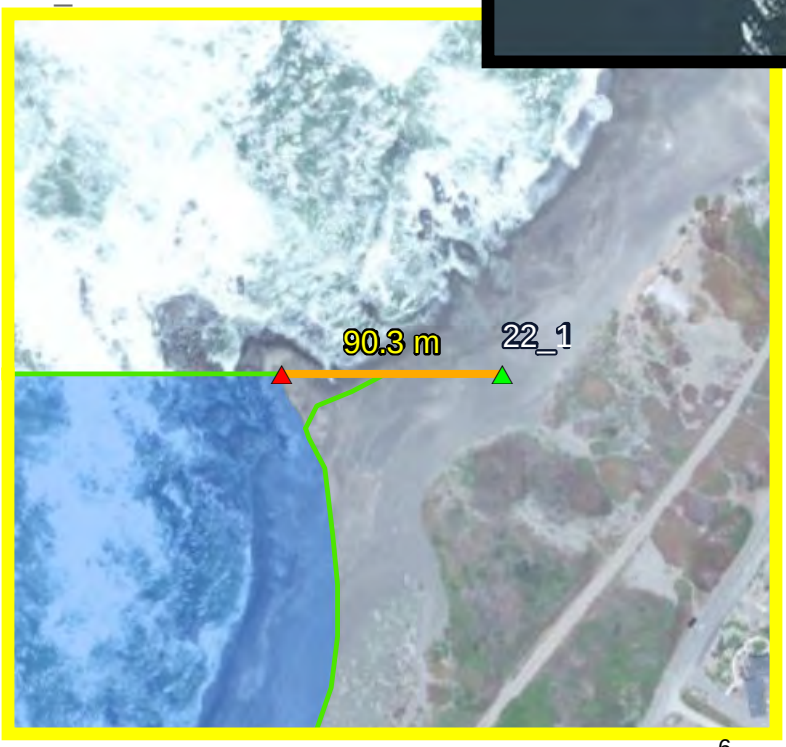

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Big River Estuary SMCA

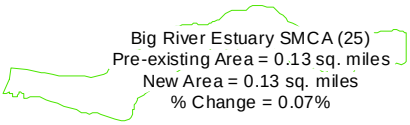
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



25_2

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Navarro River Estuary SMCA

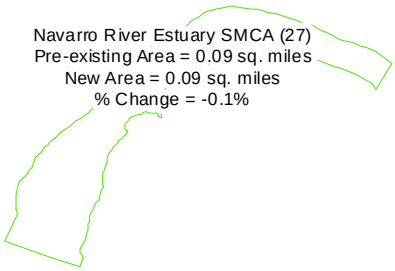
Legend

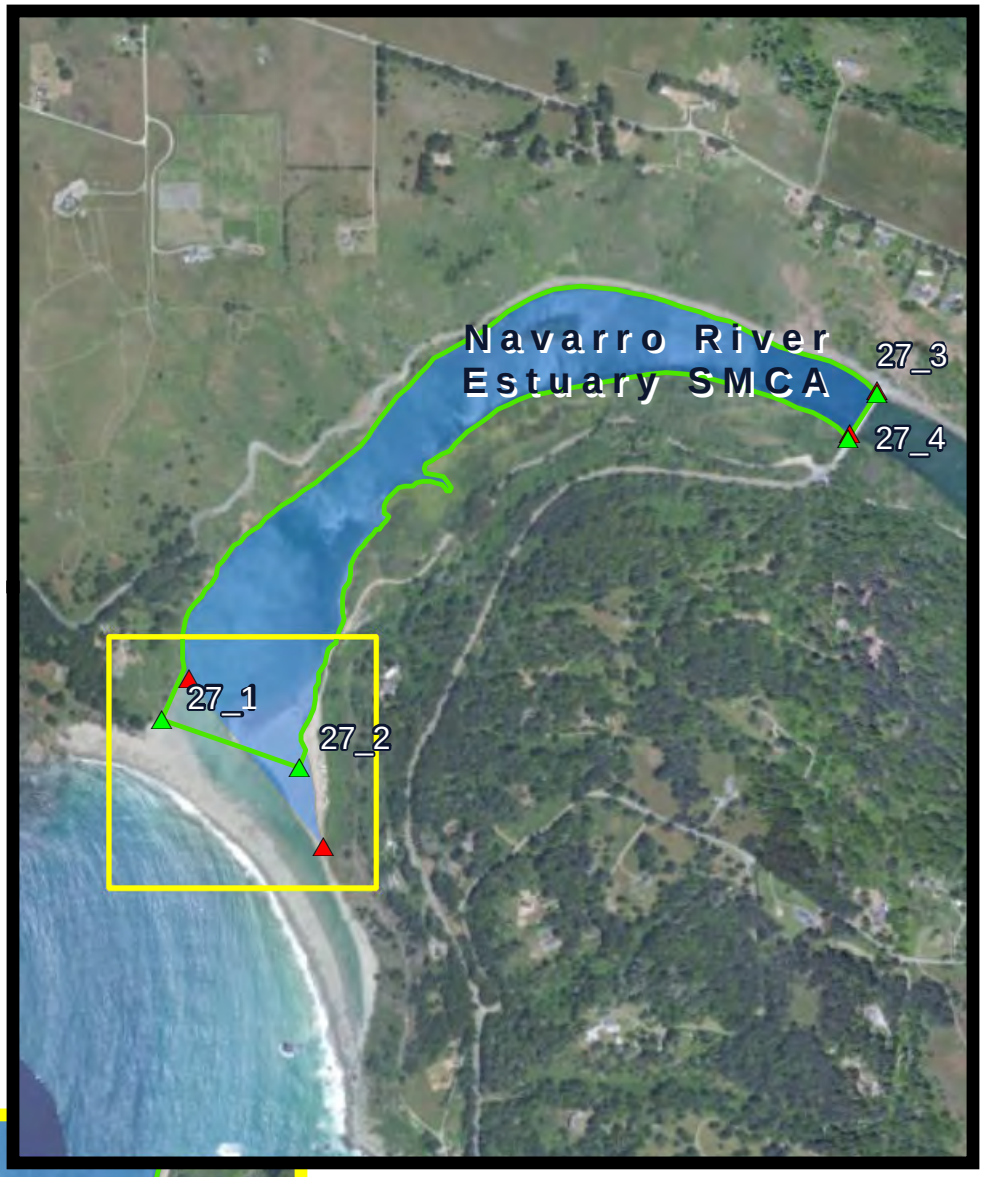
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





0 650 Meters

27_1 & 27_2

0 230 Meters

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Navarro River Estuary SMCA

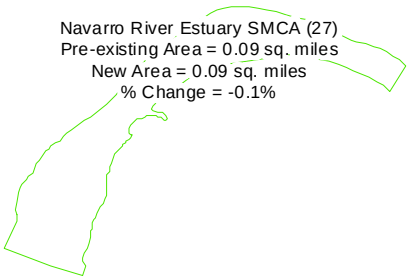
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



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27_3 & 27_4

0 90 Meters

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Point Arena SMCA

Legend

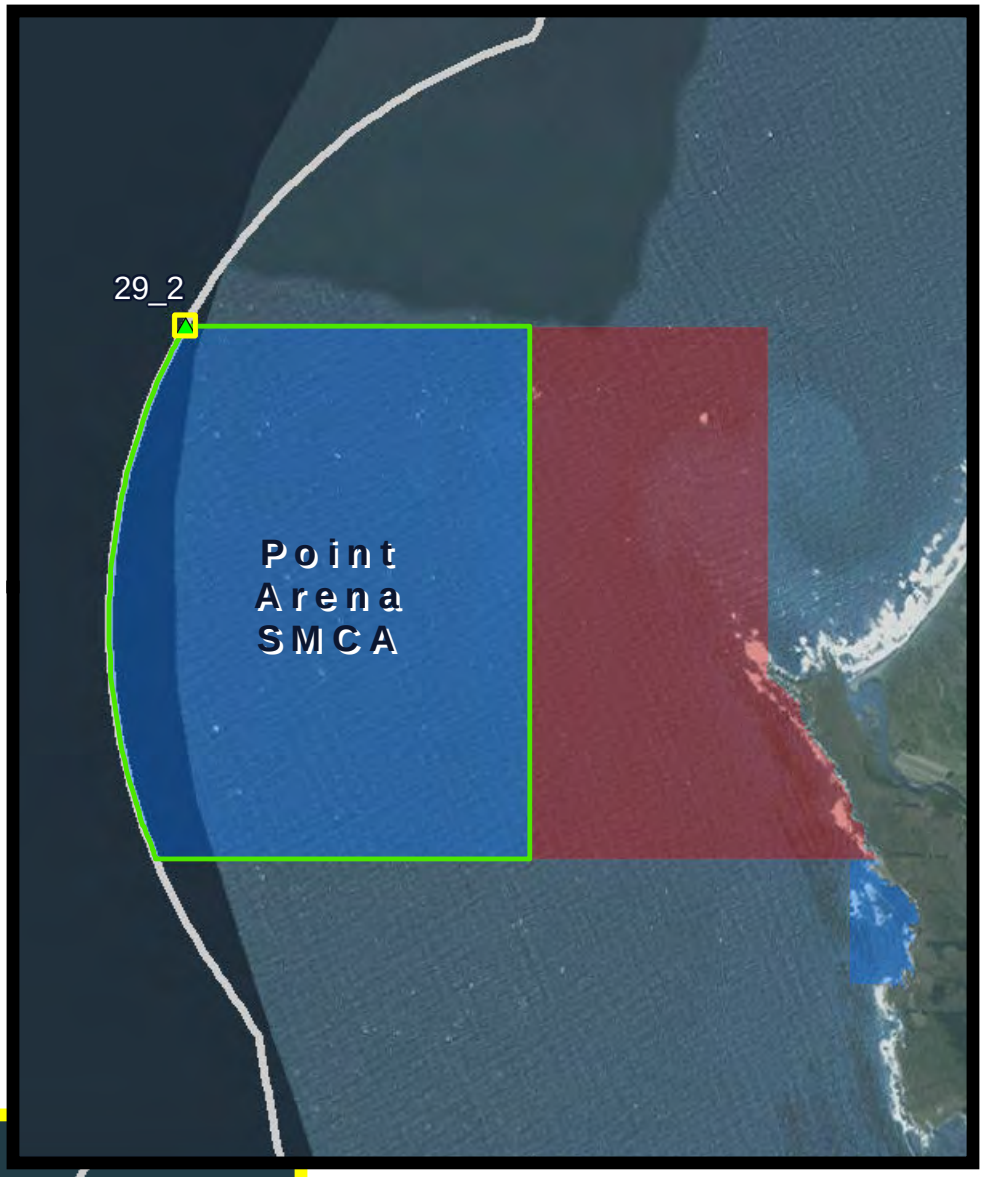
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Point Arena SMCA (29)
Pre-existing Area = 6.74 sq. miles
New Area = 6.74 sq. miles
% Change = -0.01%



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0 90 Meters

10

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Del Mar Landing SMR

Legend

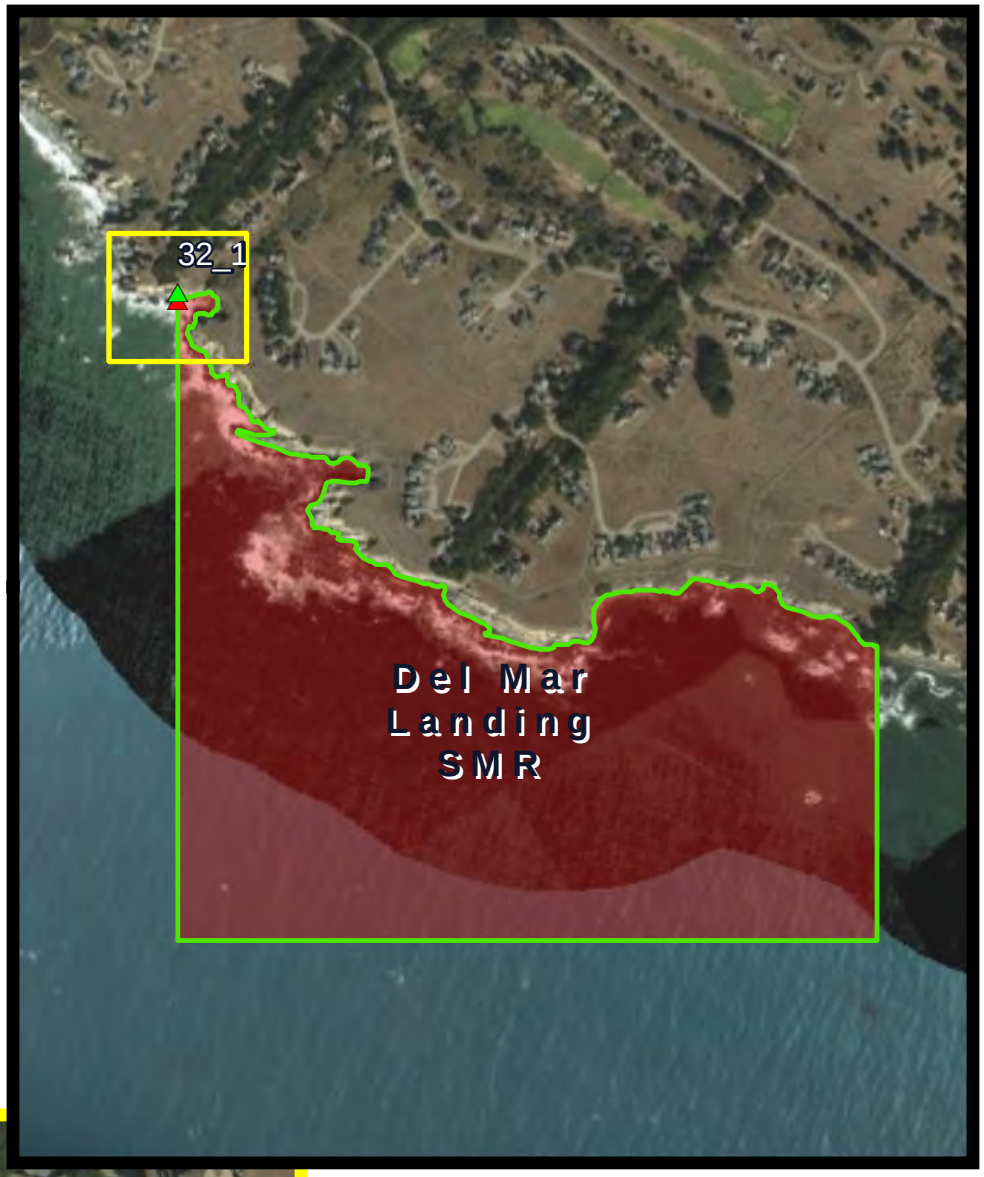
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Reserve (SMR)

Summary of Proposed Refinements

Del Mar Landing SMR (32)
Pre-existing Area = 0.22 sq. miles
New Area = 0.22 sq. miles
% Change = 0.01%



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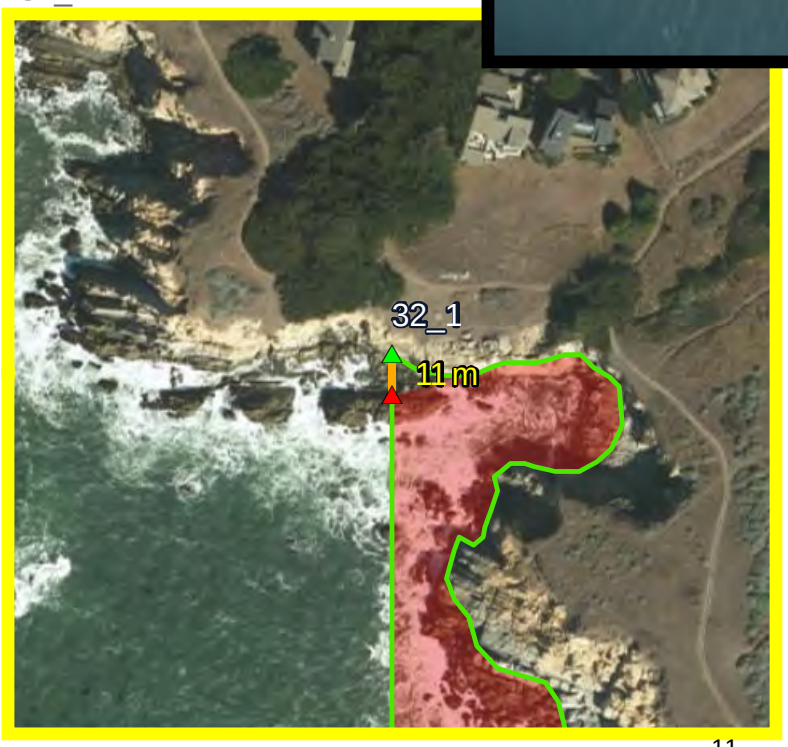
32_1



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11

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Stewarts Point SMR and SMCA

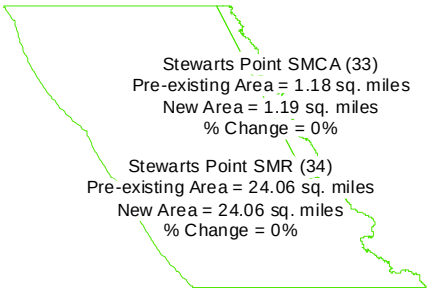
Legend

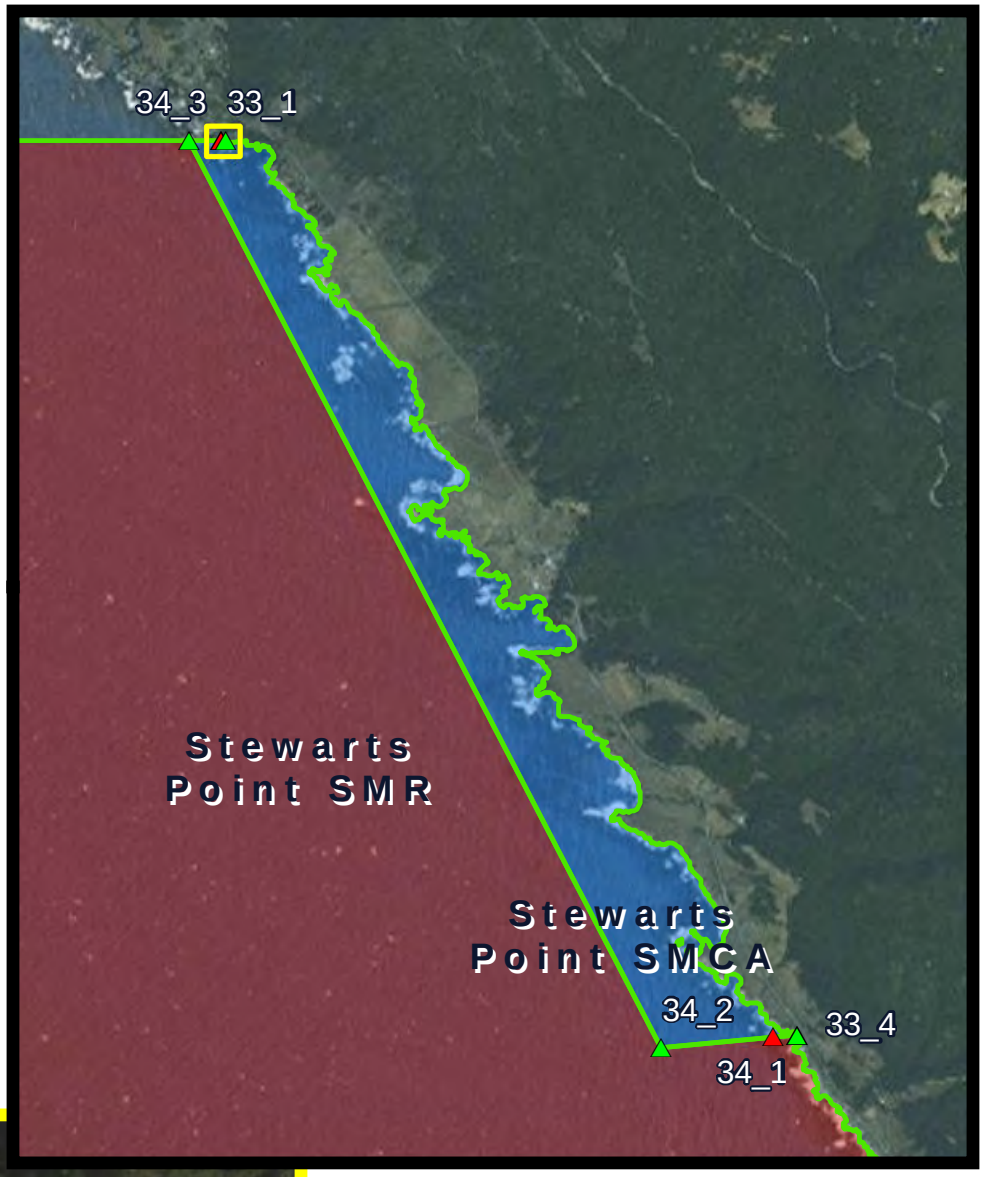
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





0 2,250 Meters

33_1

0 90 Meters

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Stewarts Point SMR and SMCA

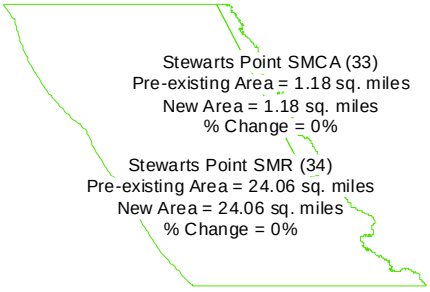
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



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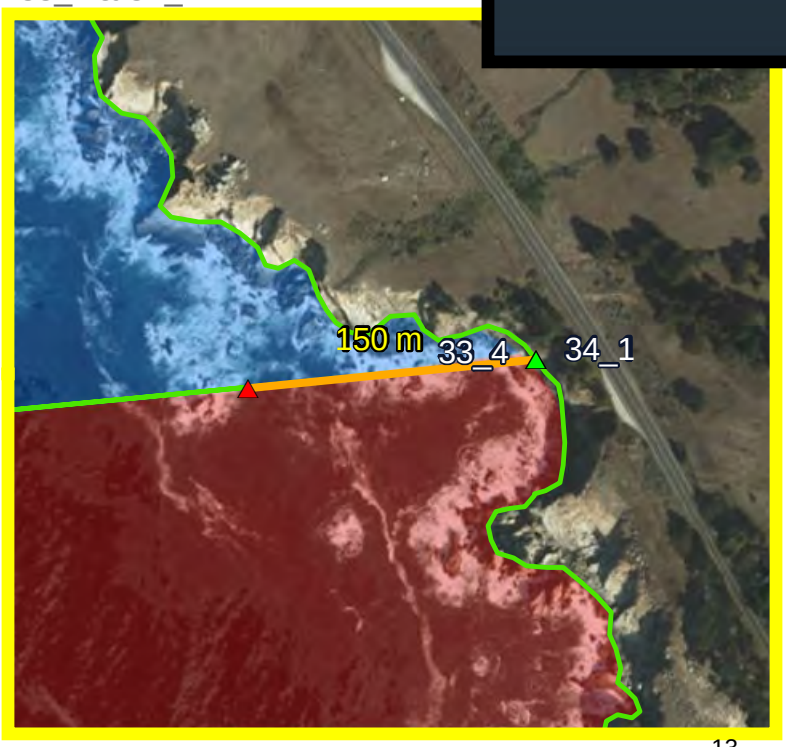
33_4 & 34_1



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Stewarts Point SMR and SMCA

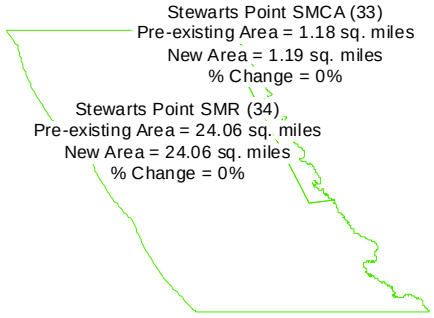
Legend

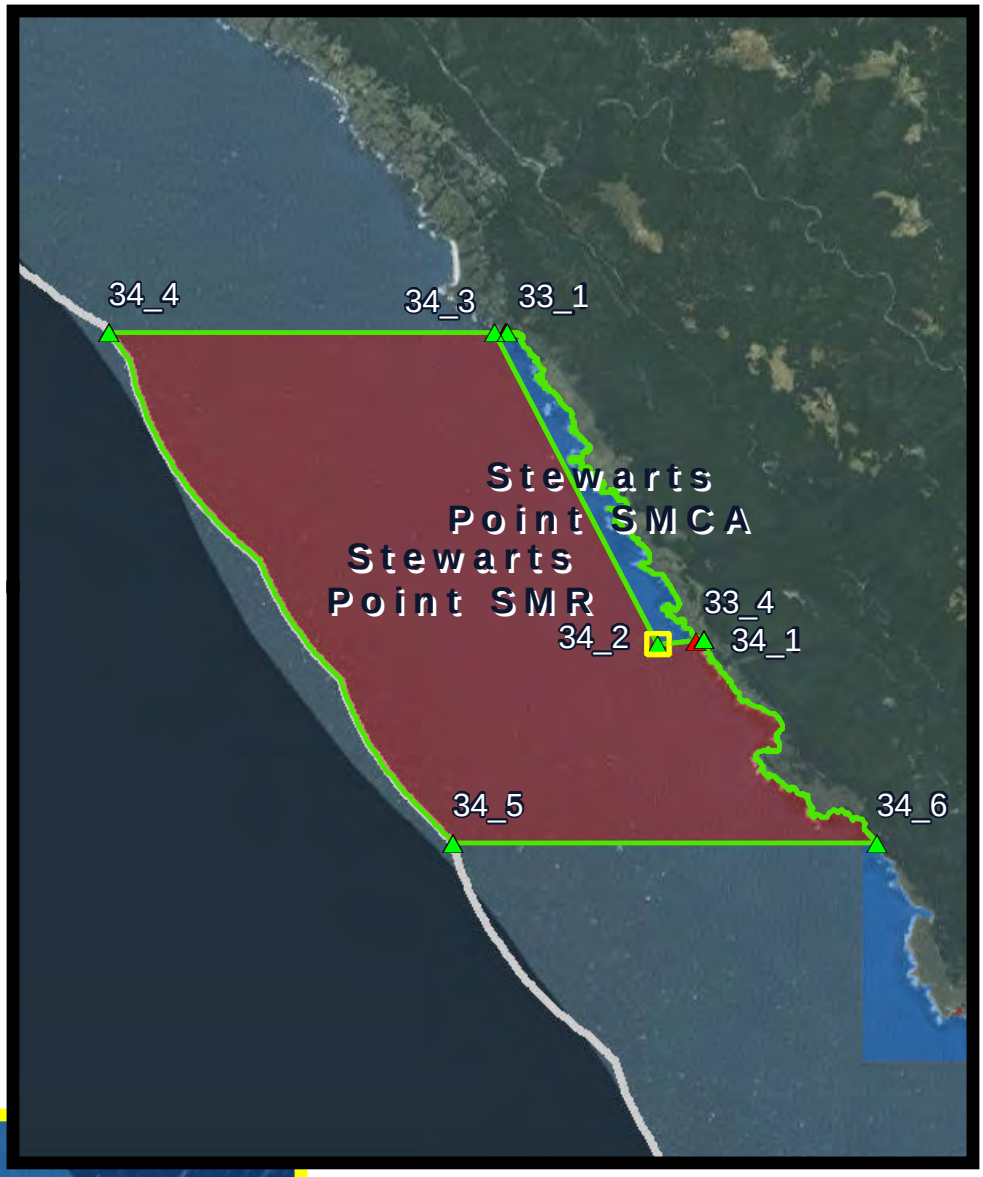
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





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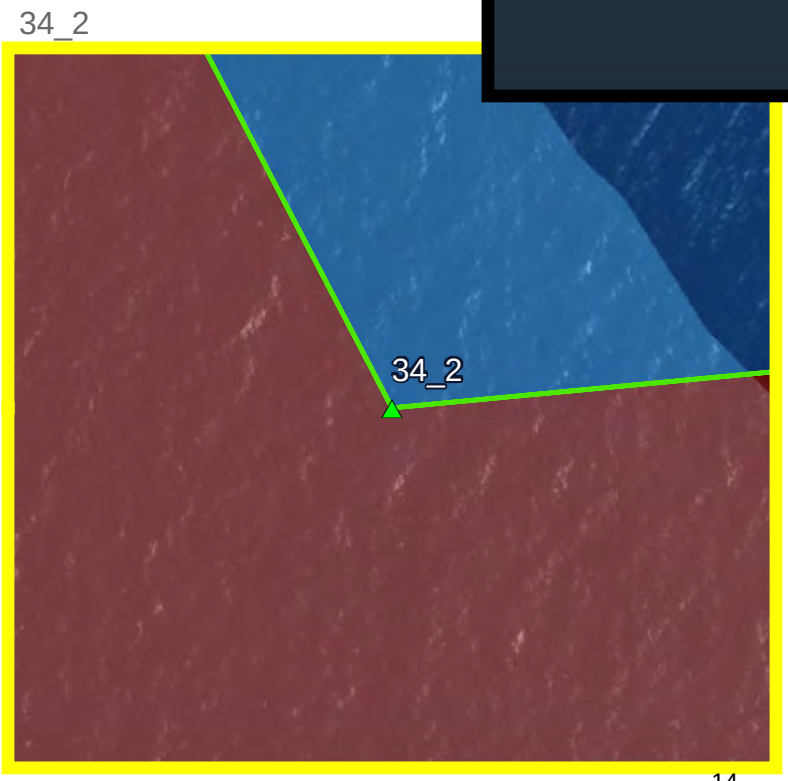

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May 8, 2015

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Stewarts Point SMR and SMCA

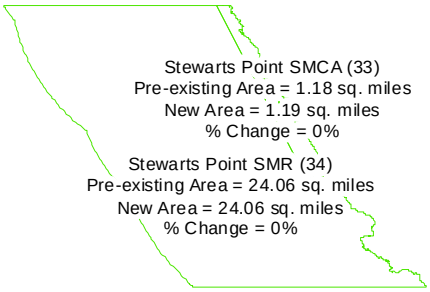
Legend

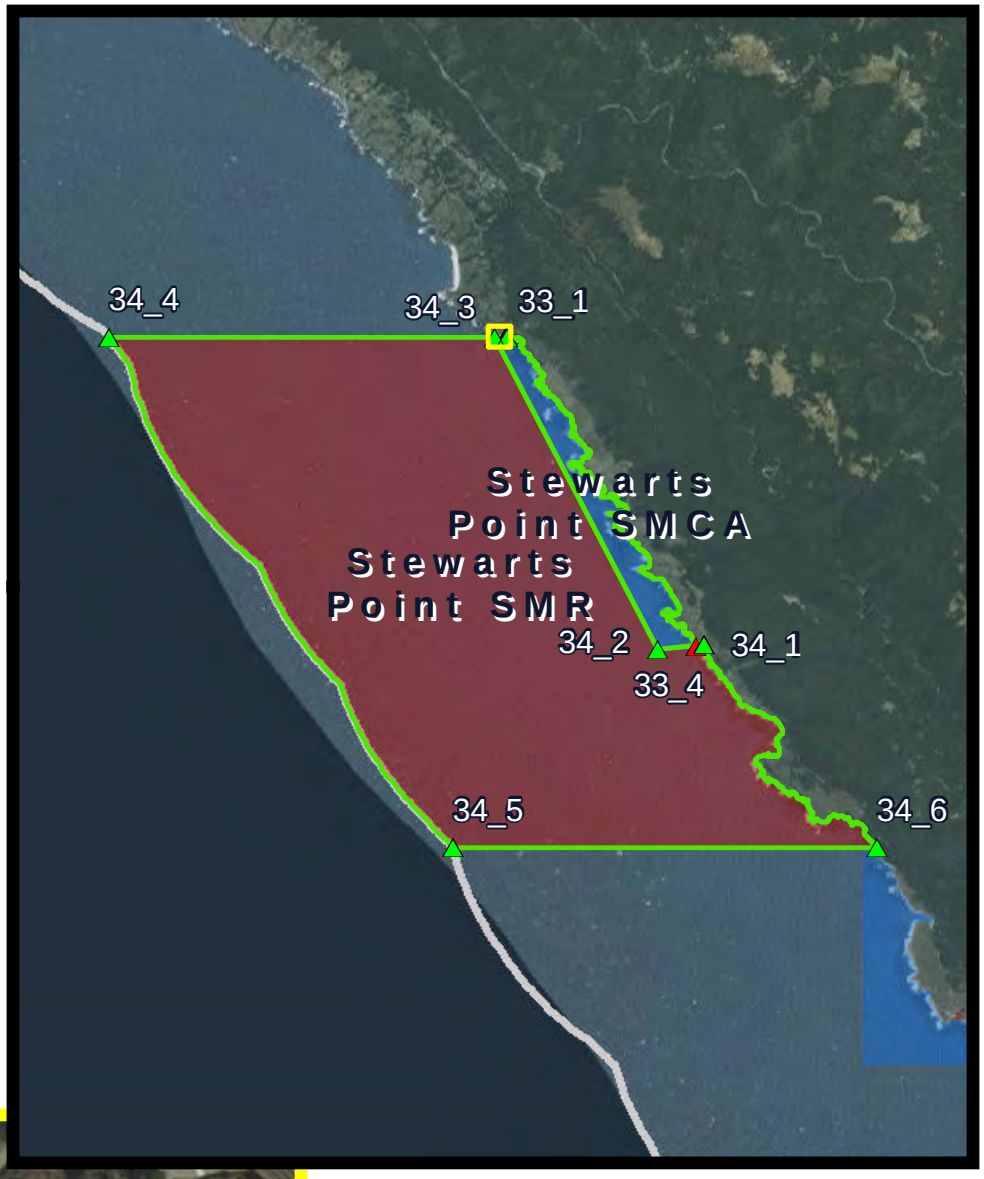
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

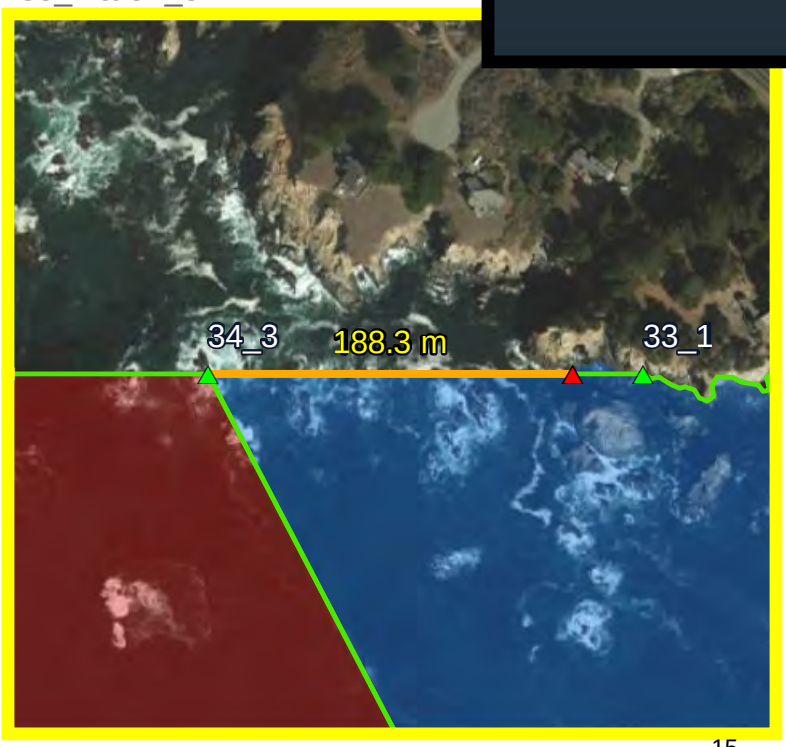
Summary of Proposed Refinements





0 6,600 Meters

33_1 & 34_3



0 190 Meters

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May 8, 2015

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Stewarts Point SMR

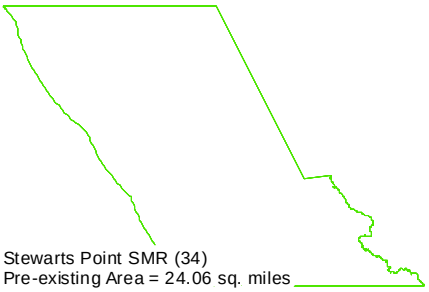
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

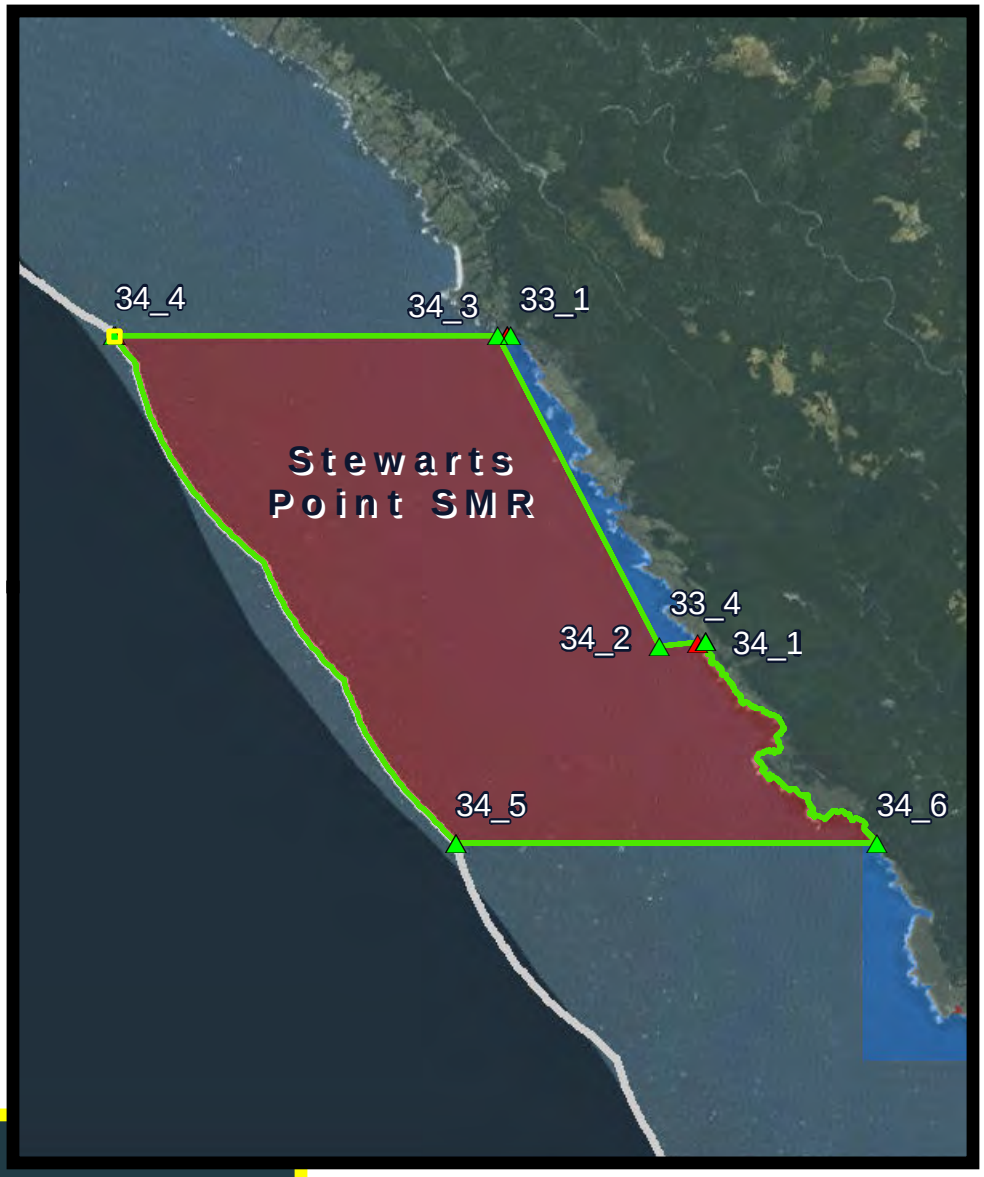
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

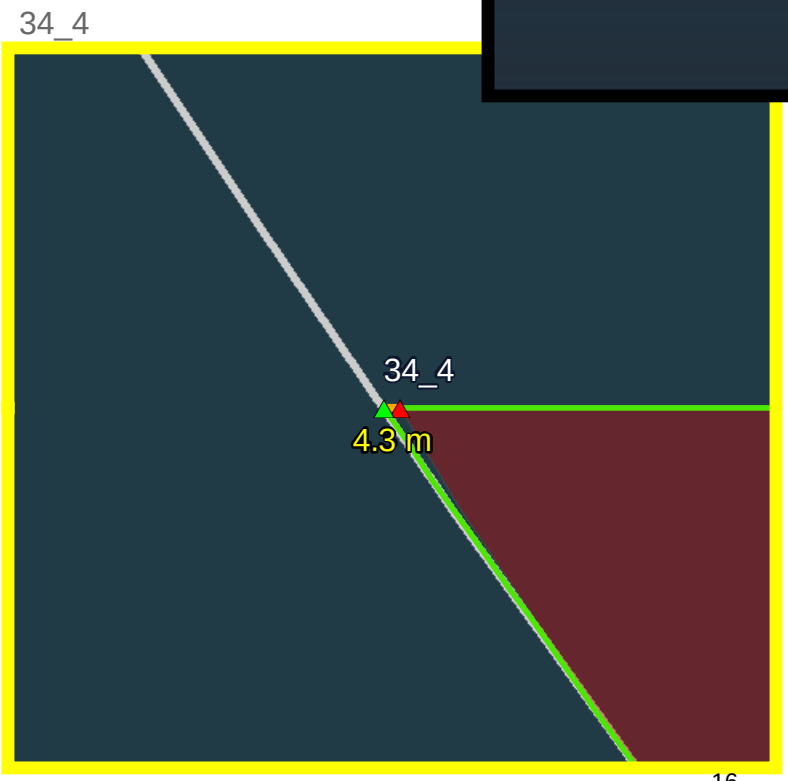
Summary of Proposed Refinements



Stewarts Point SMR (34)
Pre-existing Area = 24.06 sq. miles
New Area = 24.06 sq. miles
% Change = 0%



0 6,600 Meters



0 90 Meters

16

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Stewarts Point SMR

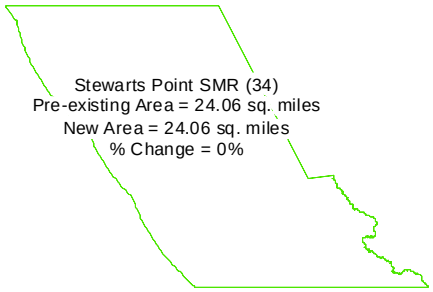
Legend

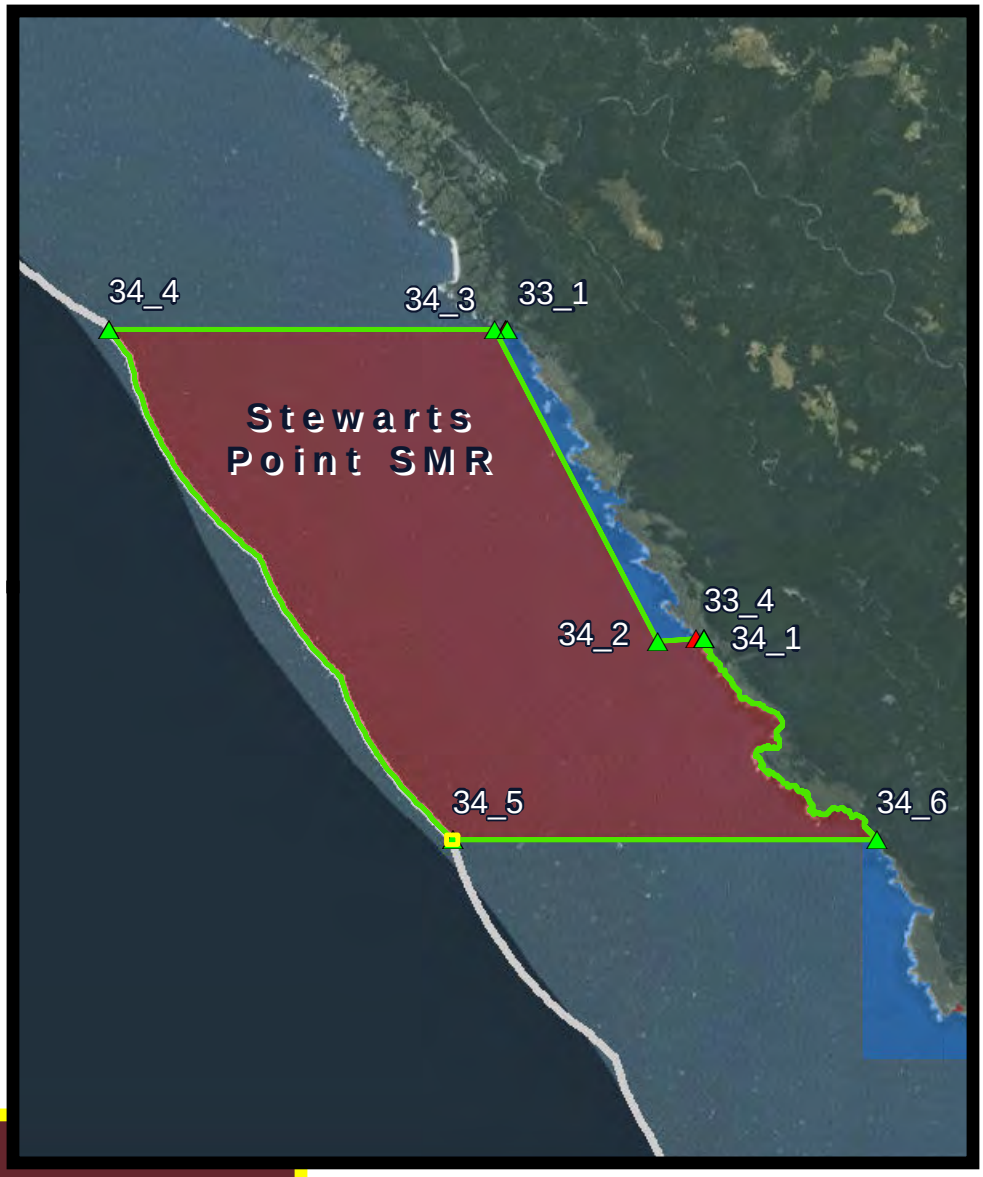
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





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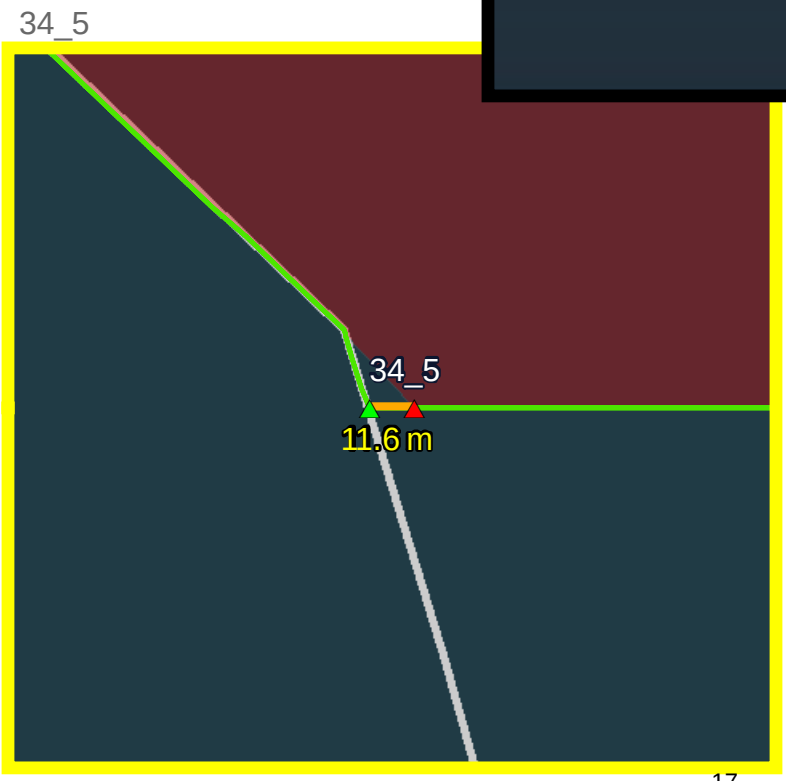

0 90 Meters

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Stewarts Point SMR and Salt Point SMCA

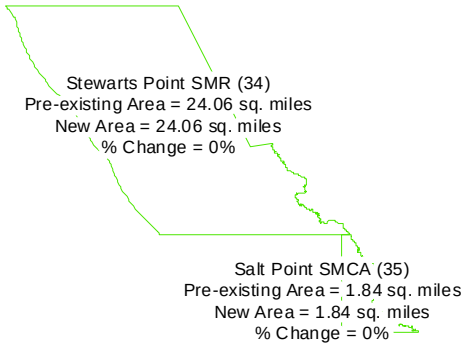
Legend

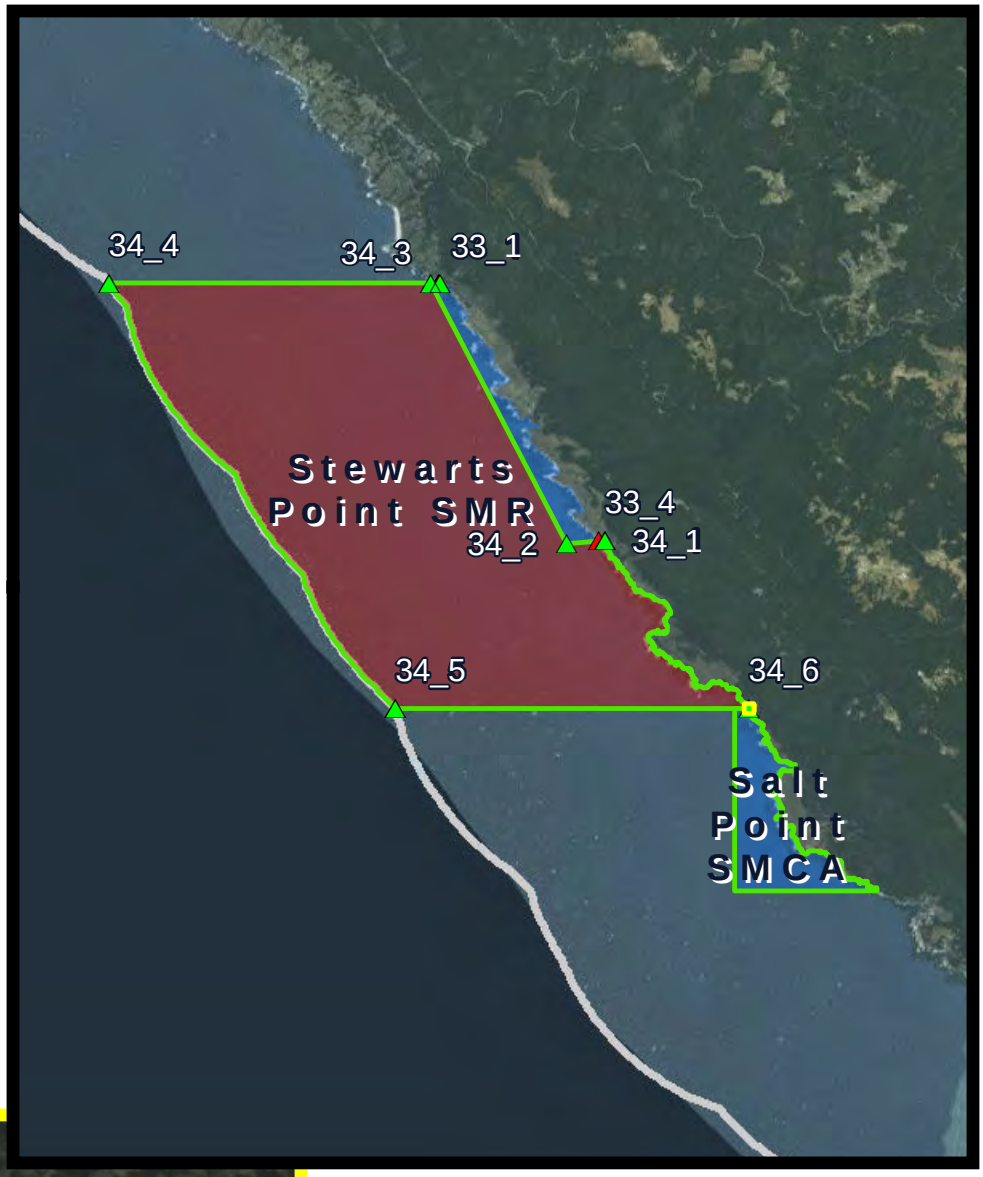
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





0 7,900 Meters

34_6

0 90 Meters

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May 8, 2015

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Bodega Head SMR

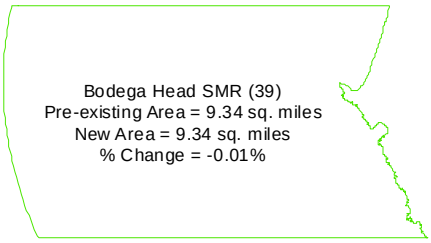
Legend

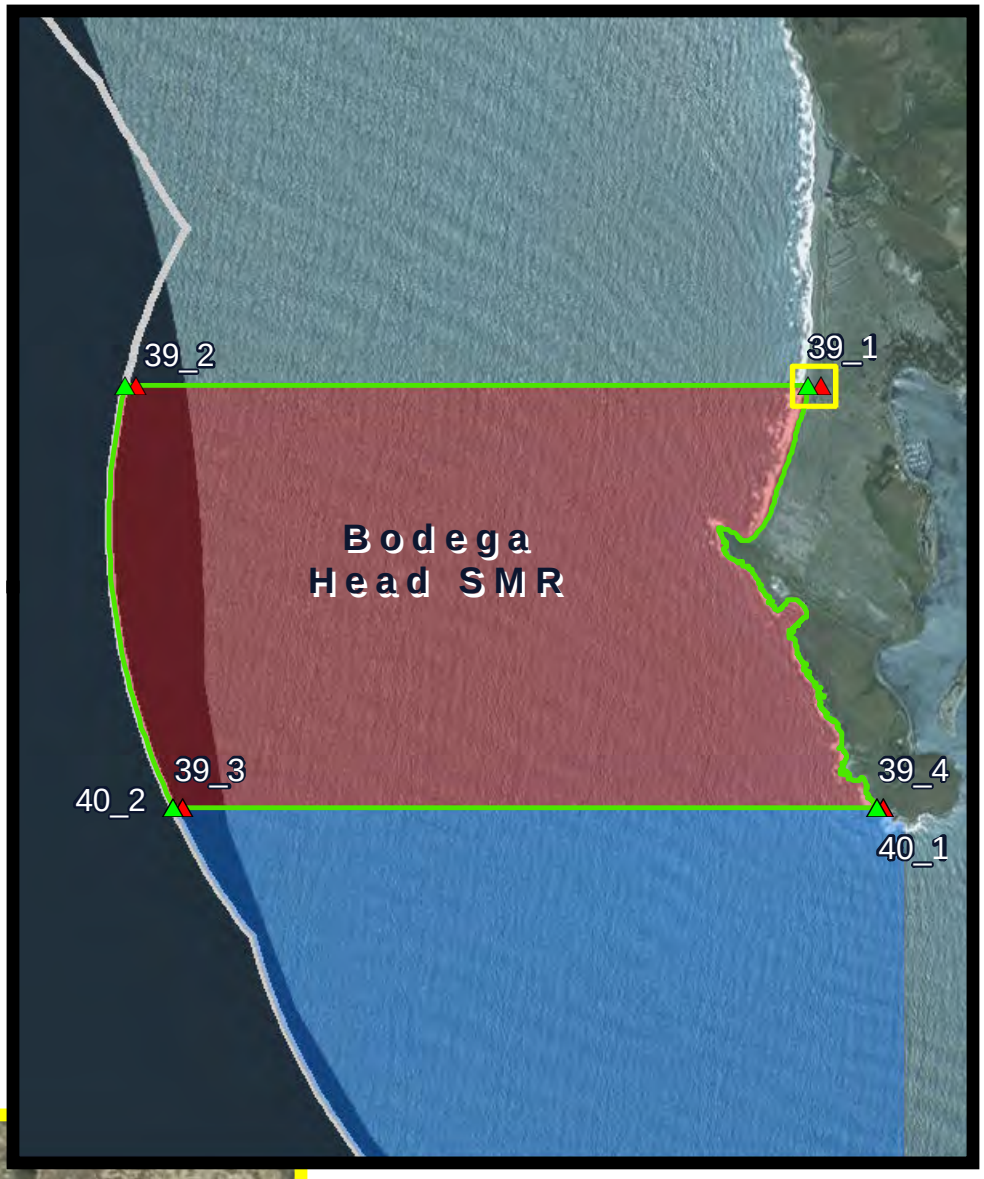
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

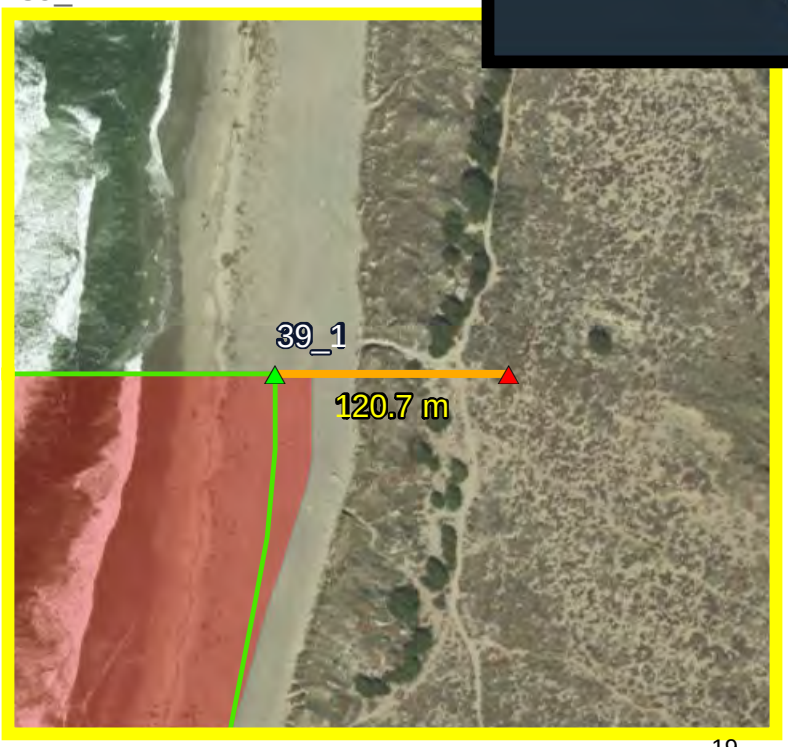
Summary of Proposed Refinements





0 3,400 Meters

39_1



0 190 Meters

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Bodega Head SMR

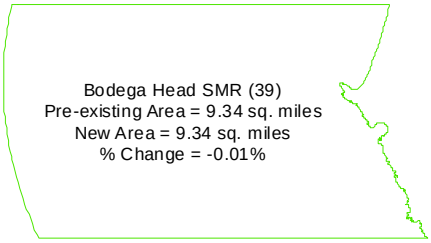
Legend

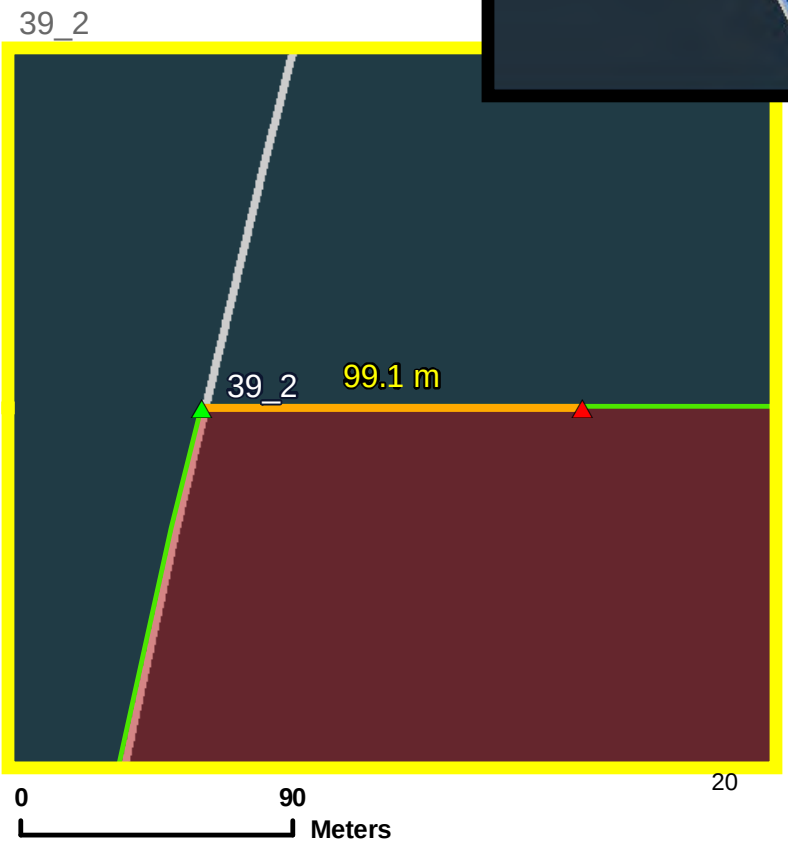
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





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Bodega Head SMR and SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

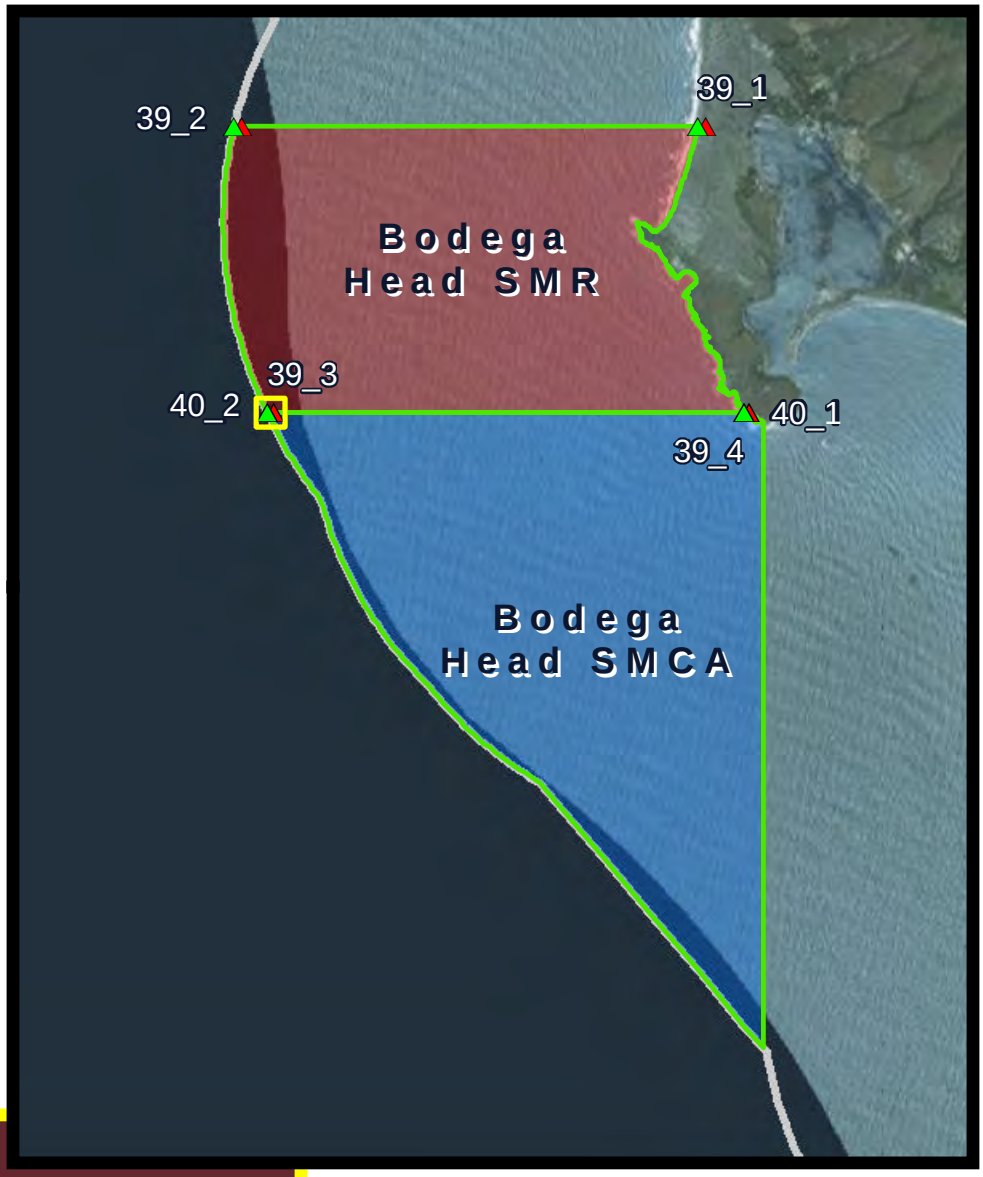
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

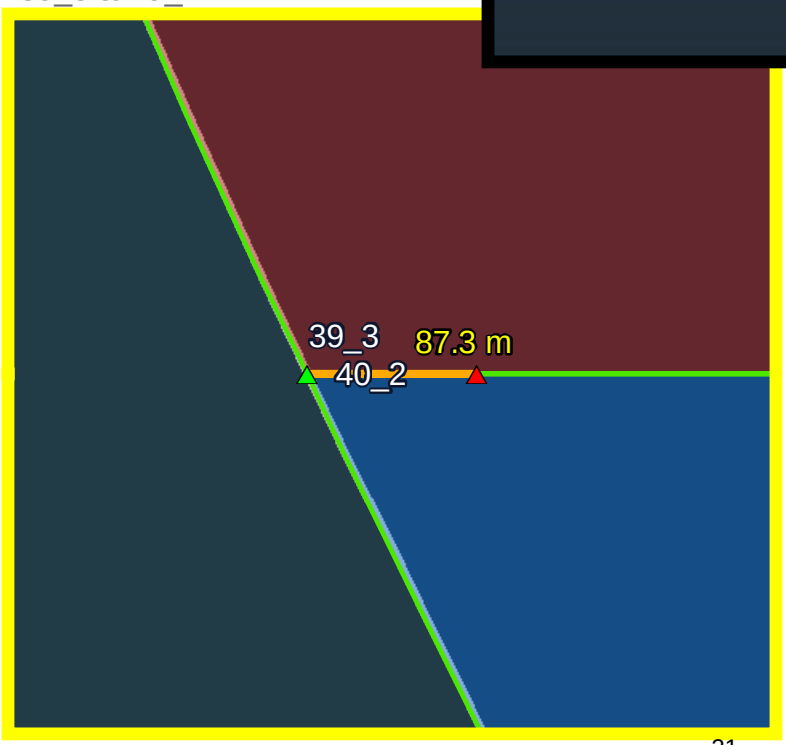
Bodega Head SMR (39)
Pre-existing Area = 9.34 sq. miles
New Area = 9.34 sq. miles
% Change = -0.01%

Bodega Head SMCA (40)
Pre-existing Area = 12.31 sq. miles
New Area = 12.31 sq. miles
% Change = -0.01%



0 5,000 Meters

39_3 & 40_2



0 190 Meters

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Bodega Head SMR and SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

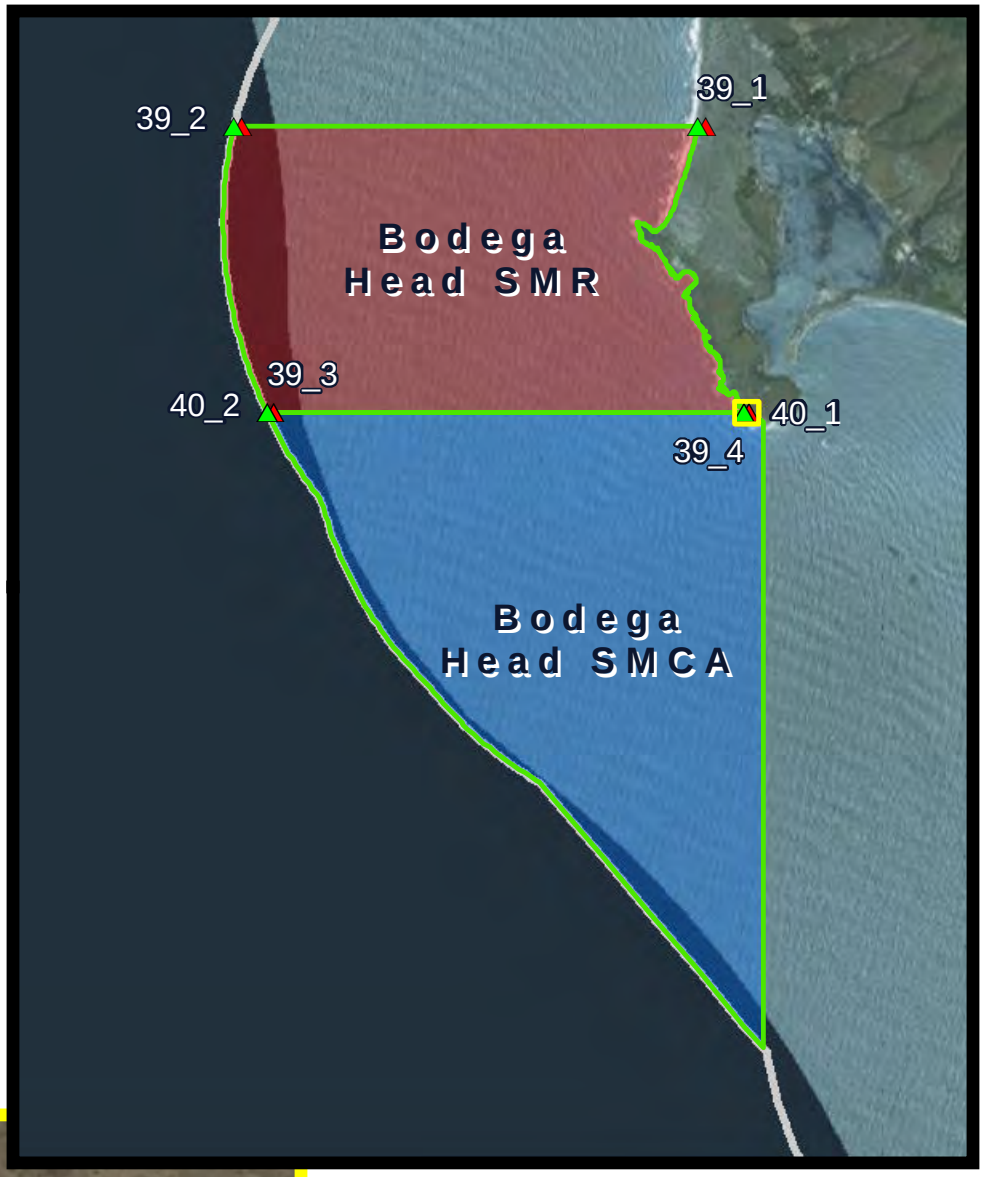
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

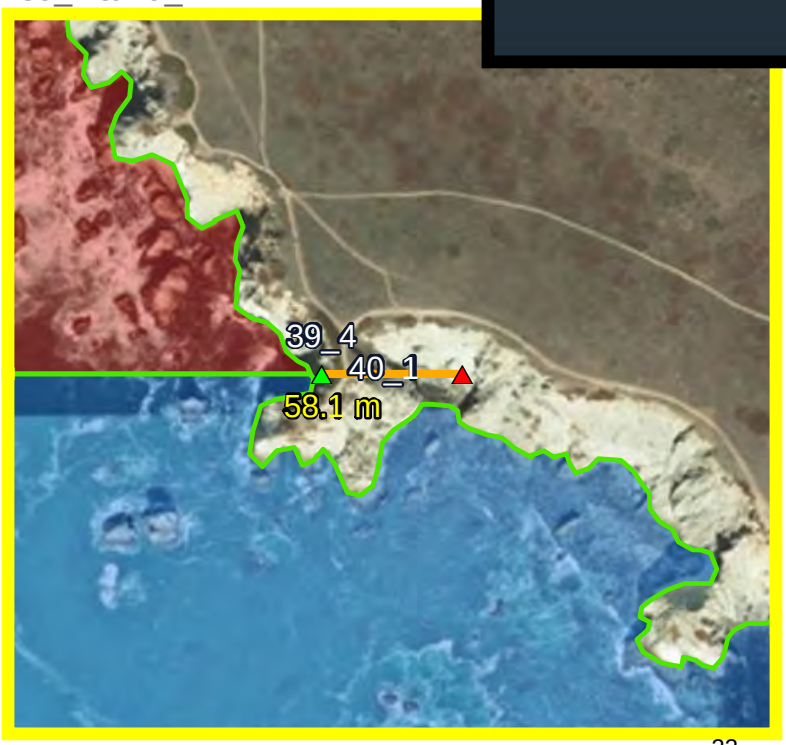
Bodega Head SMR (39)
Pre-existing Area = 9.34 sq. miles
New Area = 9.34 sq. miles
% Change = -0.01%

Bodega Head SMCA (40)
Pre-existing Area = 12.31 sq. miles
New Area = 12.31 sq. miles
% Change = -0.01%



0 5,000 Meters

39_4 & 40_1



0 150 Meters

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Point Reyes SMR

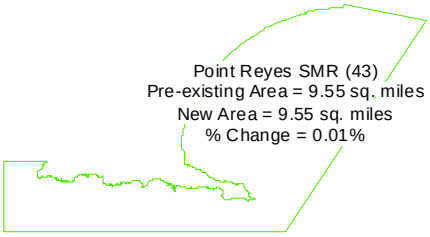
Legend

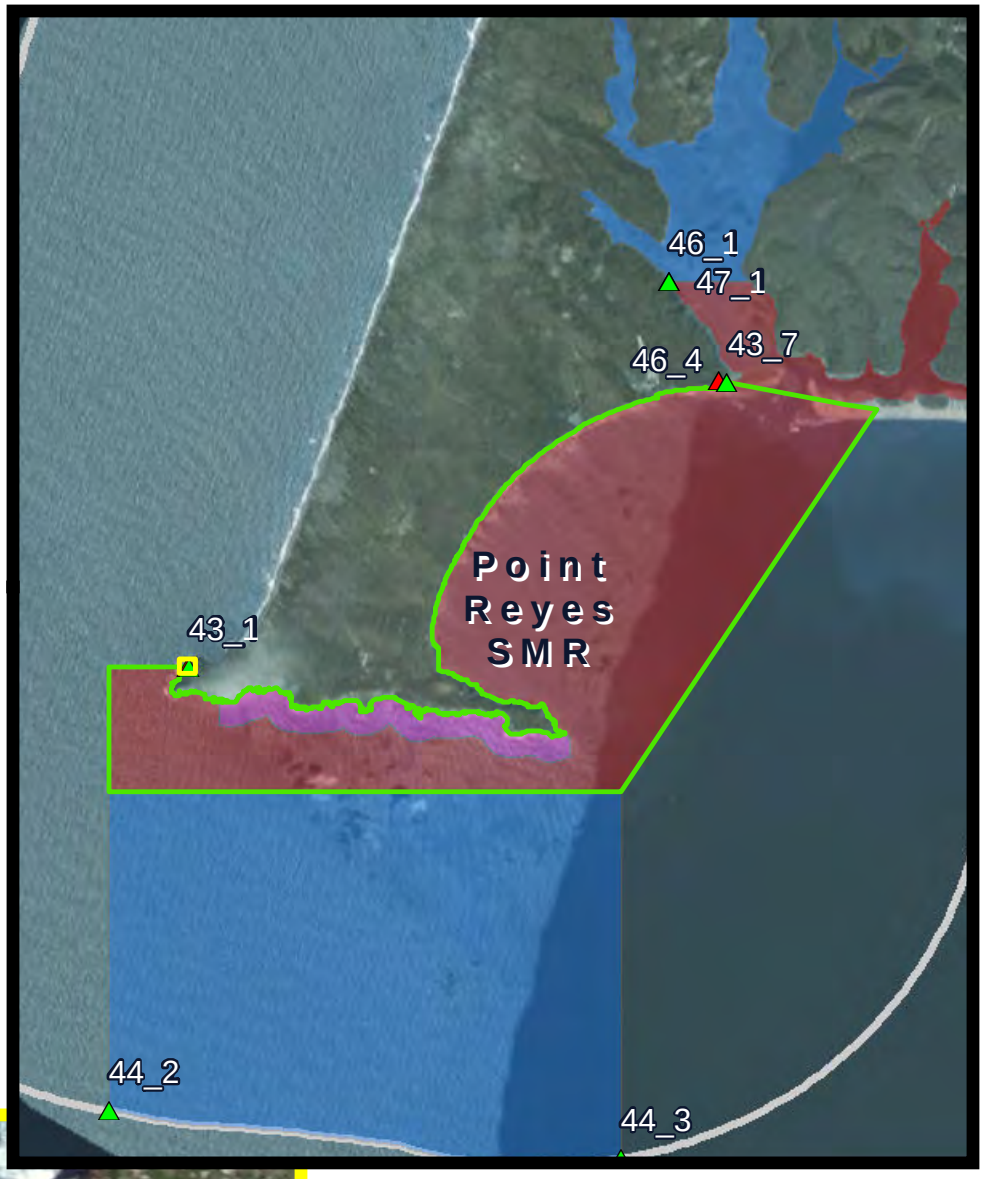
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)
- Special Closure

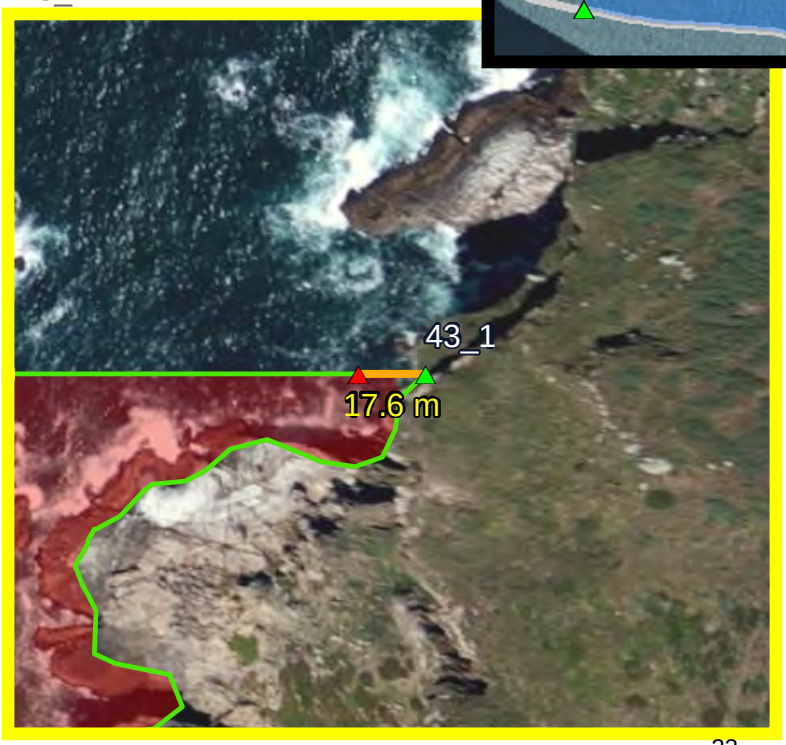
Summary of Proposed Refinements





0 4,900 Meters

43_1



0 90 Meters

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Point Reyes SMR and Estero de Limantour SMR

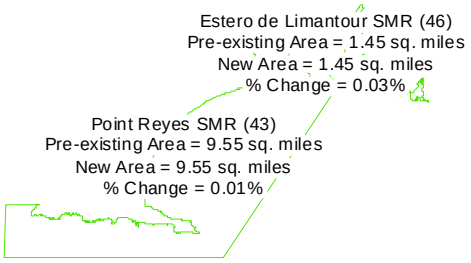
Legend

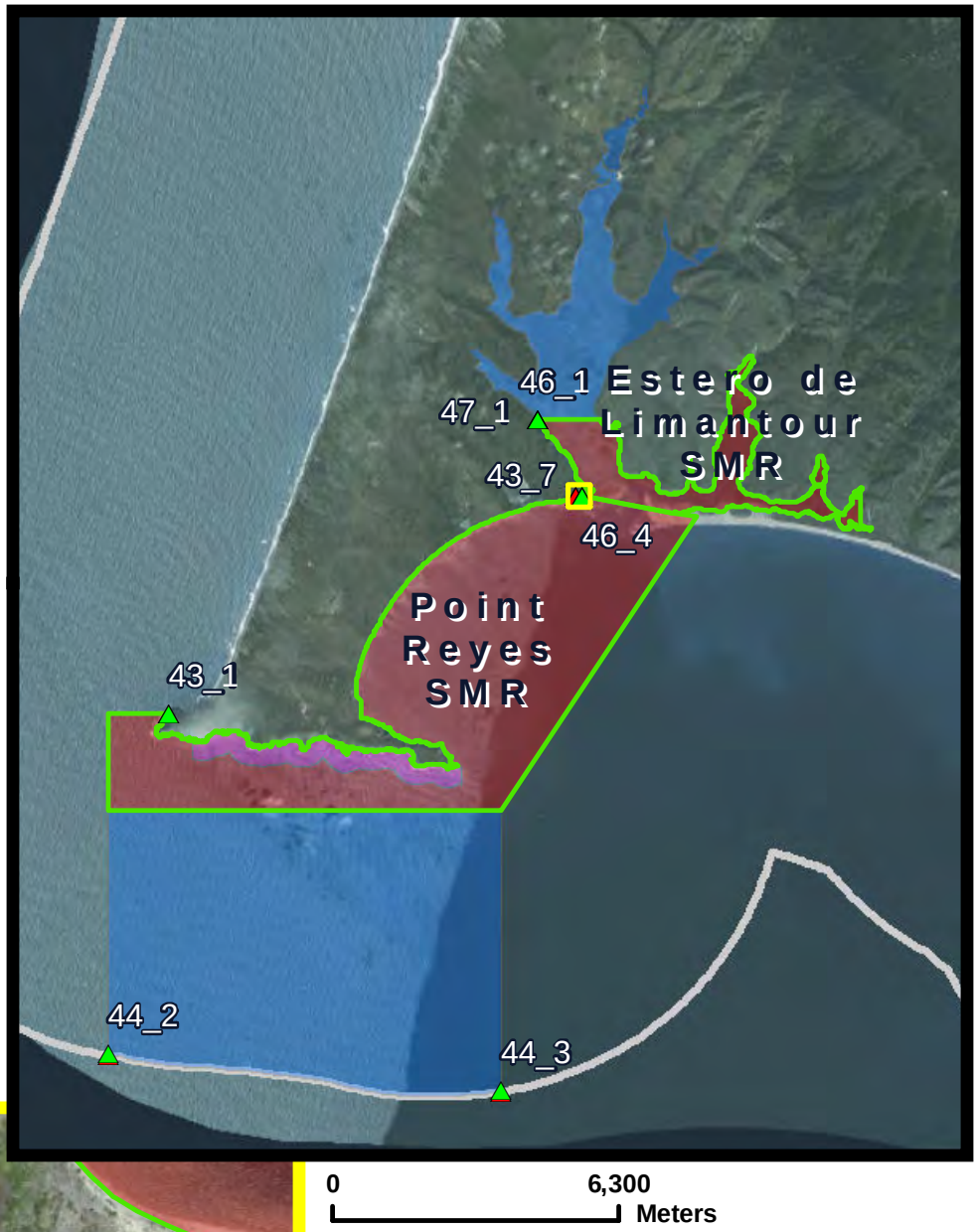
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

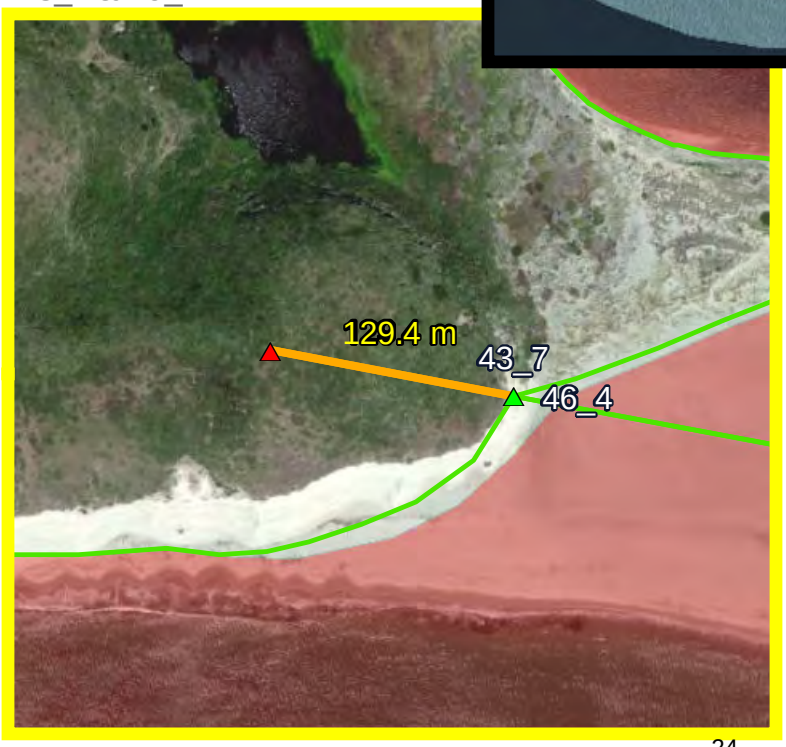
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)
- Special Closure

Summary of Proposed Refinements





43_7 & 46_4



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Point Reyes SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

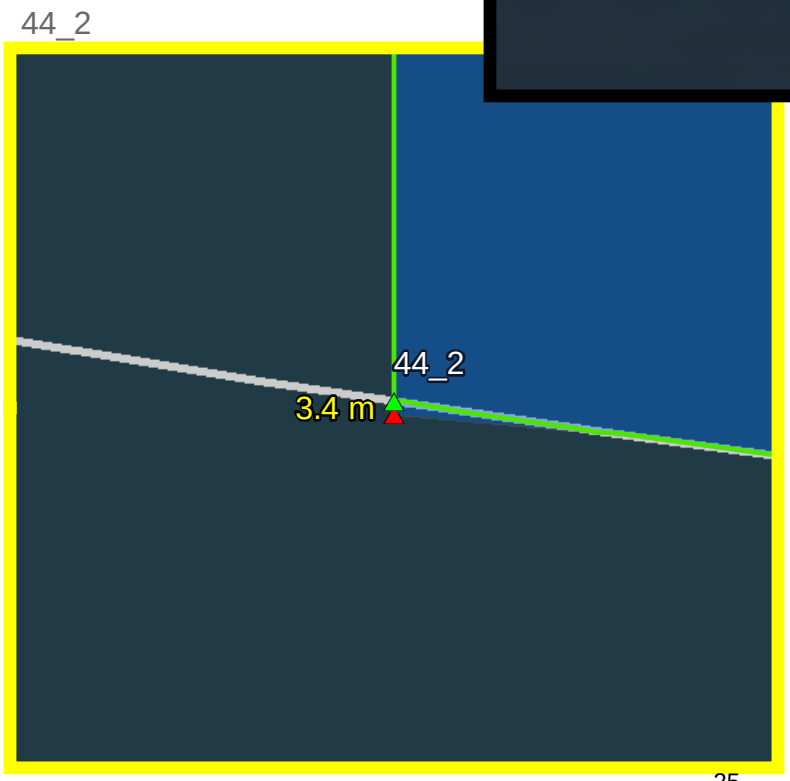
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)
- Special Closure

Summary of Proposed Refinements

Point Reyes SMCA (44)
Pre-existing Area = 12.27 sq. miles
New Area = 12.27 sq. miles
% Change = -0.01%

0 4,900 Meters



0 90 Meters

25

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Point Reyes SMCA

Legend

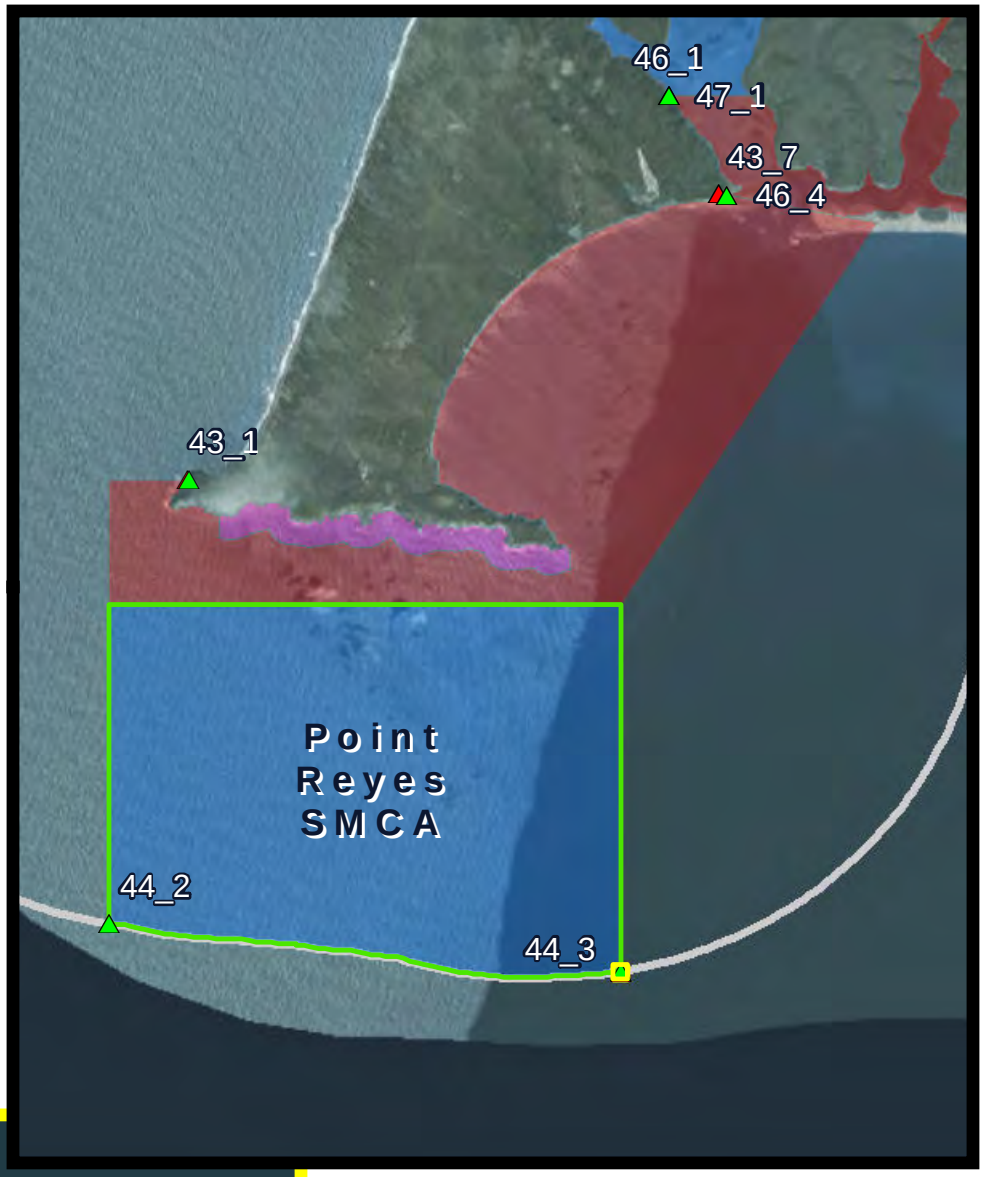
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

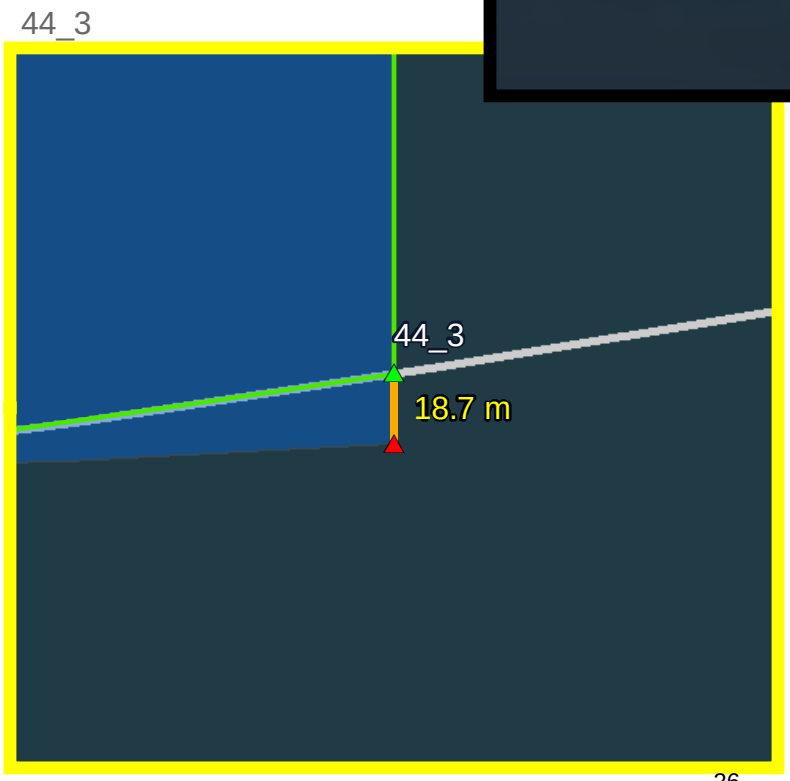
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)
- Special Closure

Summary of Proposed Refinements

Point Reyes SMCA (44)
Pre-existing Area = 12.27 sq. miles
New Area = 12.27 sq. miles
% Change = -0.01%



0 4,900 Meters



0 90 Meters

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Estero de Limantour SMR and Drakes Estero SMCA

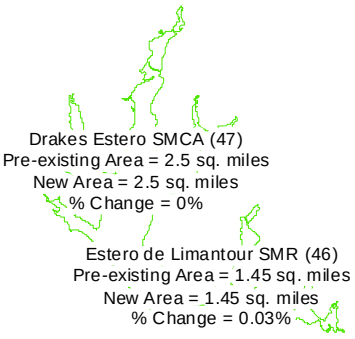
Legend

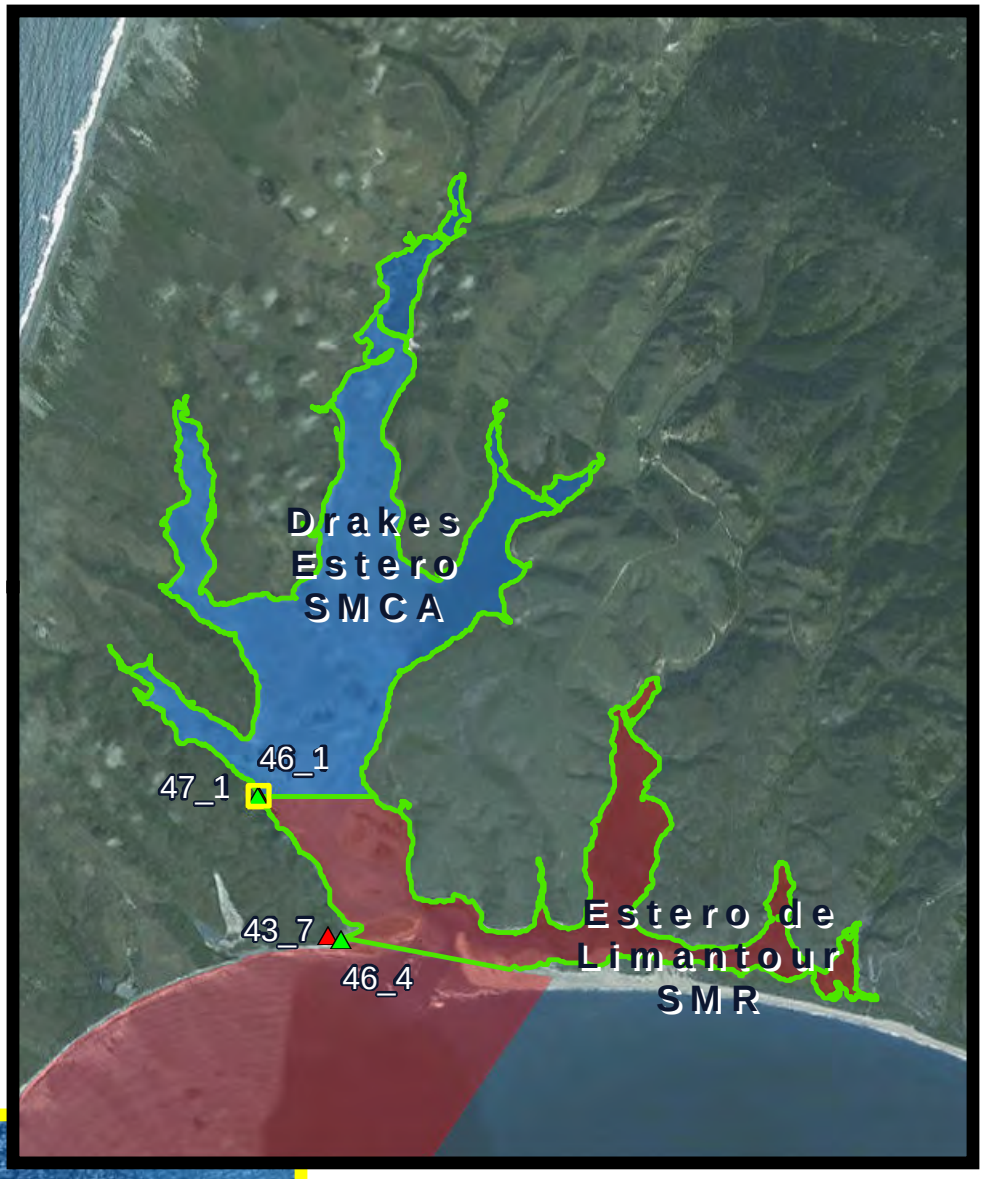
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





0 3,400 Meters

46_1 & 47_1

0 90 Meters

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Point Resistance Rock Special Closure

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- Special Closure

Summary of Proposed Refinements

48_1

0 90 Meters

28

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Duxbury Reef SMCA

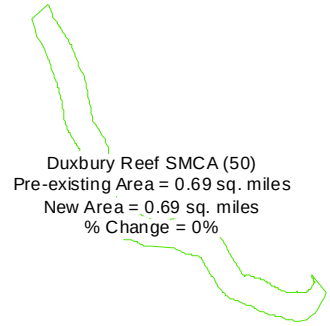
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

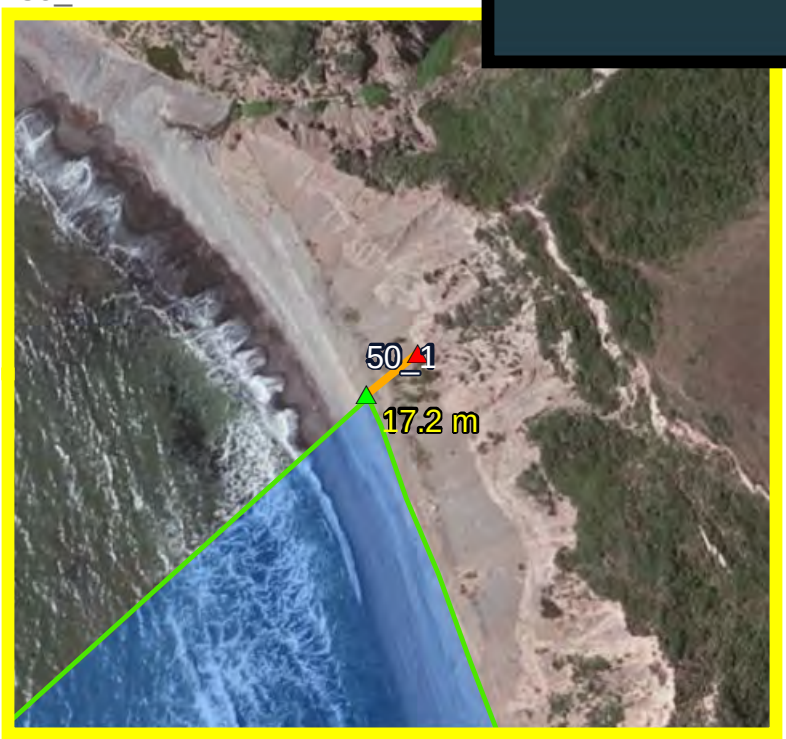
Summary of Proposed Refinements



Duxbury Reef SMCA (50)
Pre-existing Area = 0.69 sq. miles
New Area = 0.69 sq. miles
% Change = 0%

0 1,600 Meters

50_1



0 90 Meters

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North Farallon Islands SMR

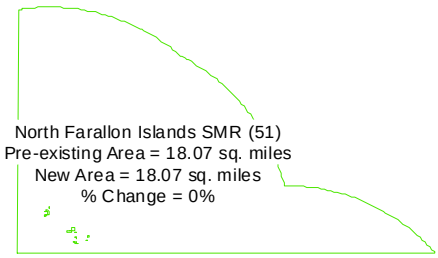
Legend

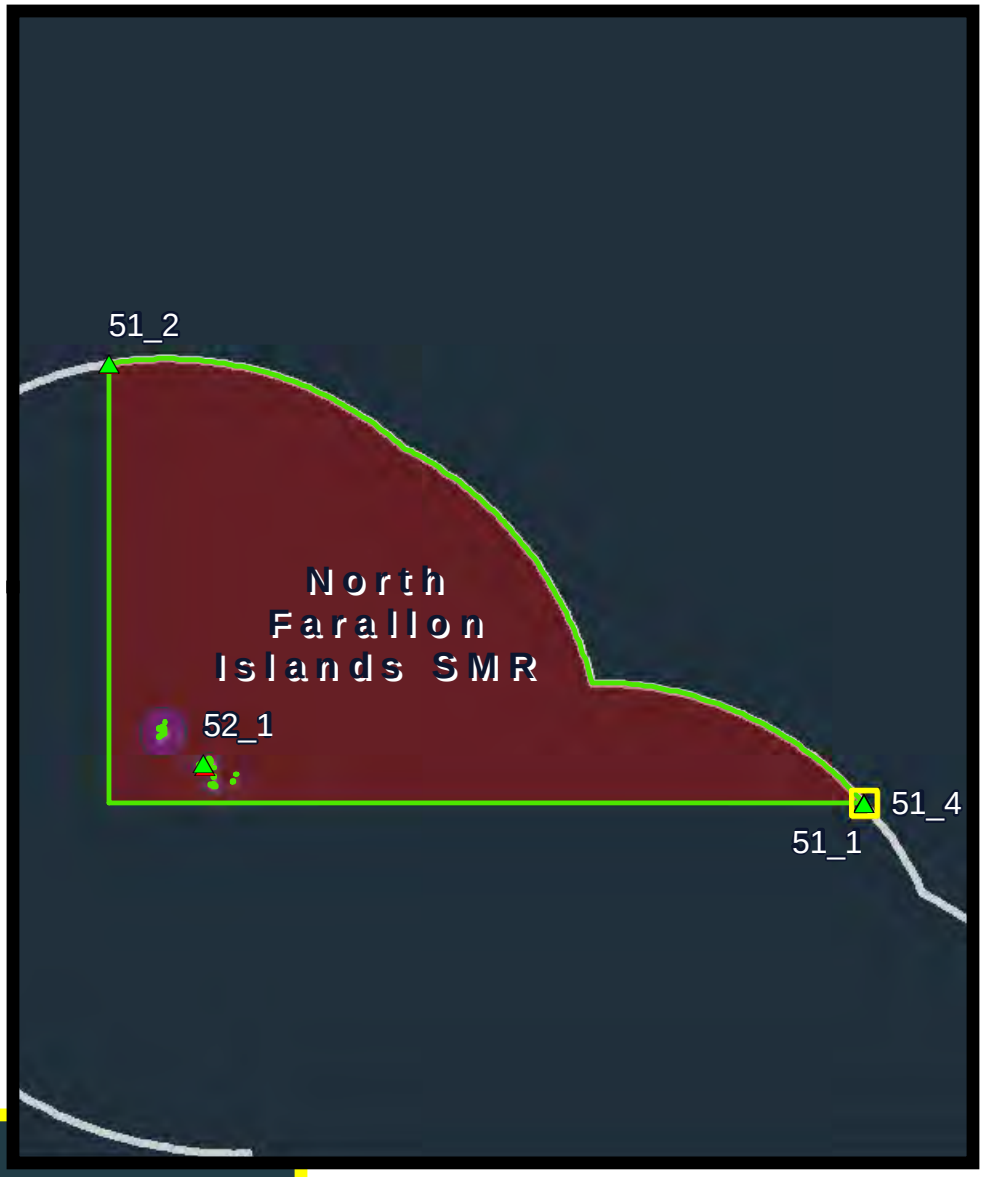
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

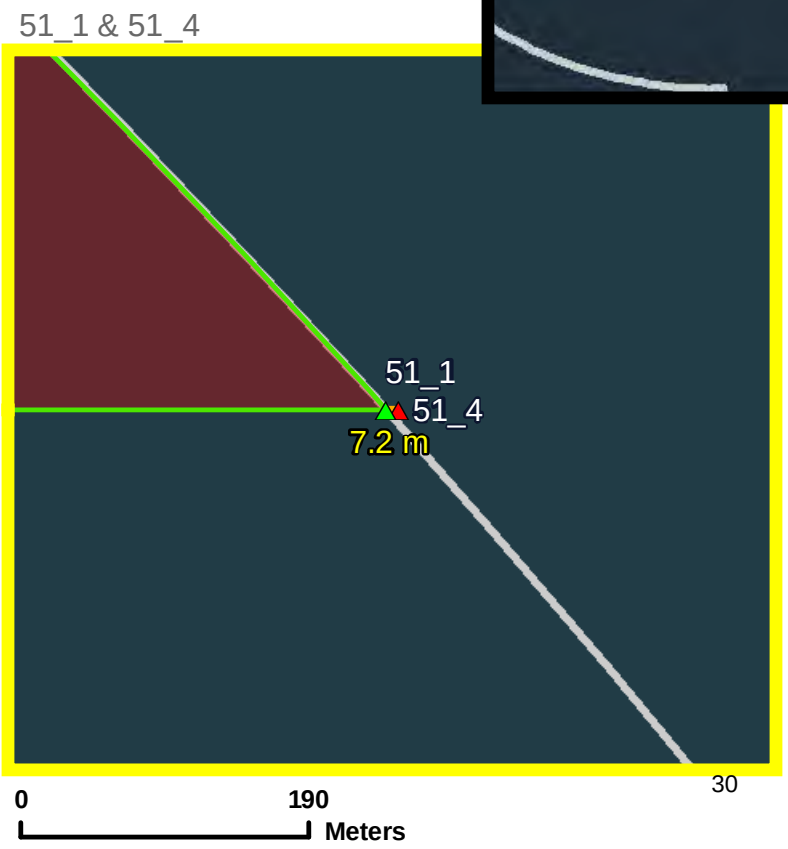
Current MPA Boundaries

- State Marine Reserve (SMR)
- Special Closure

Summary of Proposed Refinements







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North Farallon Islands SMR

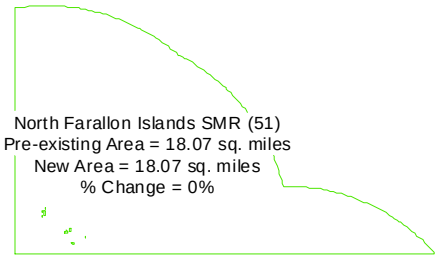
Legend

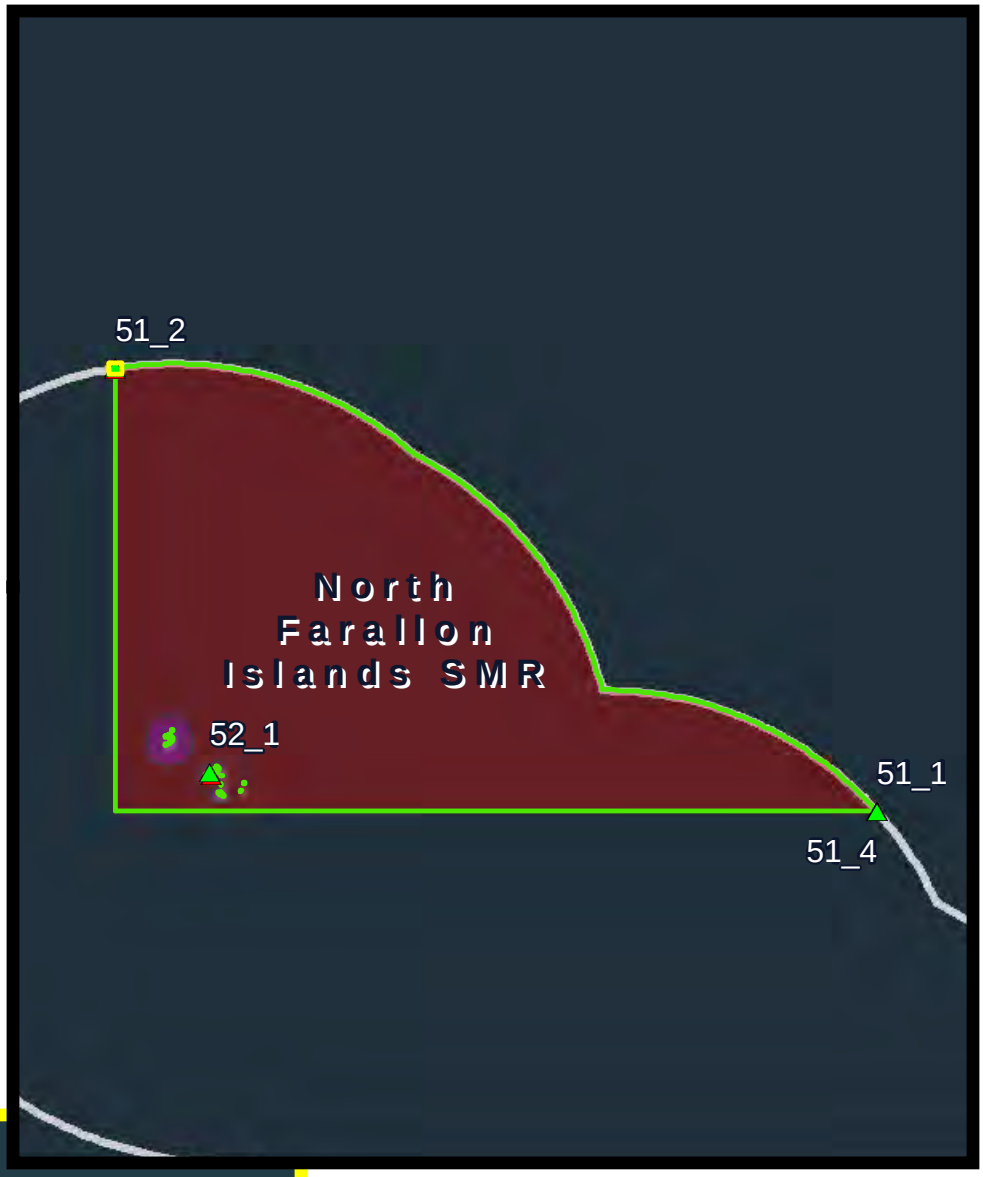
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

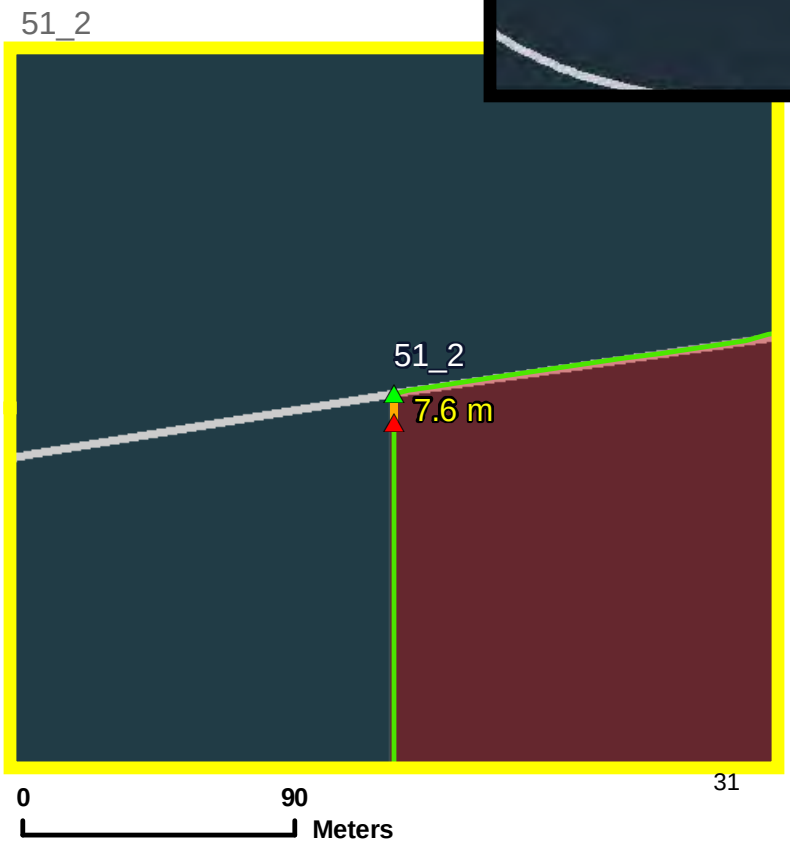
Current MPA Boundaries

- State Marine Reserve (SMR)
- Special Closure

Summary of Proposed Refinements







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North Farallon Islands Special Closure

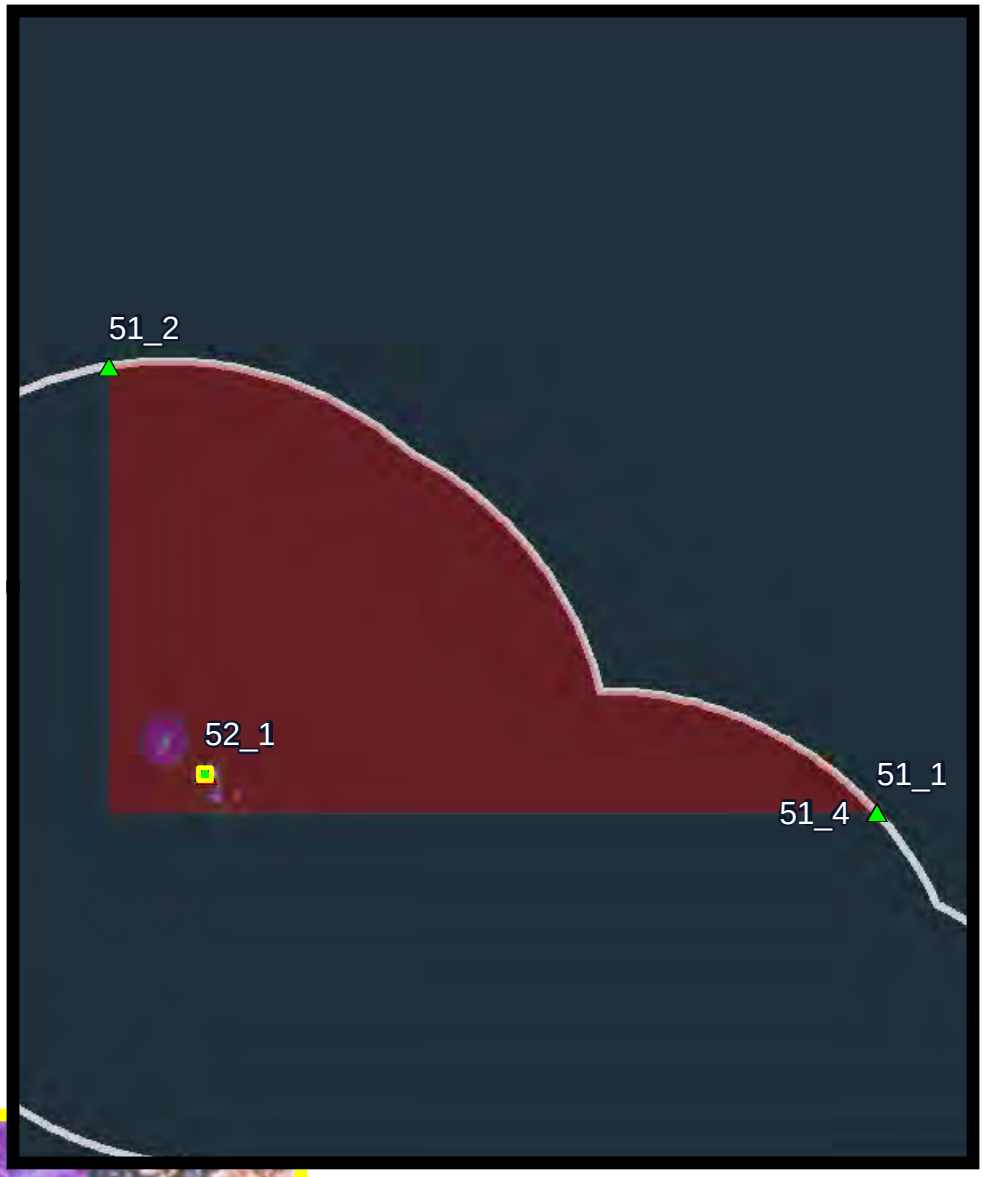
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

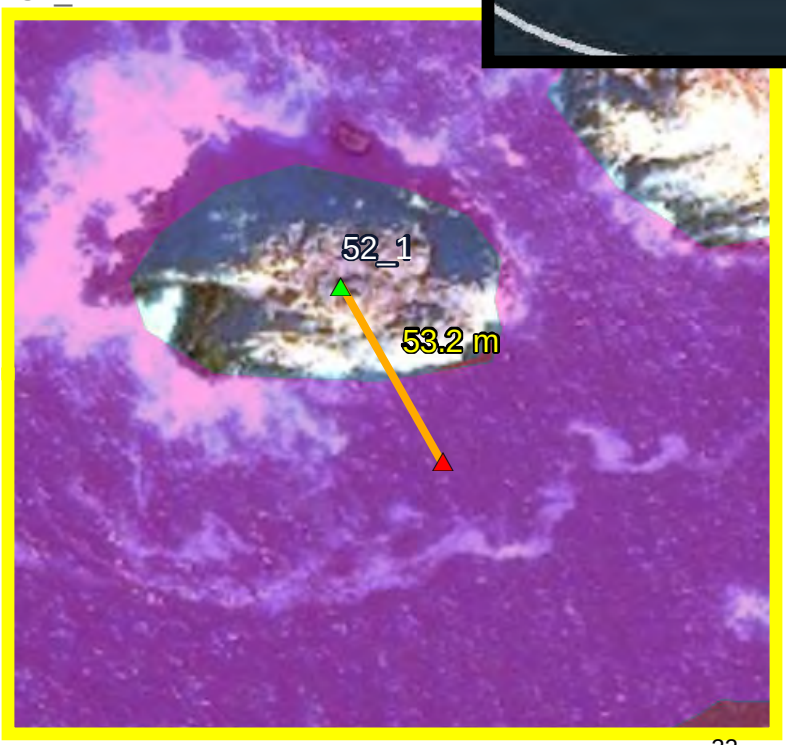
- State Marine Reserve (SMR)
- Special Closure

Summary of Proposed Refinements



0 5,500 Meters

52_1



0 90 Meters

32

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Southeast Farallon Island SMCA

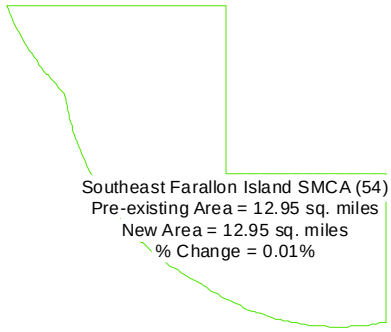
Legend

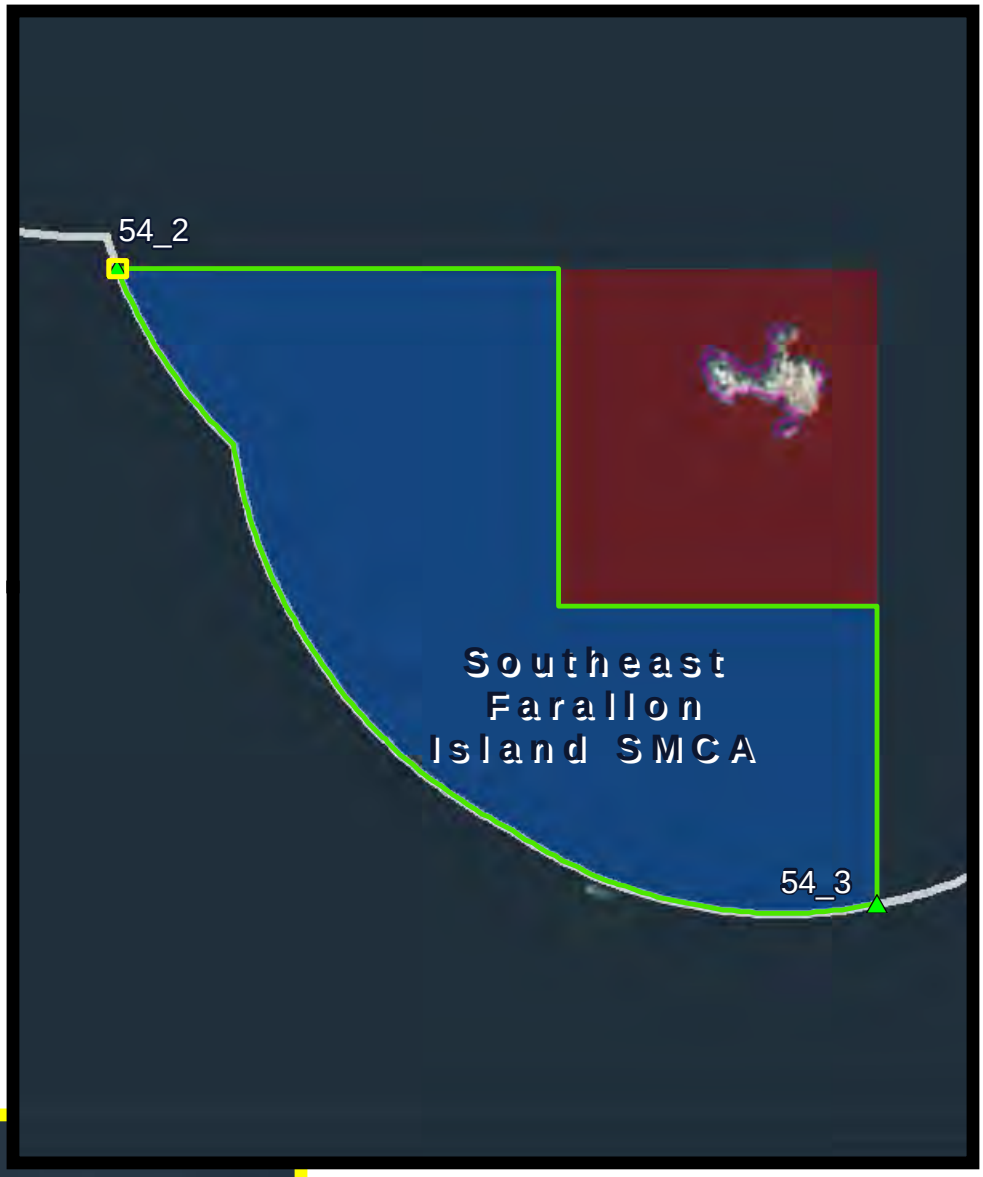
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)
- Special Closure

Summary of Proposed Refinements





0 4,200 Meters

0 90 Meters

33

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Southeast Farallon Island SMCA

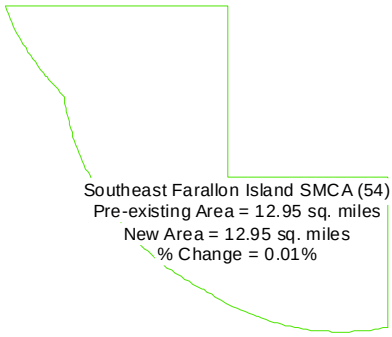
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

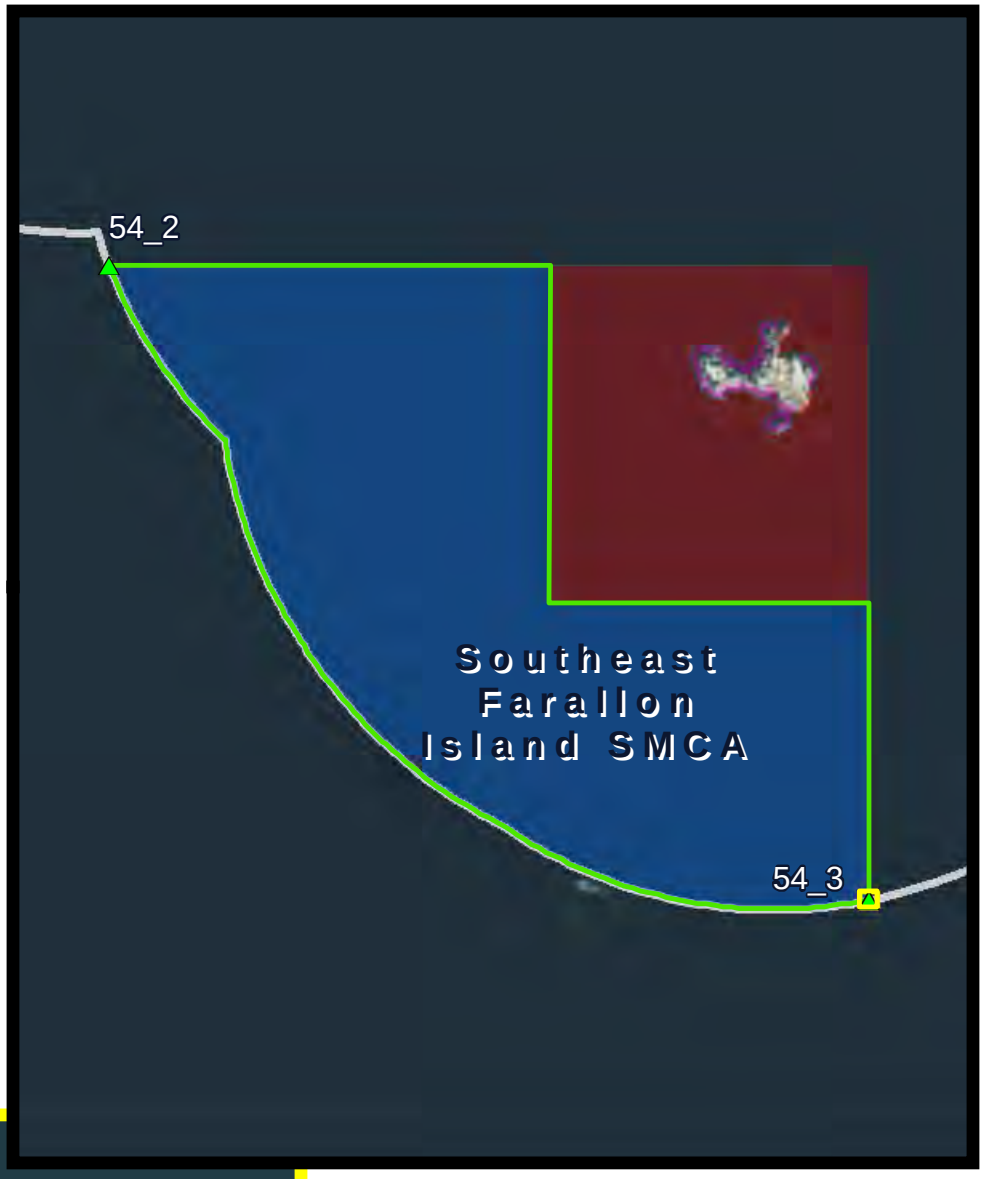
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)
- Special Closure

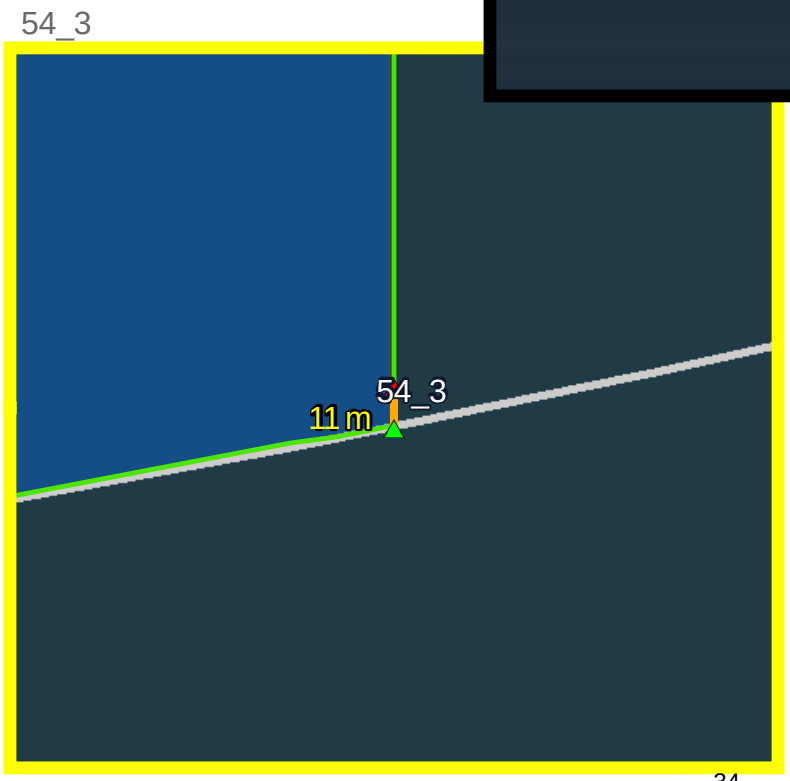
Summary of Proposed Refinements



Southeast Farallon Island SMCA (54)
Pre-existing Area = 12.95 sq. miles
New Area = 12.95 sq. miles
% Change = 0.01%



0 4,200 Meters



0 90 Meters

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Montara SMR

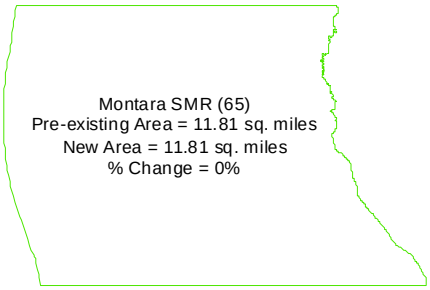
Legend

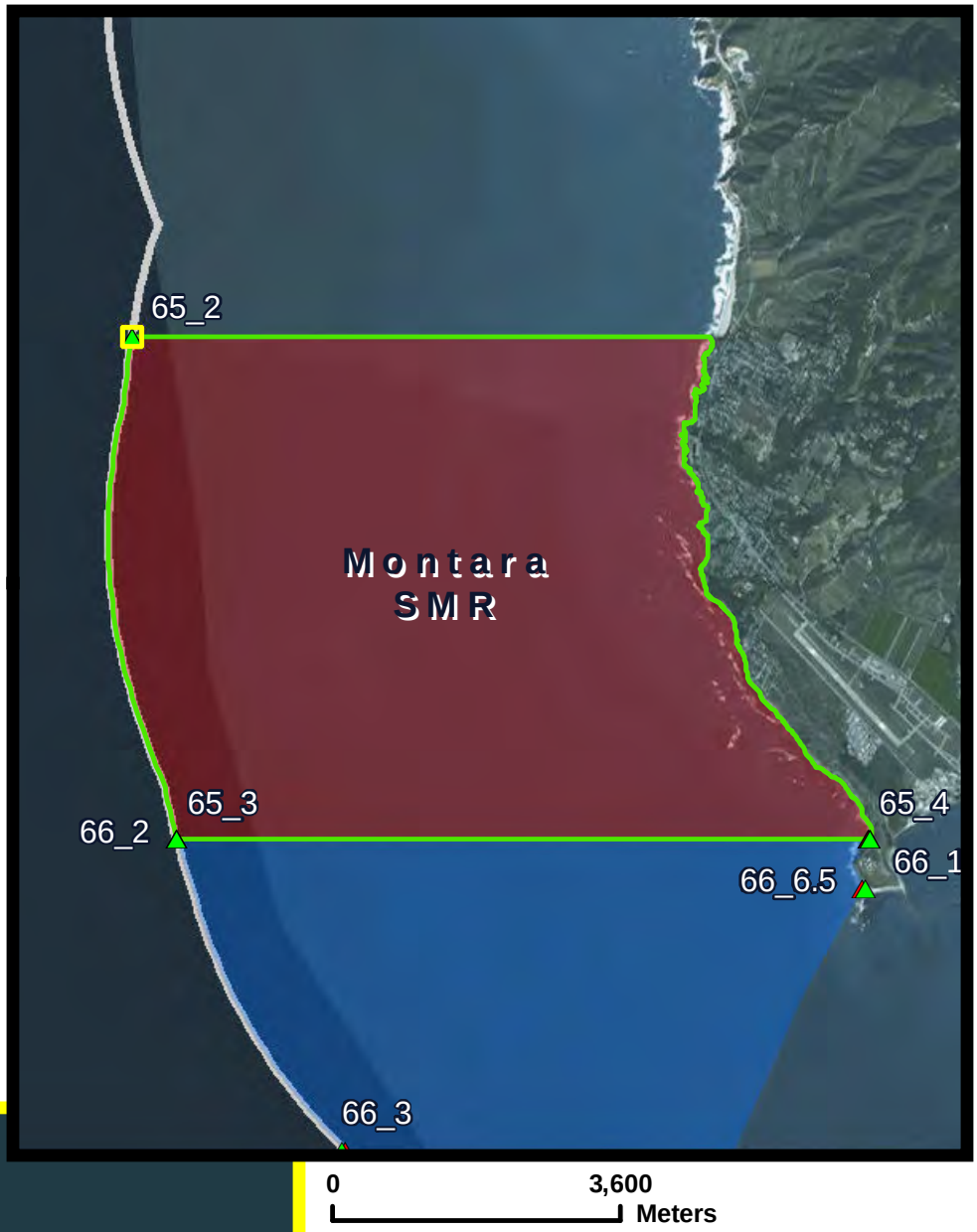
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

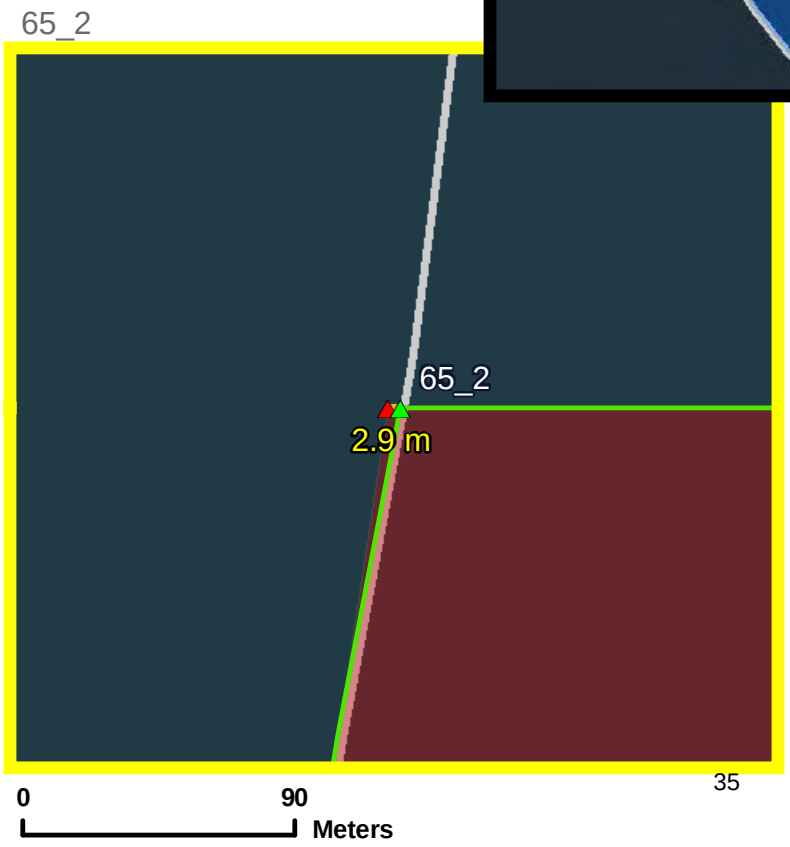
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements







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Montara SMR and Pillar Point SMCA

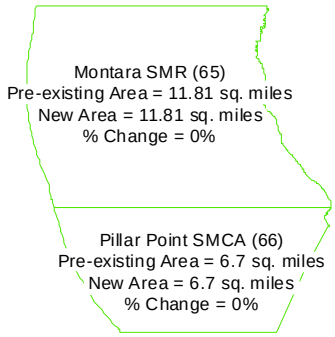
Legend

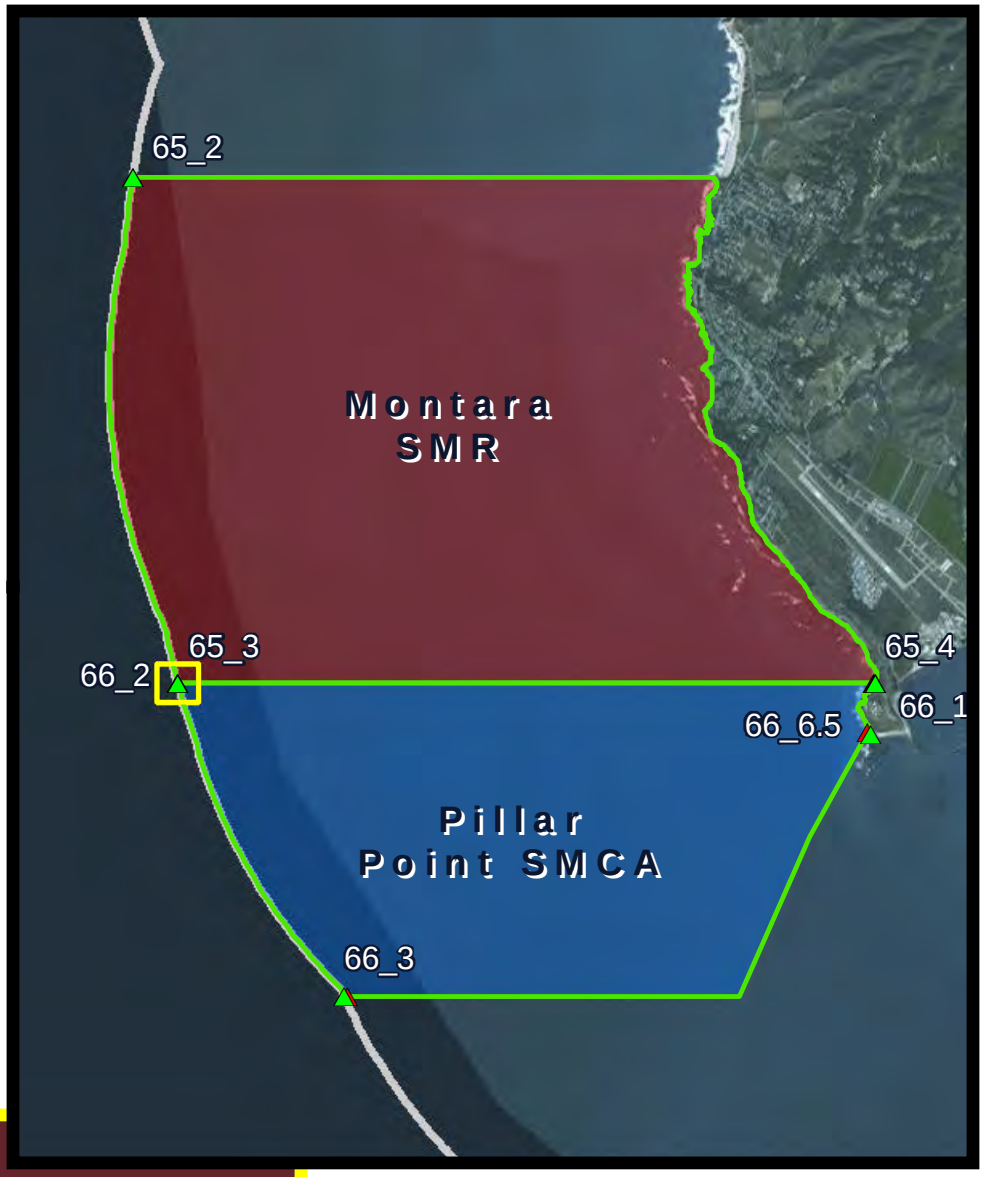
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

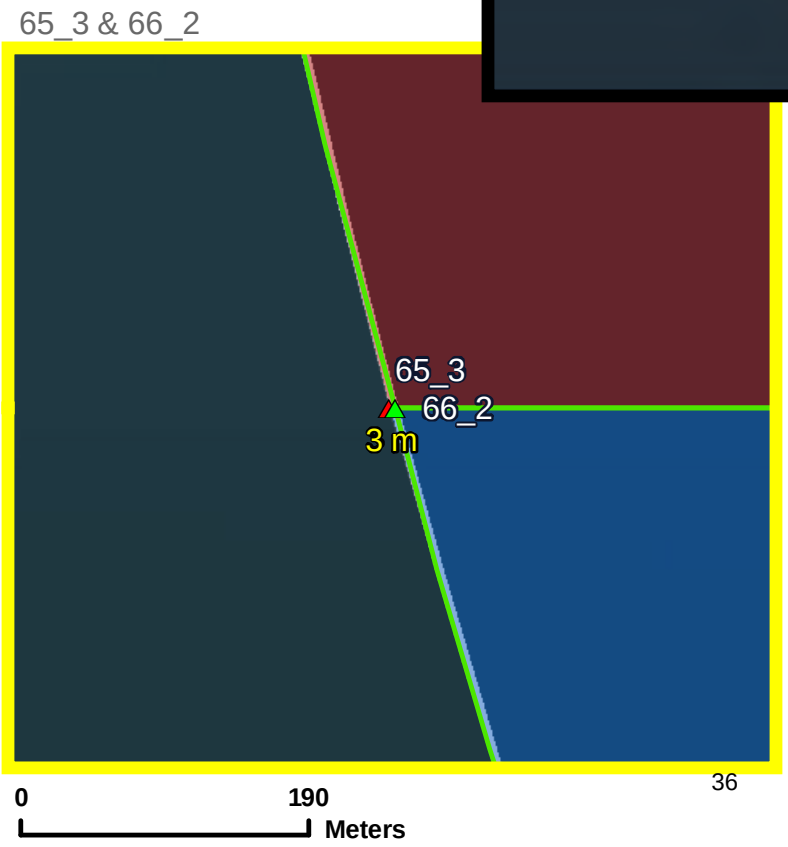
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements







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Montara SMR and Pillar Point SMCA

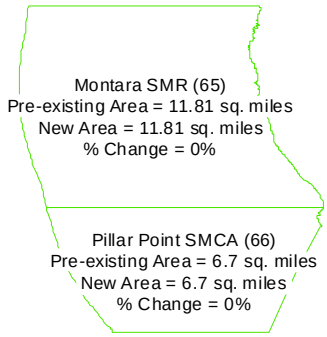
Legend

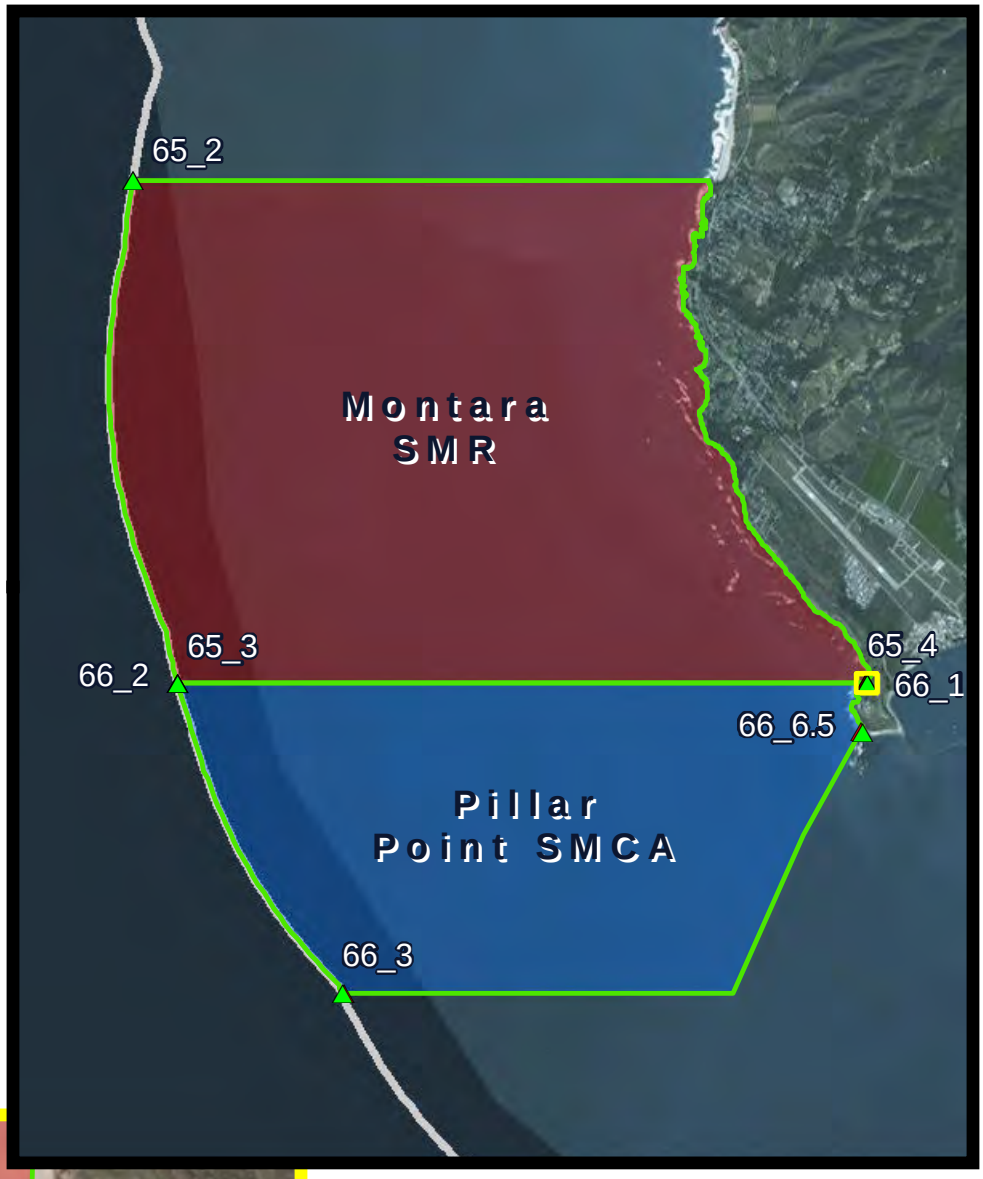
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





65_4 & 66_1

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Pillar Point SMCA

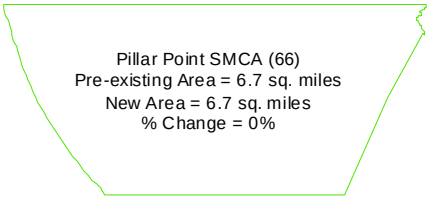
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



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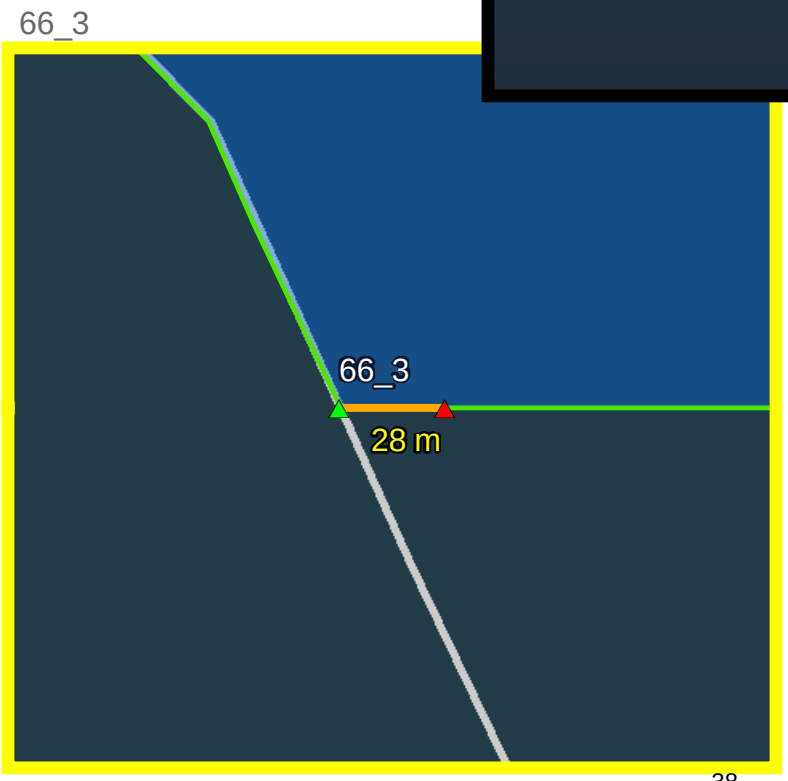

0 90 Meters

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Pillar Point SMCA

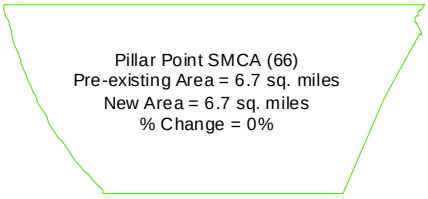
Legend

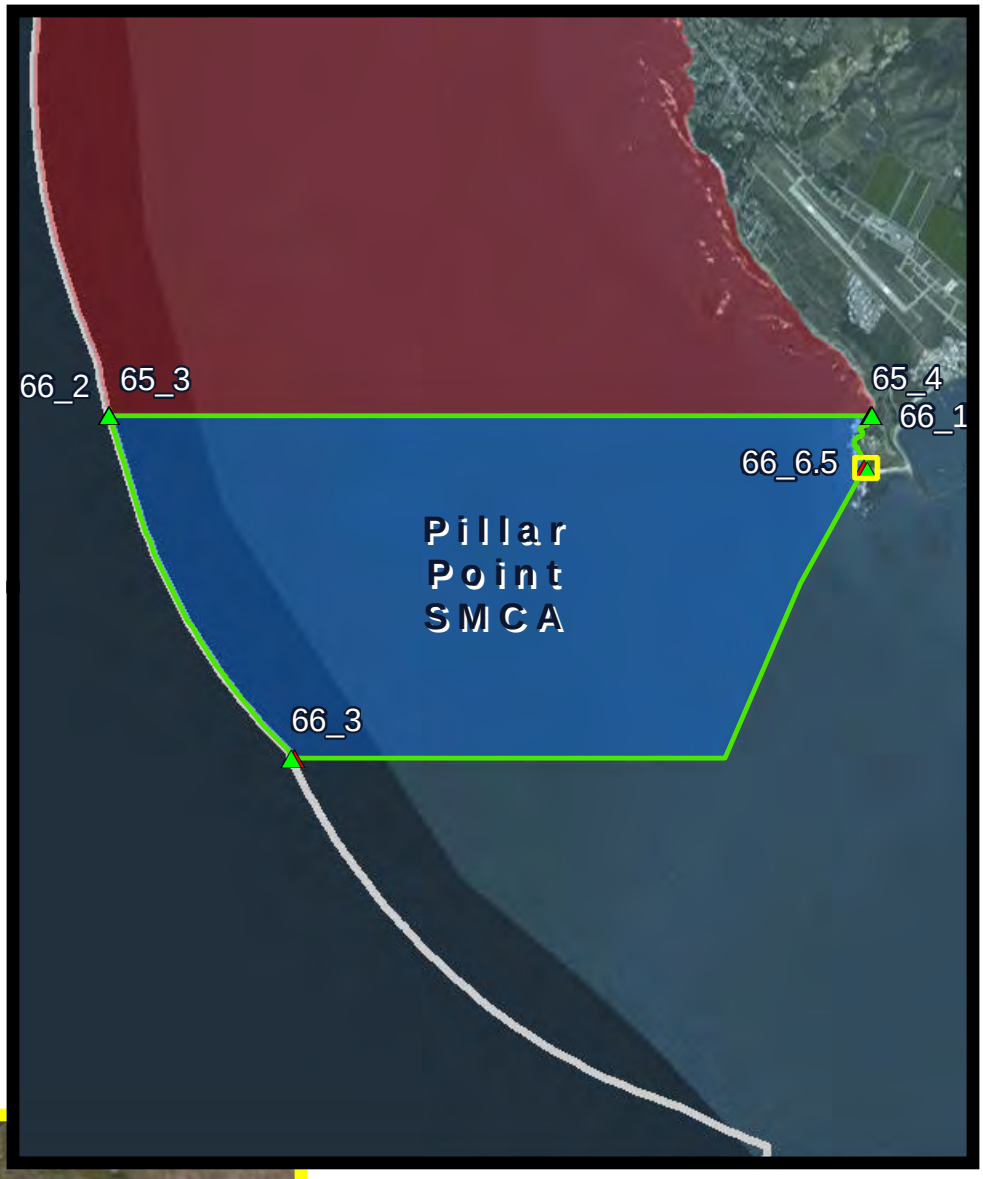
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





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Año Nuevo SMCA

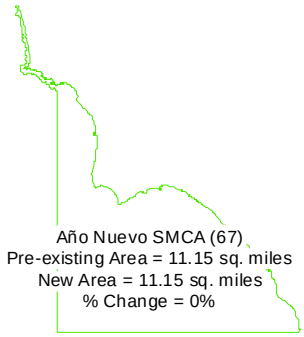
Legend

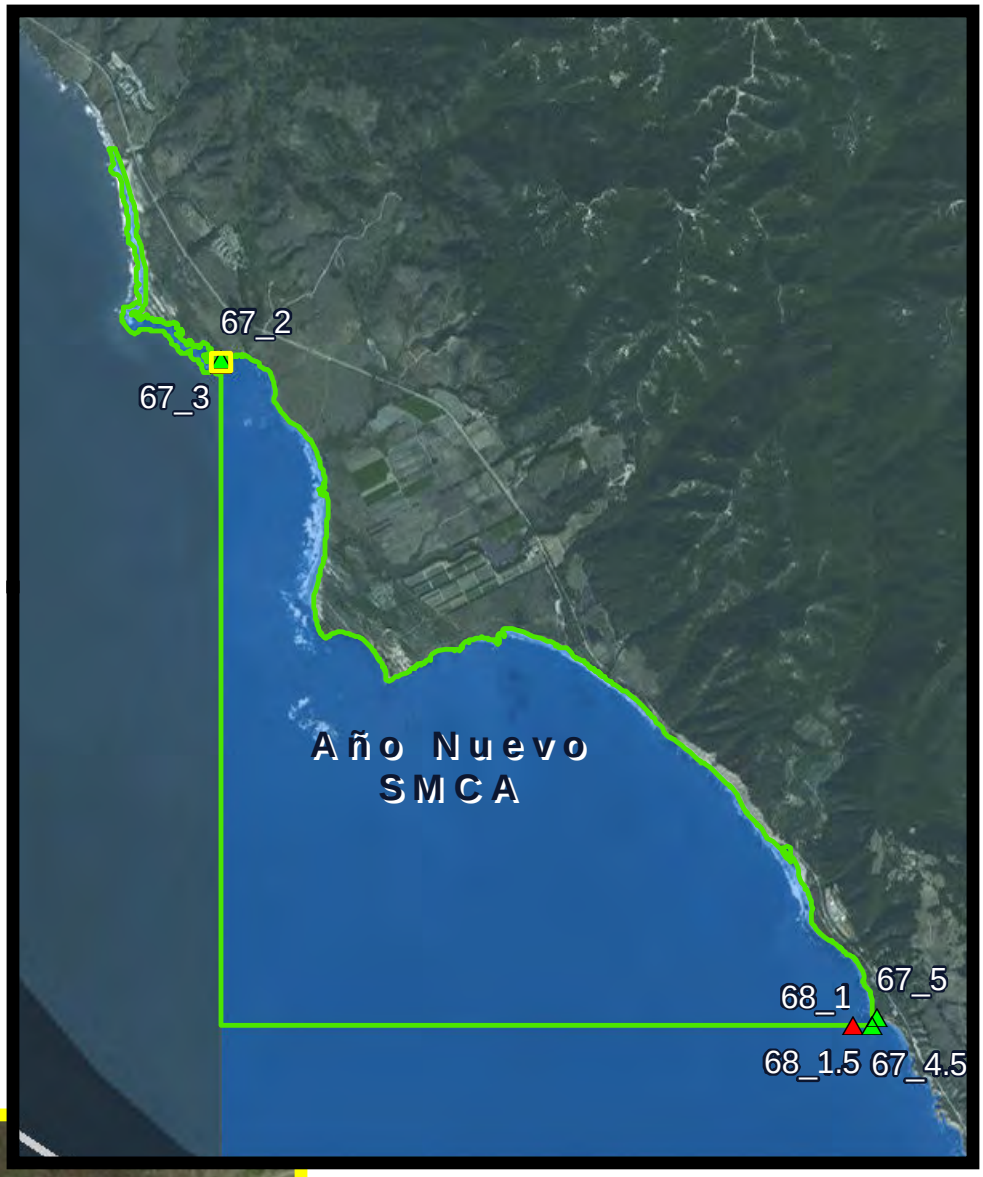
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

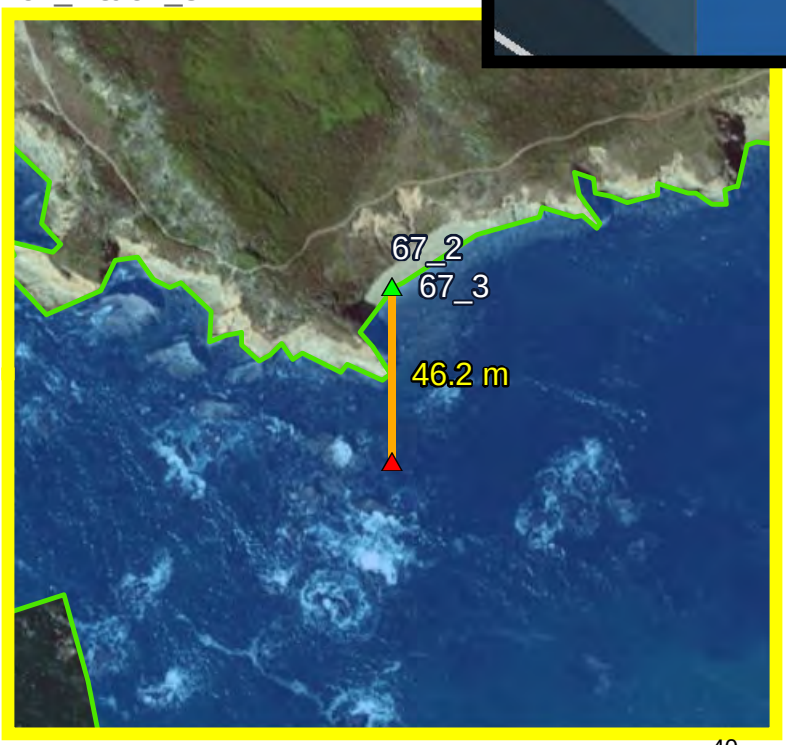
Summary of Proposed Refinements





0 4,000 Meters

67_2 & 67_3



0 90 Meters

40

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Año Nuevo SMCA and Greyhound Rock SMCA

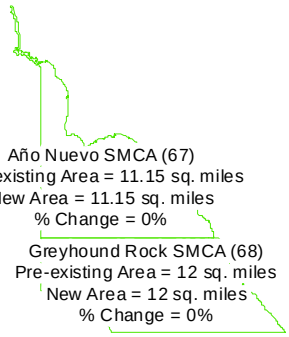
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

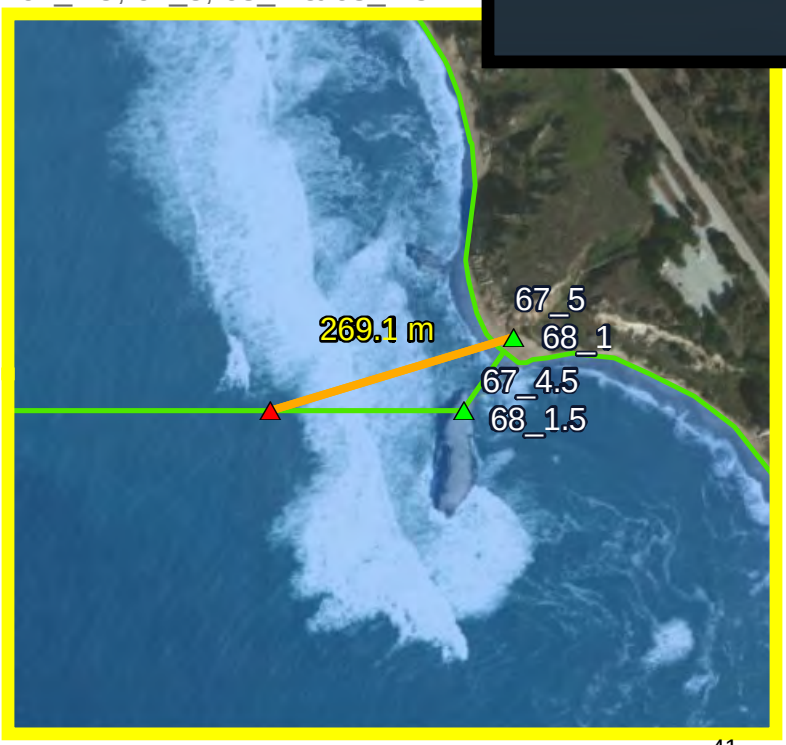


Año Nuevo SMCA (67)
Pre-existing Area = 11.15 sq. miles
New Area = 11.15 sq. miles
% Change = 0%

Greyhound Rock SMCA (68)
Pre-existing Area = 12 sq. miles
New Area = 12 sq. miles
% Change = 0%

0 5,500 Meters

67_4.5, 67_5, 68_1 & 68_1.5



0 380 Meters

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Greyhound Rock SMCA

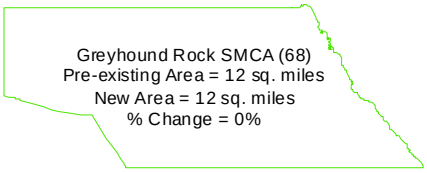
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

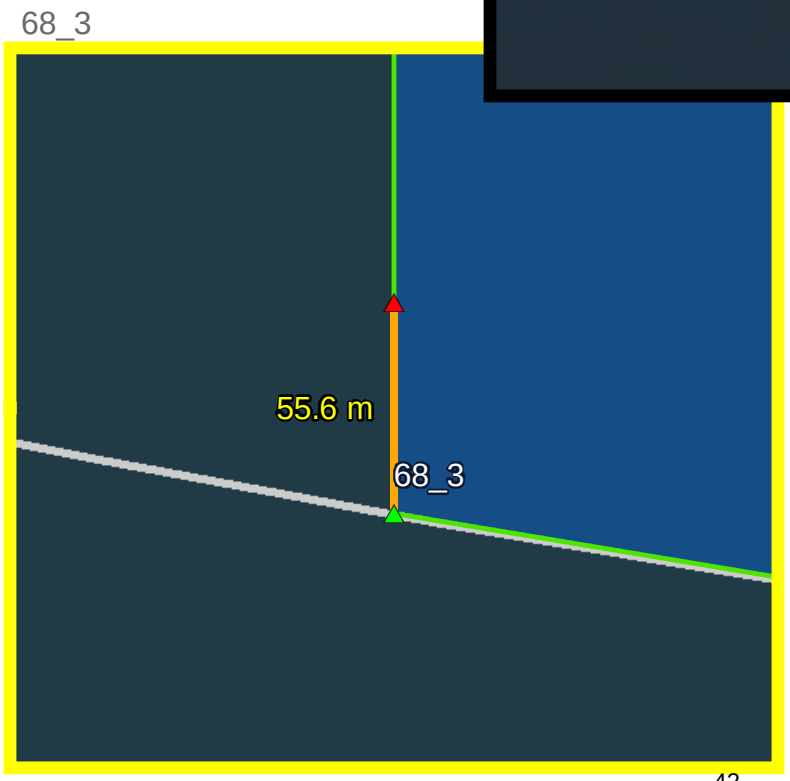
Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



0 5,500 Meters



0 90 Meters

42

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Greyhound Rock SMCA

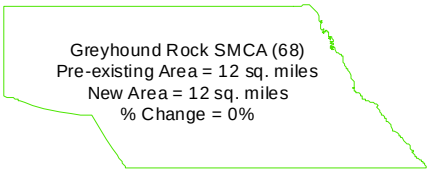
Legend

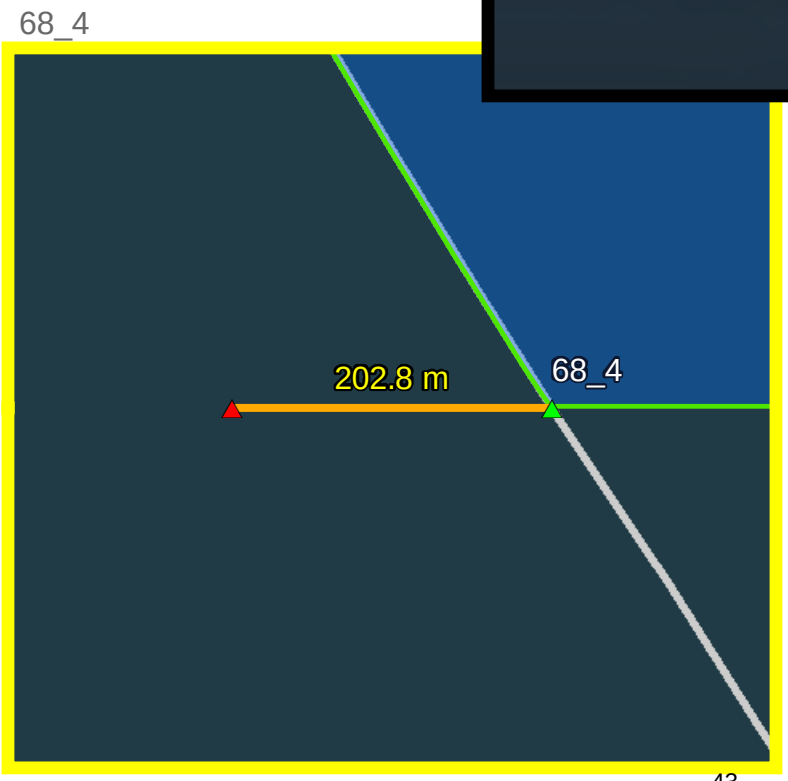
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





43

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Greyhound Rock SMCA

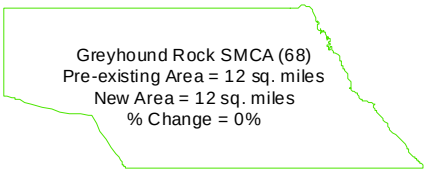
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



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Natural Bridges SMR

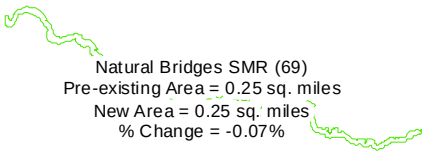
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

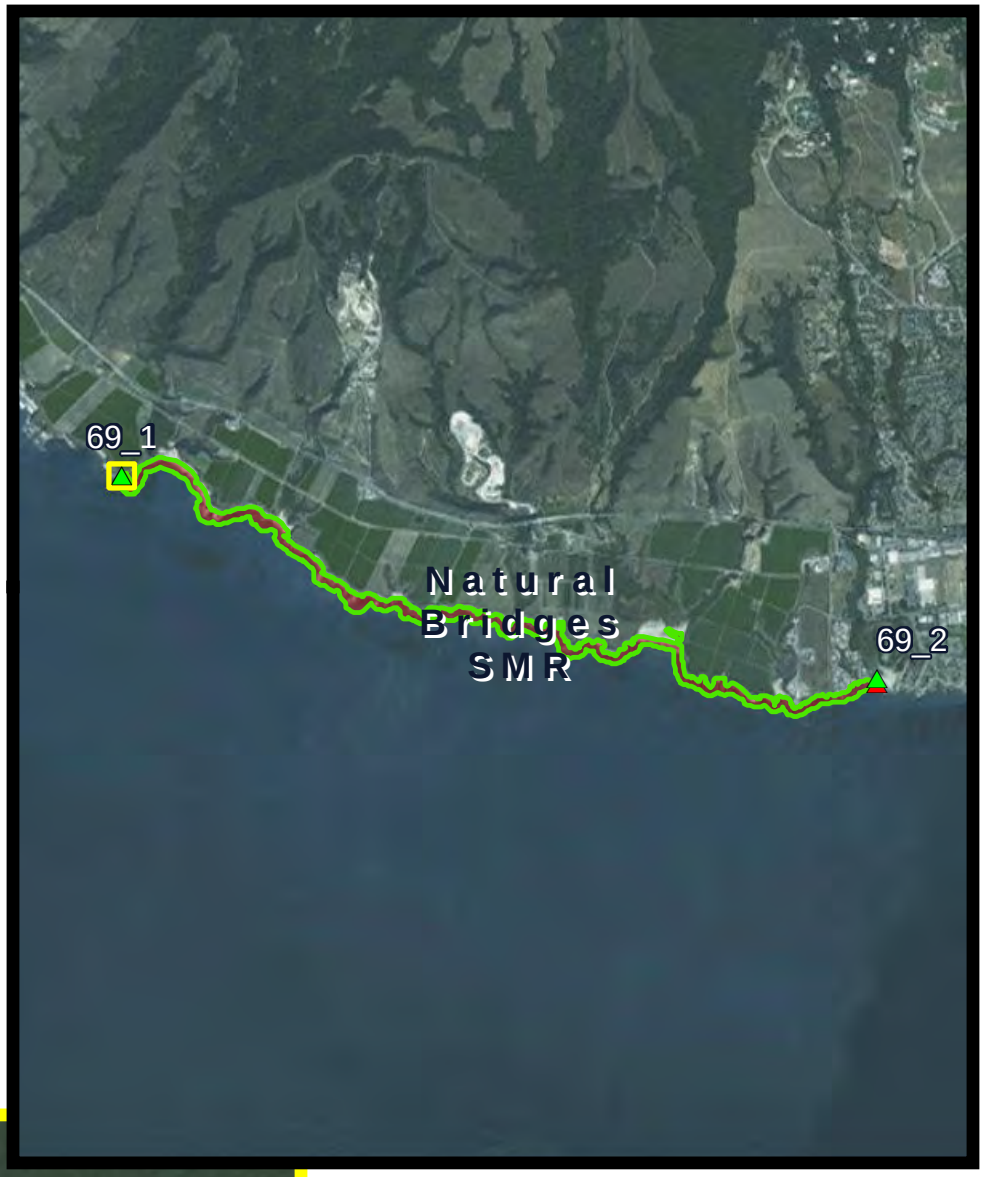
Current MPA Boundaries

- State Marine Reserve (SMR)

Summary of Proposed Refinements

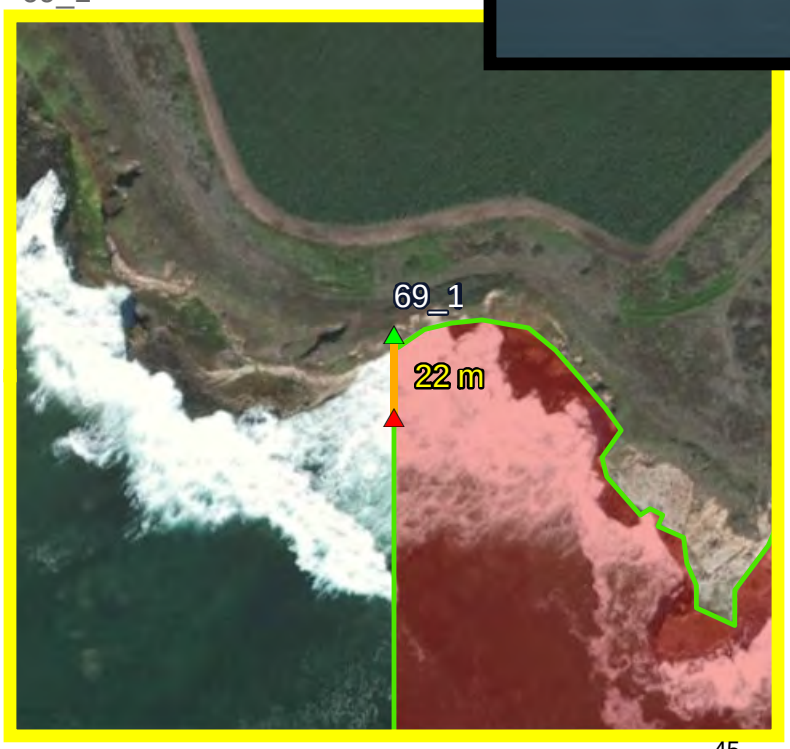


Natural Bridges SMR (69)
Pre-existing Area = 0.25 sq. miles
New Area = 0.25 sq. miles
% Change = -0.07%



0 2,900 Meters

69_1



0 90 Meters

45

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Natrual Bridges SMR

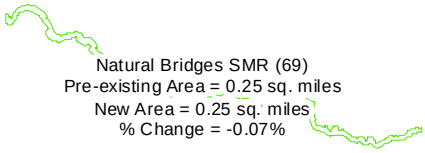
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

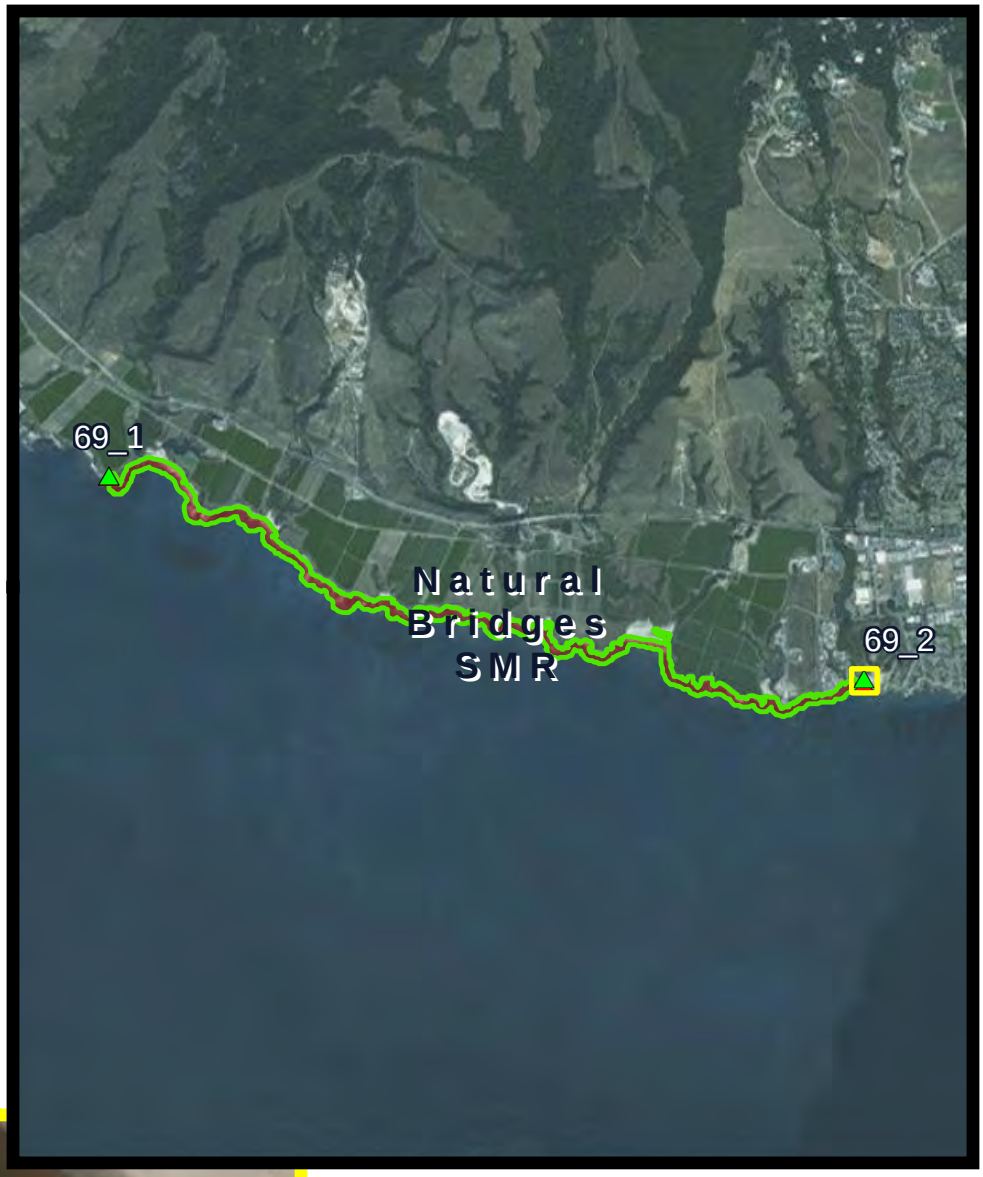
Current MPA Boundaries

State Marine Reserve (SMR)

Summary of Proposed Refinements

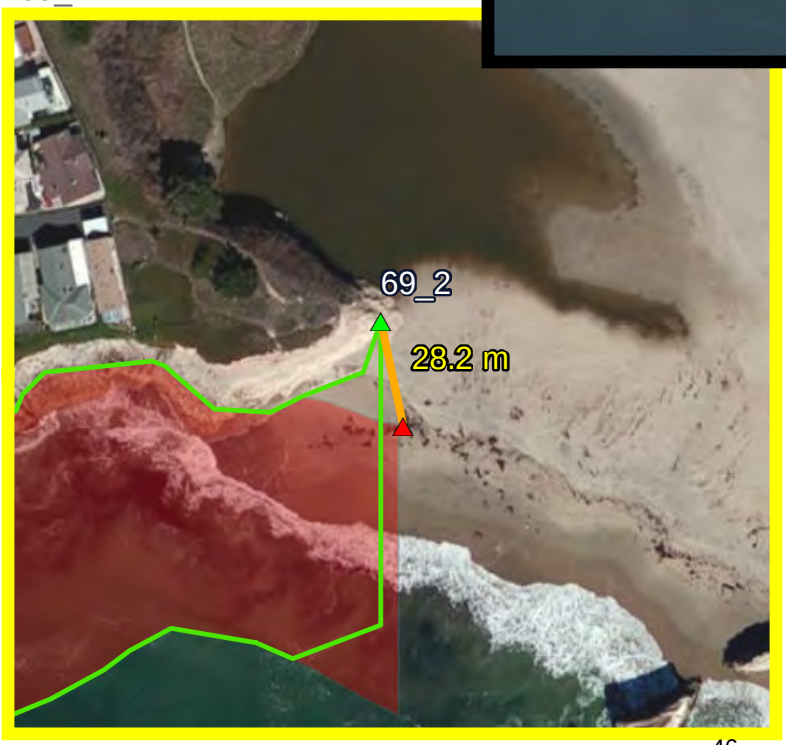


Natural Bridges SMR (69)
Pre-existing Area = 0.25 sq. miles
New Area = 0.25 sq. miles
% Change = -0.07%



0 2,900 Meters

69_2



0 90 Meters

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Soquel Canyon SMCA

Legend

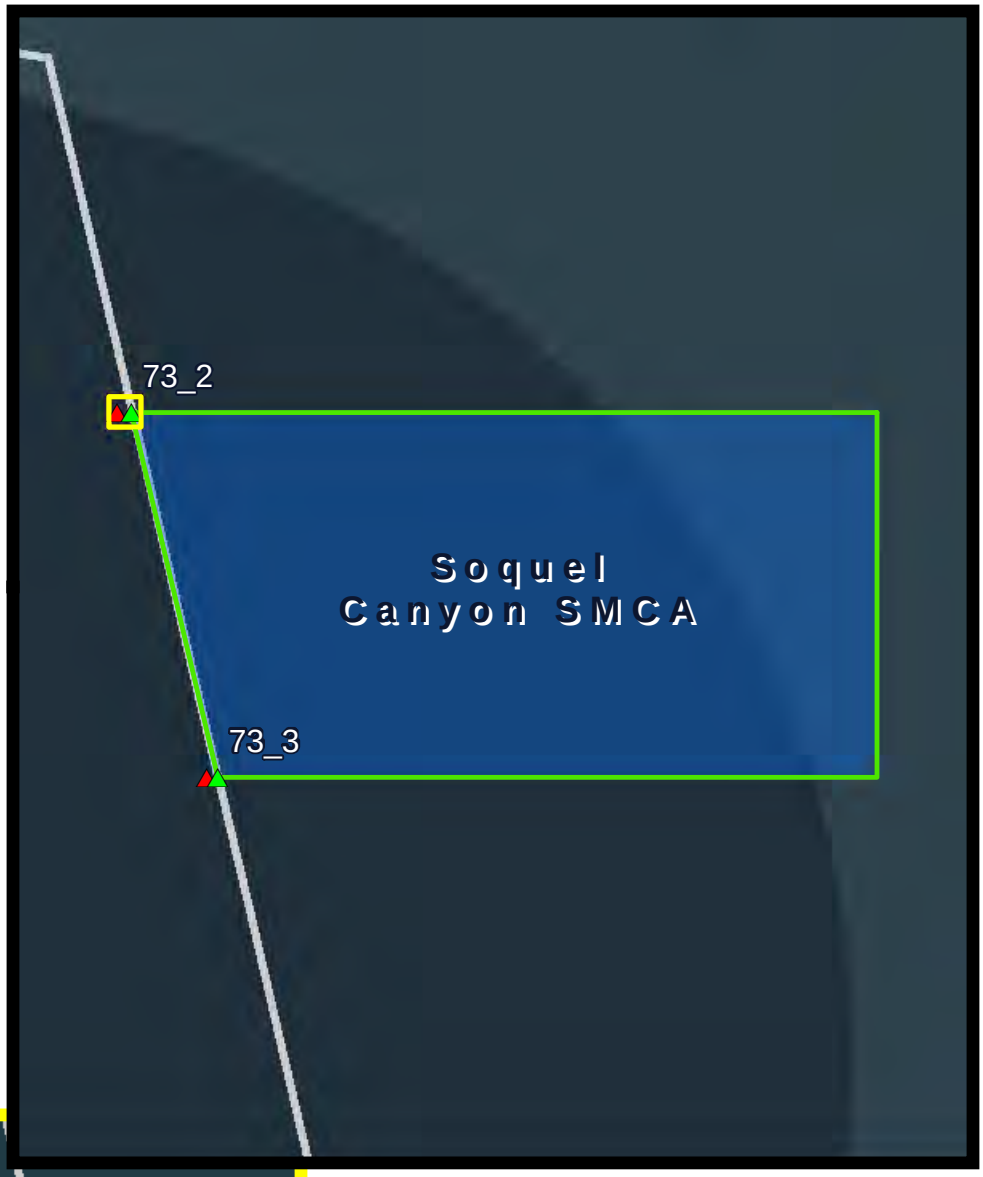
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

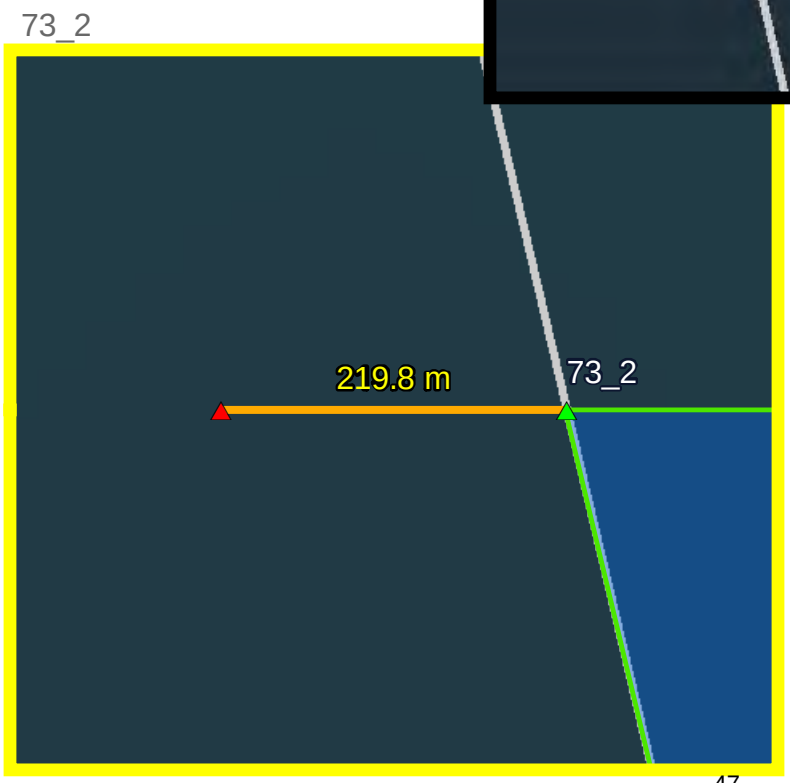
State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Soquel Canyon SMCA (73)
Pre-existing Area = 22.97 sq. miles
New Area = 22.97 sq. miles
% Change = 0%



0 5,500 Meters



0 230 Meters

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May 8, 2015

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Soquel Canyon SMCA

Legend

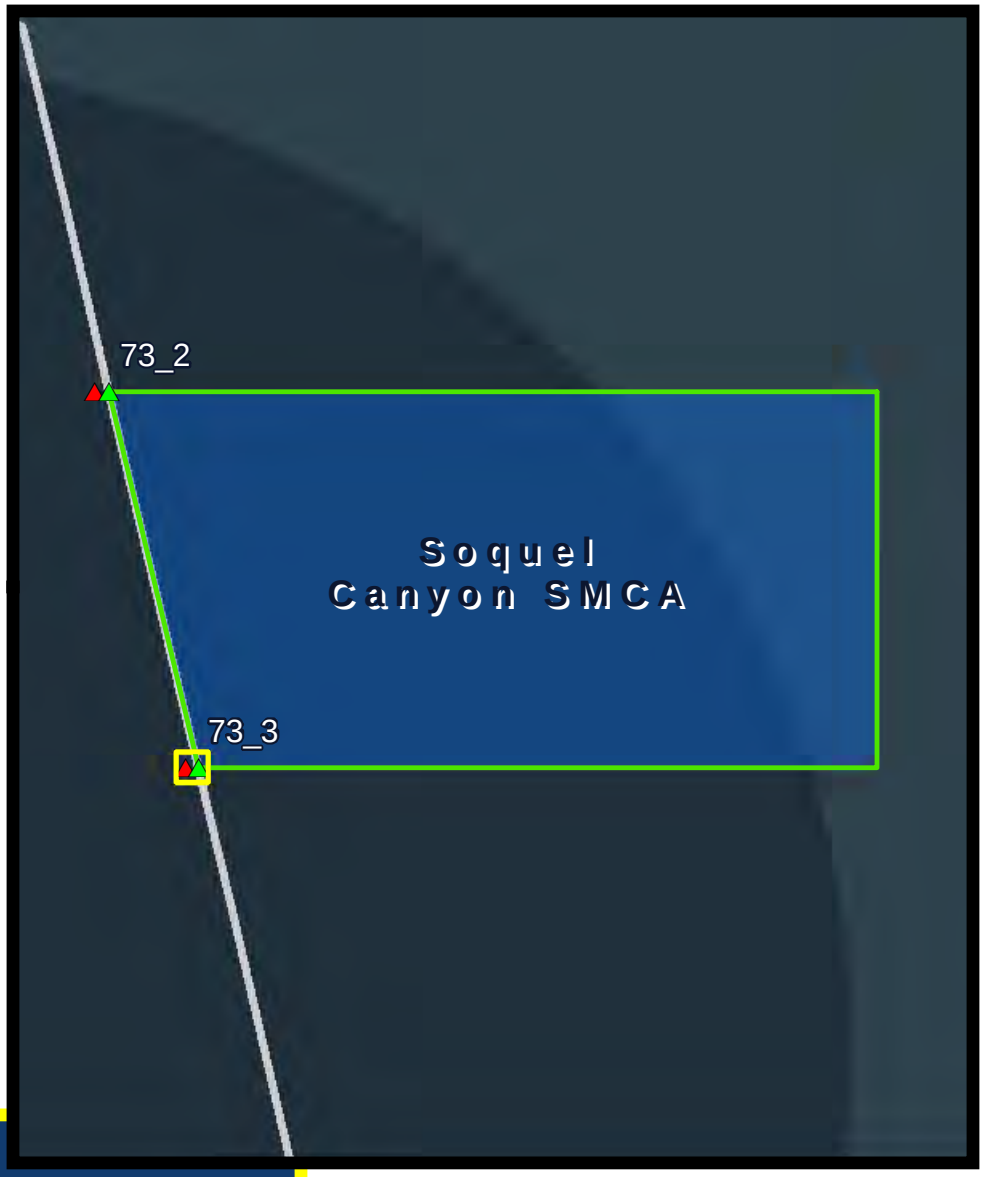
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

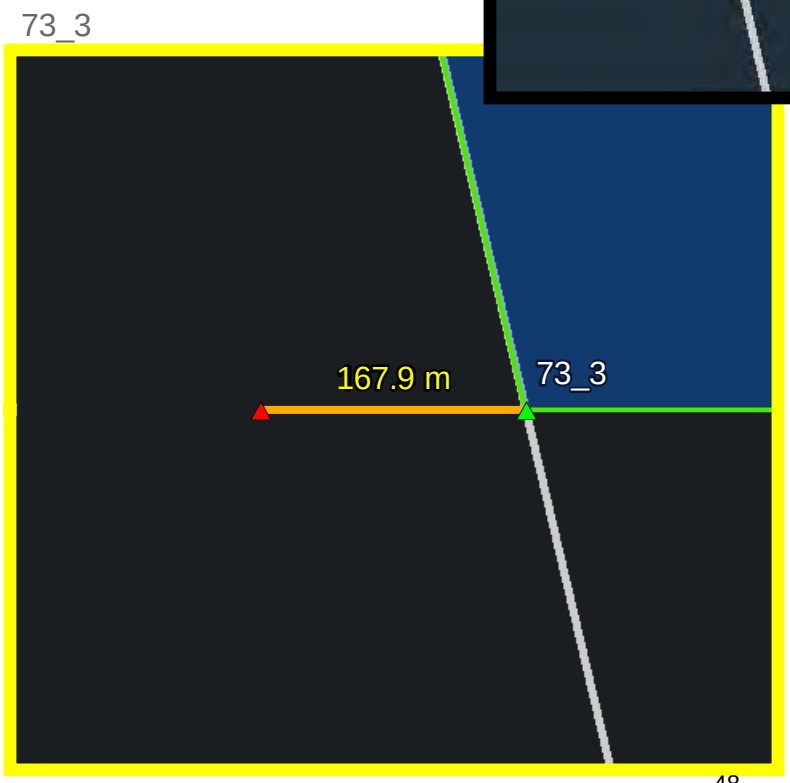
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Soquel Canyon SMCA (73)
Pre-existing Area = 22.97 sq. miles
New Area = 22.97 sq. miles
% Change = 0%



0 5,300 Meters



0 230 Meters

48

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Portuguese Ledge SMCA

Legend

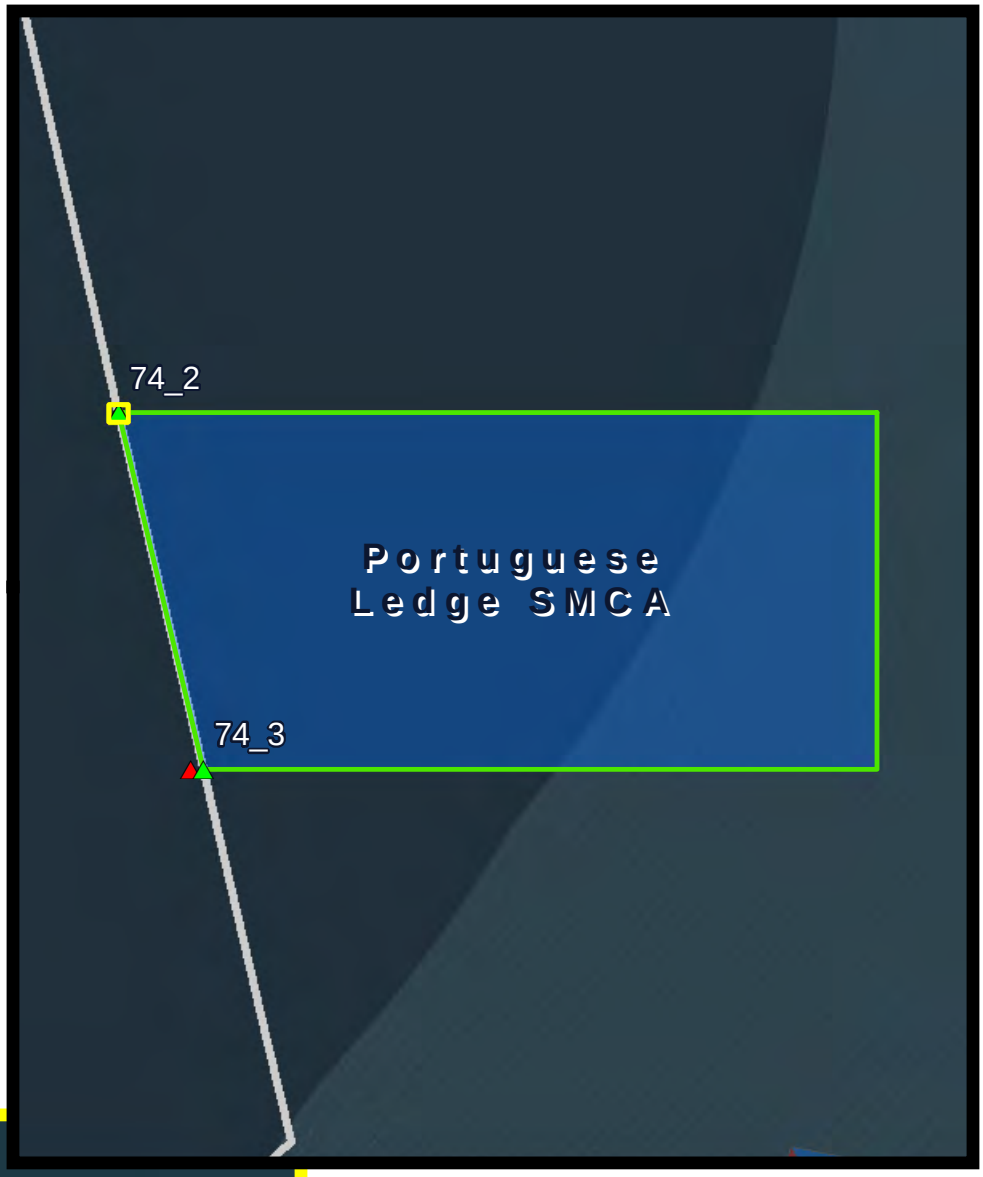
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Portuguese Ledge SMCA (74)
Pre-existing Area = 10.64 sq. miles
New Area = 10.64 sq. miles
% Change = 0%



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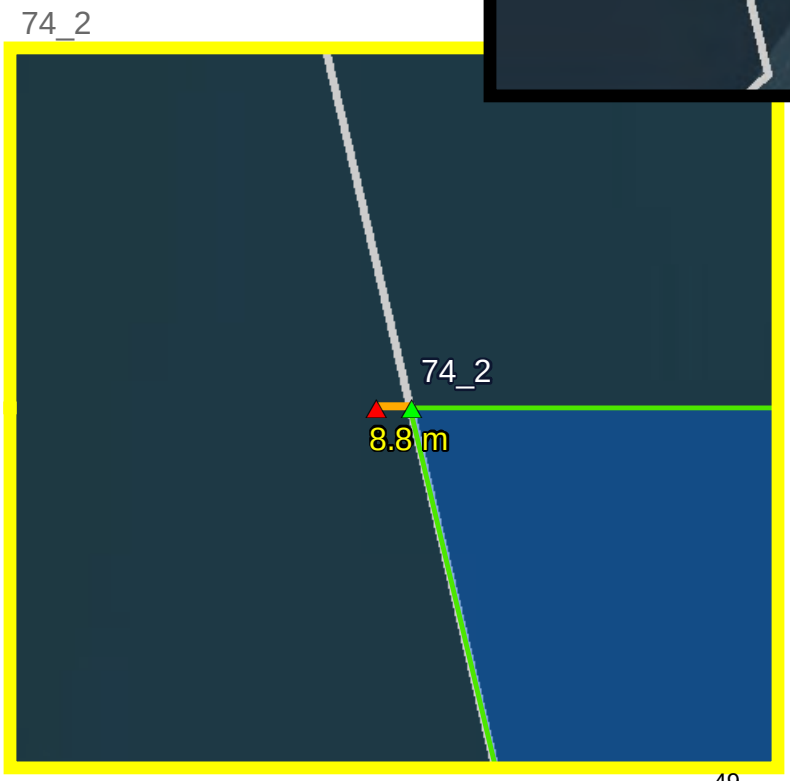

0 90 Meters

49

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Portuguese Ledge SMCA

Legend

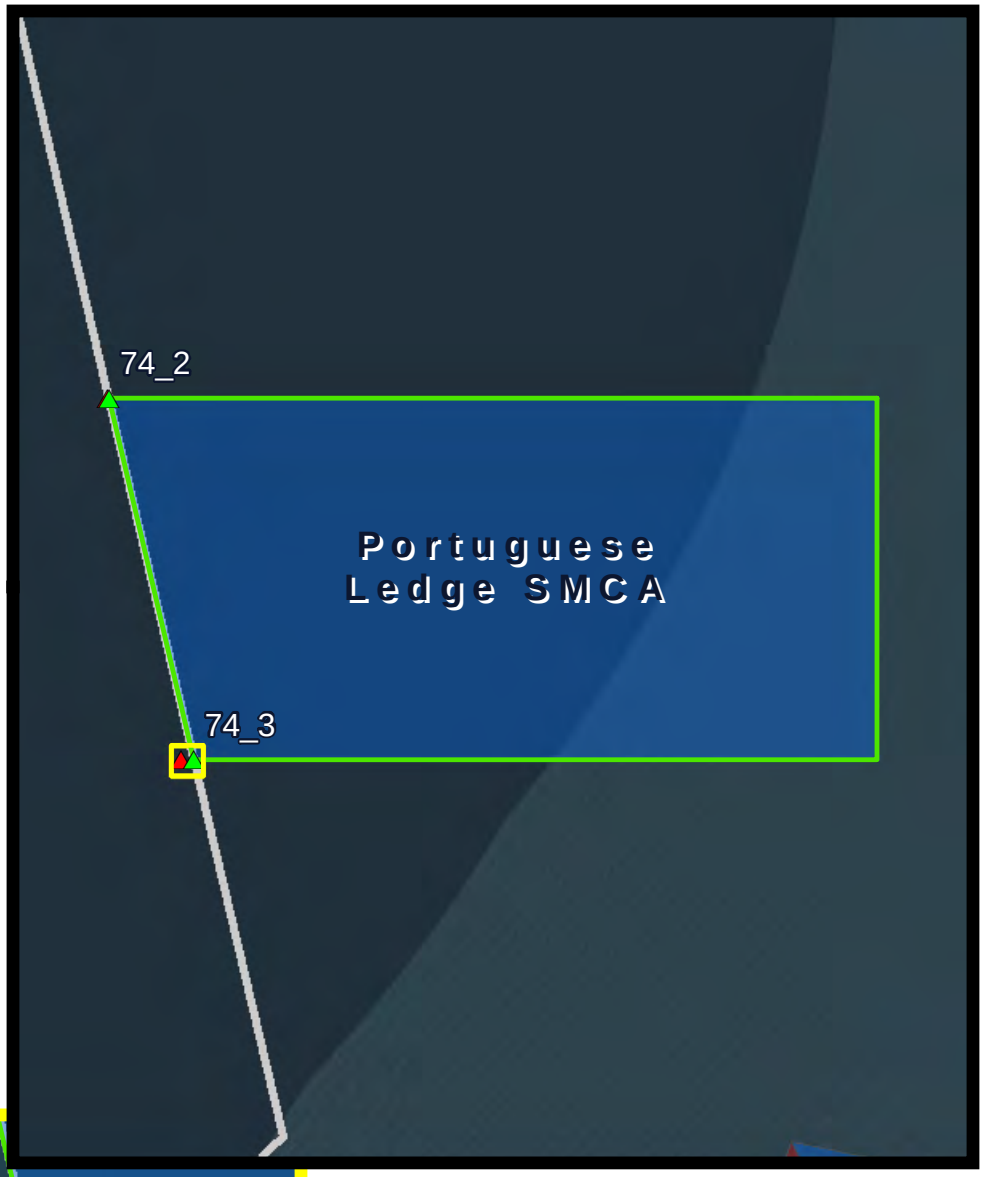
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

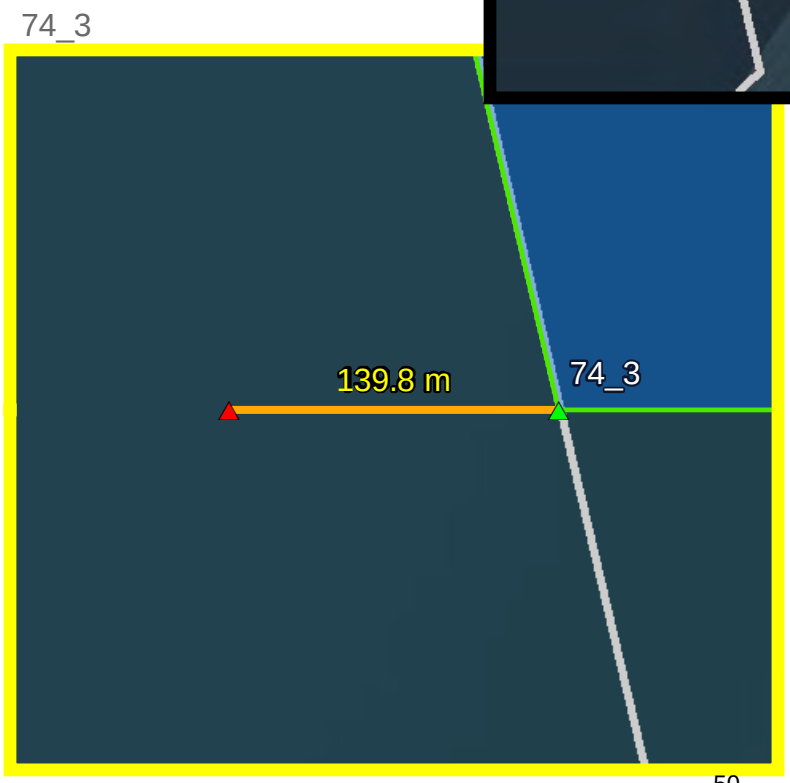
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Portuguese Ledge SMCA (74)
Pre-existing Area = 10.64 sq. miles
New Area = 10.64 sq. miles
% Change = 0%



0 3,700 Meters



0 150 Meters

50

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Edward F. Ricketts SMCA

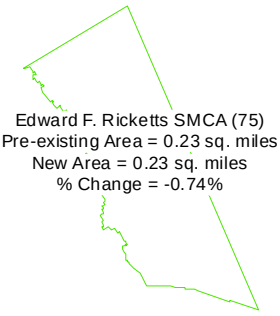
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Edward F. Ricketts SMCA (75)
Pre-existing Area = 0.23 sq. miles
New Area = 0.23 sq. miles
% Change = -0.74%

0 575 Meters

75_1

0 90 Meters

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Edward F. Ricketts SMCA and Lovers Point SMR

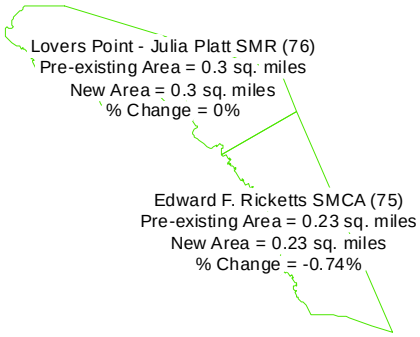
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



0 1,100 Meters

75_3 & 76_1

0 90 Meters

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Lovers Point SMR and Pacific Grove Marine Gardens SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

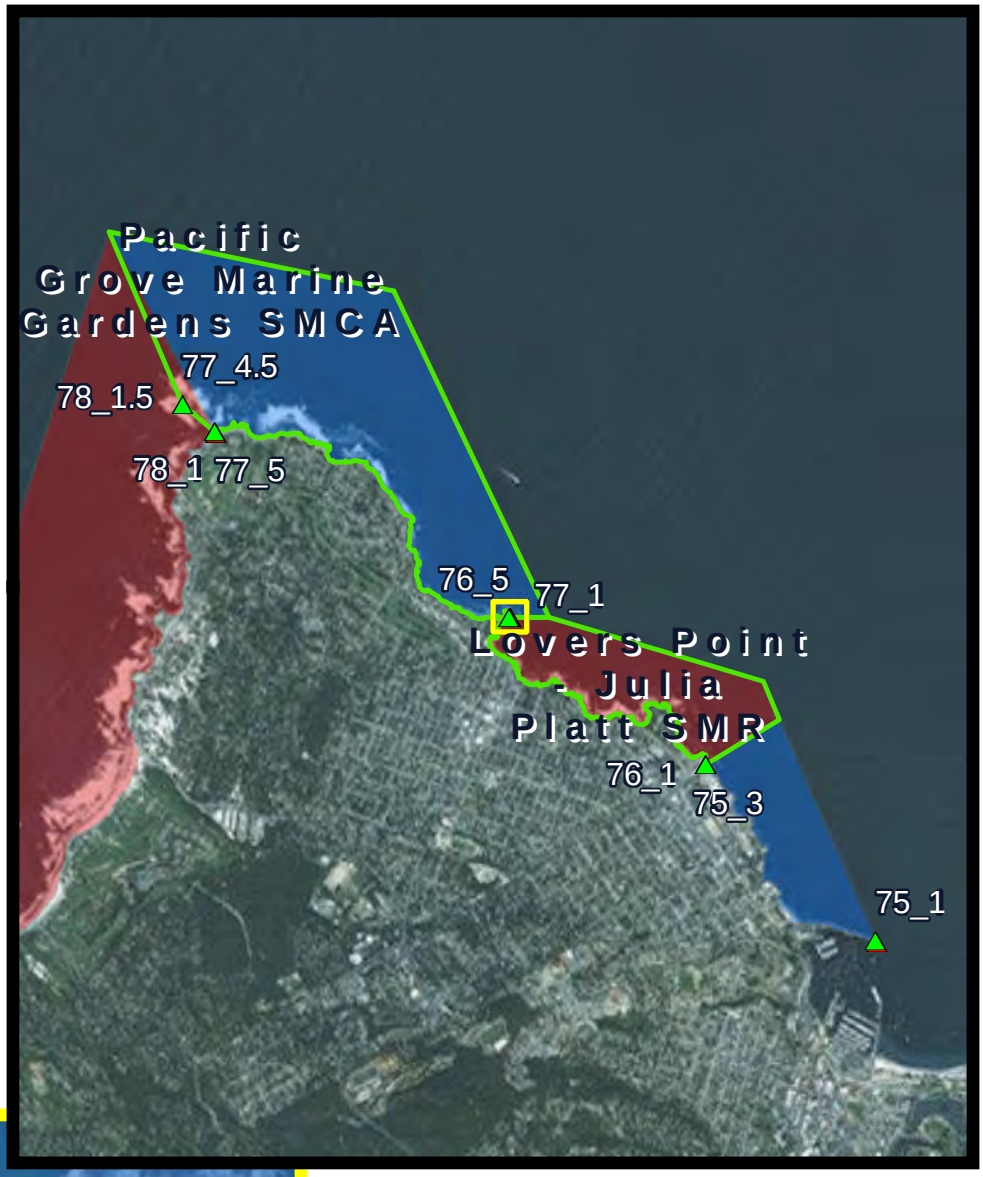
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

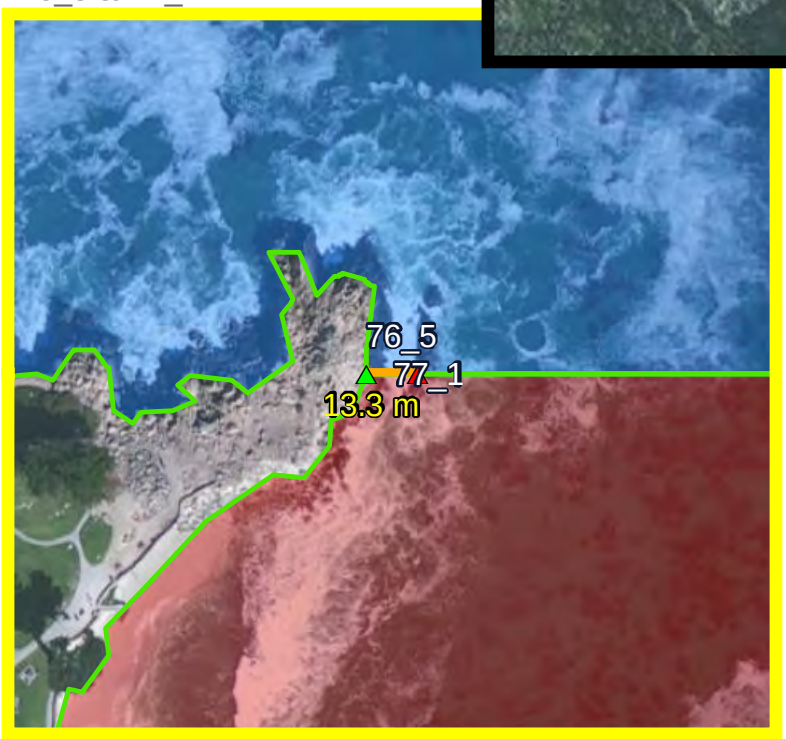
Pacific Grove Marine Gardens SMCA (77)
Pre-existing Area = 0.95 sq. miles
New Area = 0.98 sq. miles
% Change = 3%

Lovers Point - Julia Platt SMR (76)
Pre-existing Area = 0.3 sq. miles
New Area = 0.3 sq. miles
% Change = 0%



0 2,250 Meters

76_5 & 77_1



0 90 Meters

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Pacific Grove Marine Gardens SMCA and Asilomar SMR

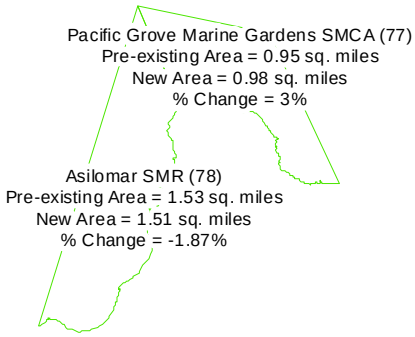
Legend

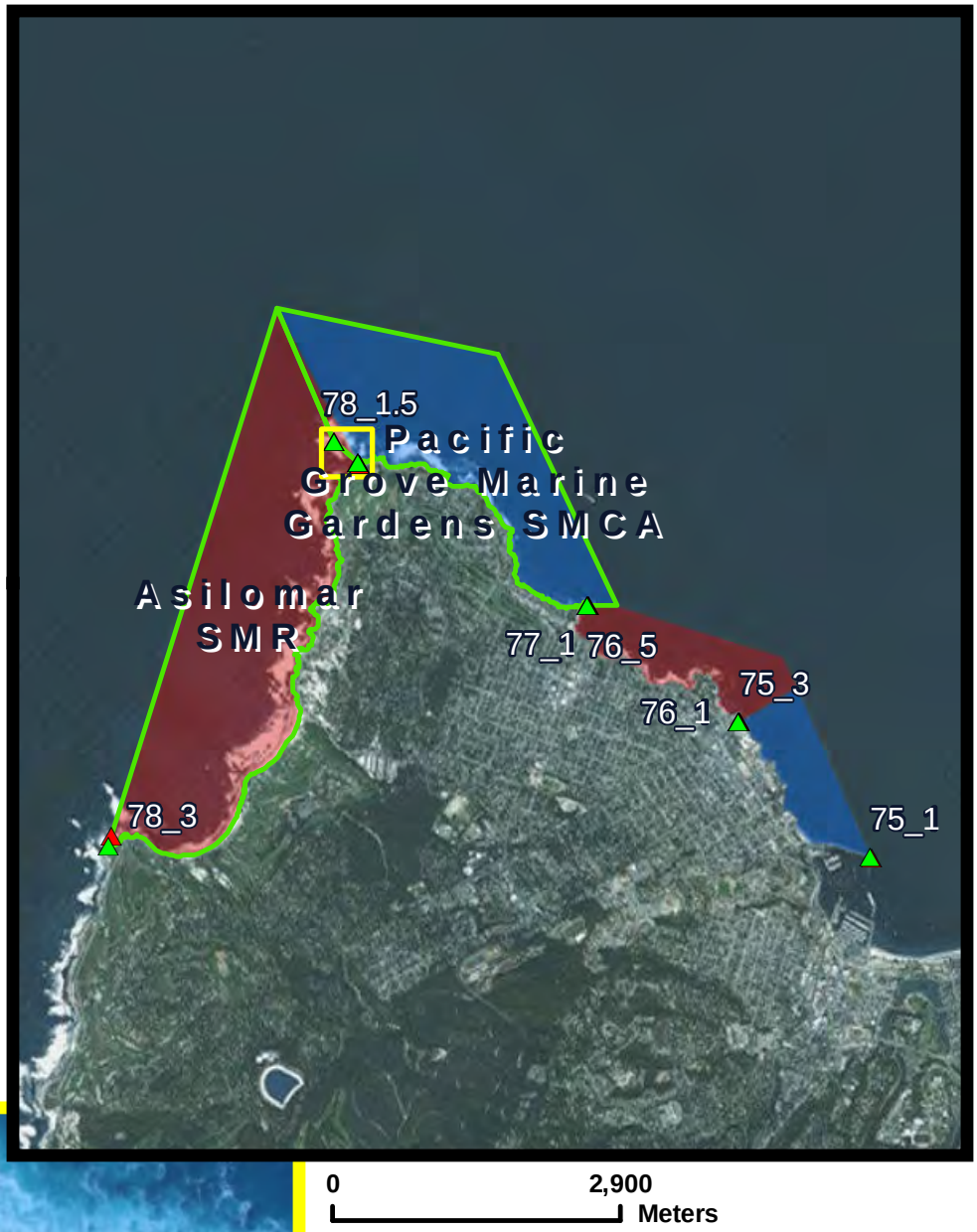
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

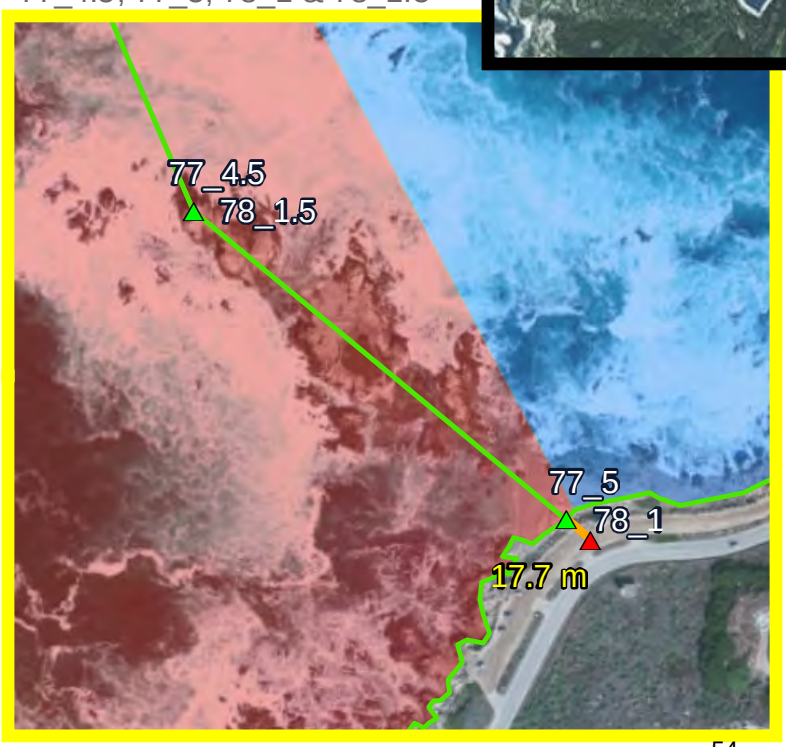
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





77_4.5, 77_5, 78_1 & 78_1.5



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Asilomar SMR

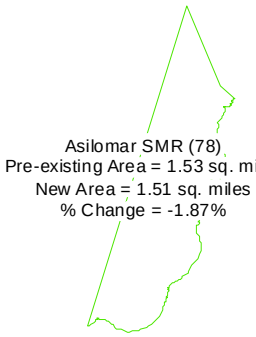
Legend

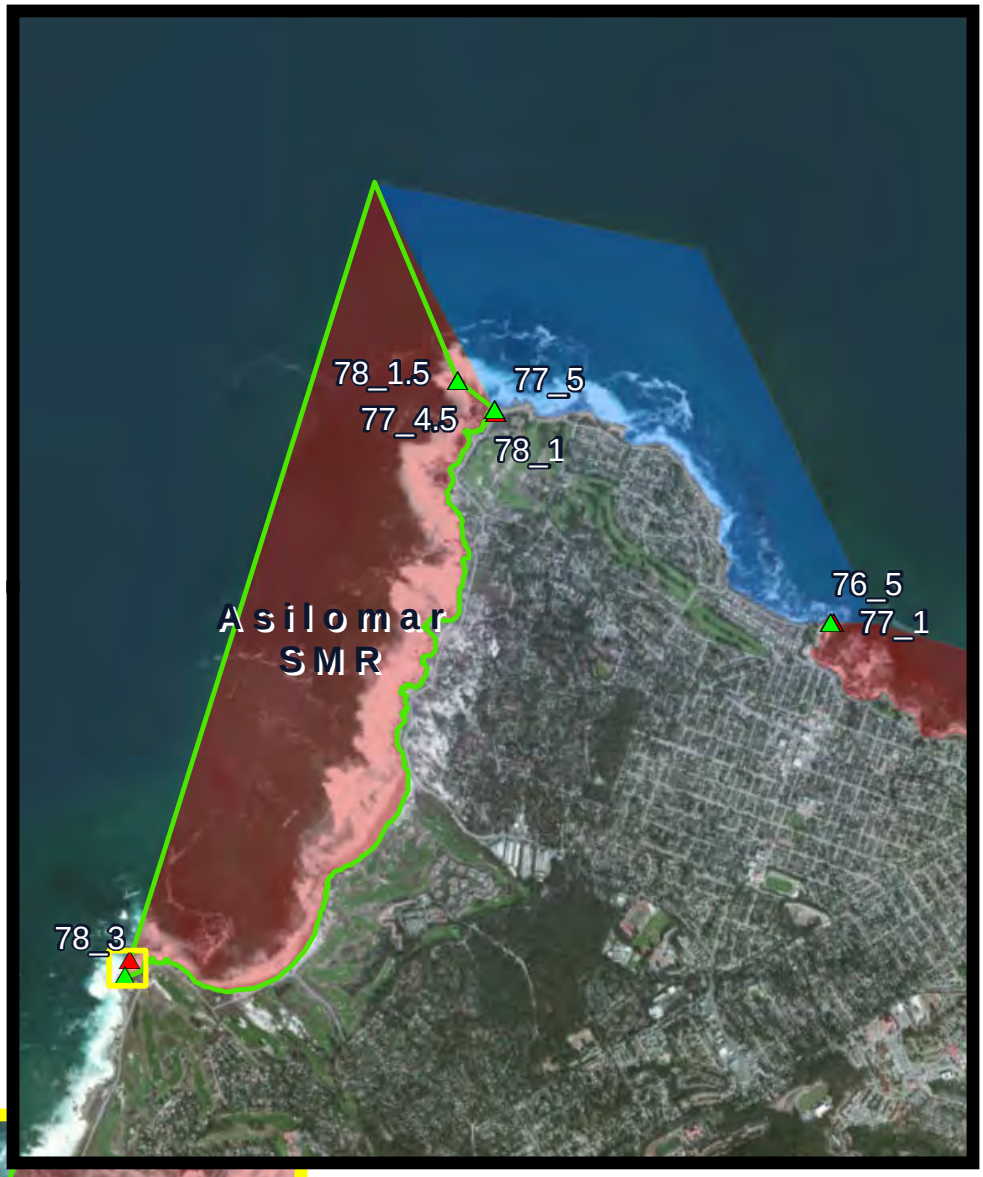
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

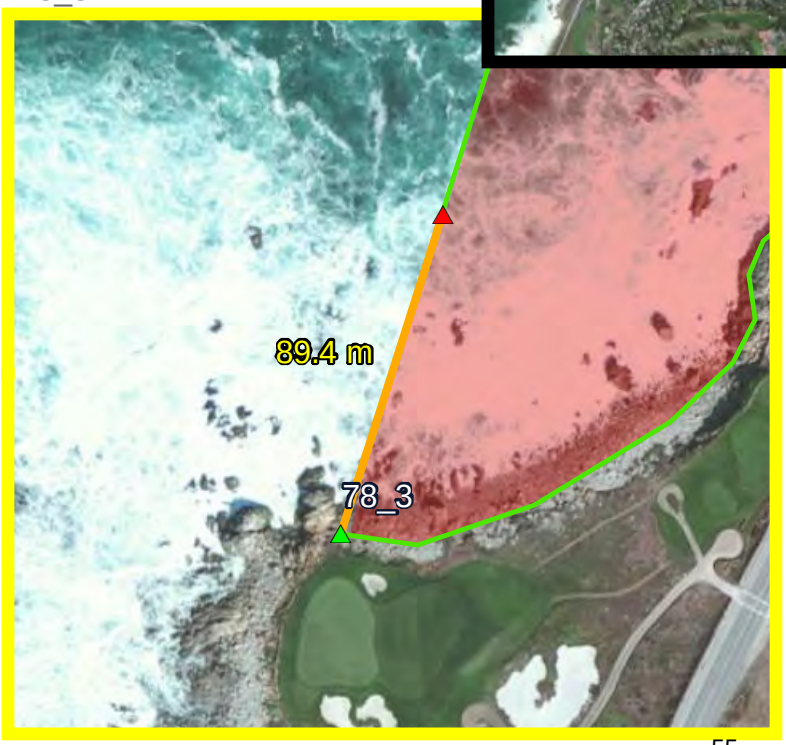
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





78_3



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Carmel Bay SMCA

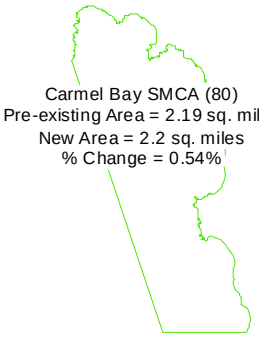
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

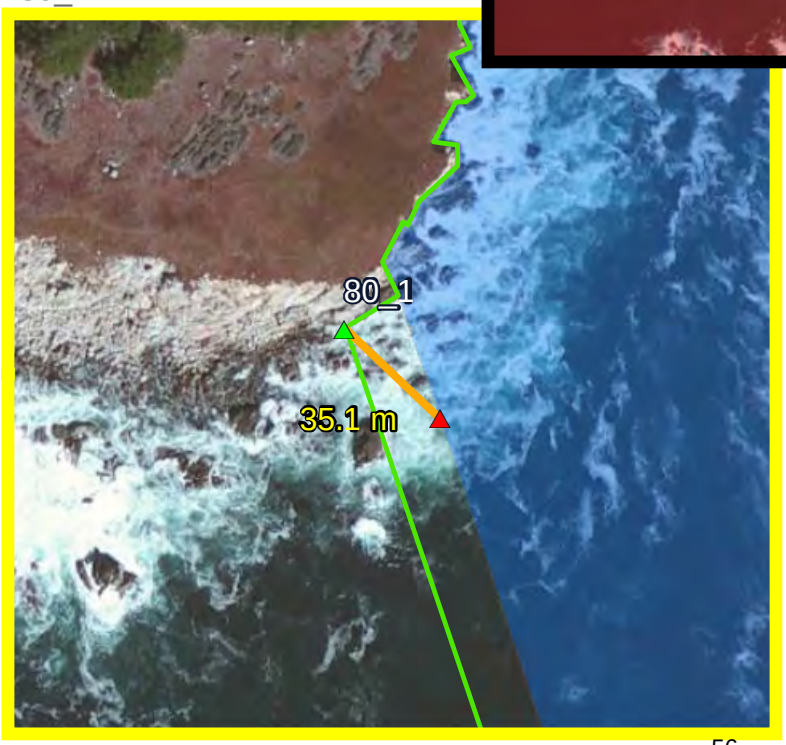
Summary of Proposed Refinements



Carmel Bay SMCA (80)
Pre-existing Area = 2.19 sq. miles
New Area = 2.2 sq. miles
% Change = 0.54%

0 1,700 Meters

80_1



0 90 Meters

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Point Lobos SMR

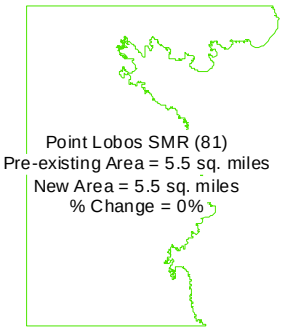
Legend

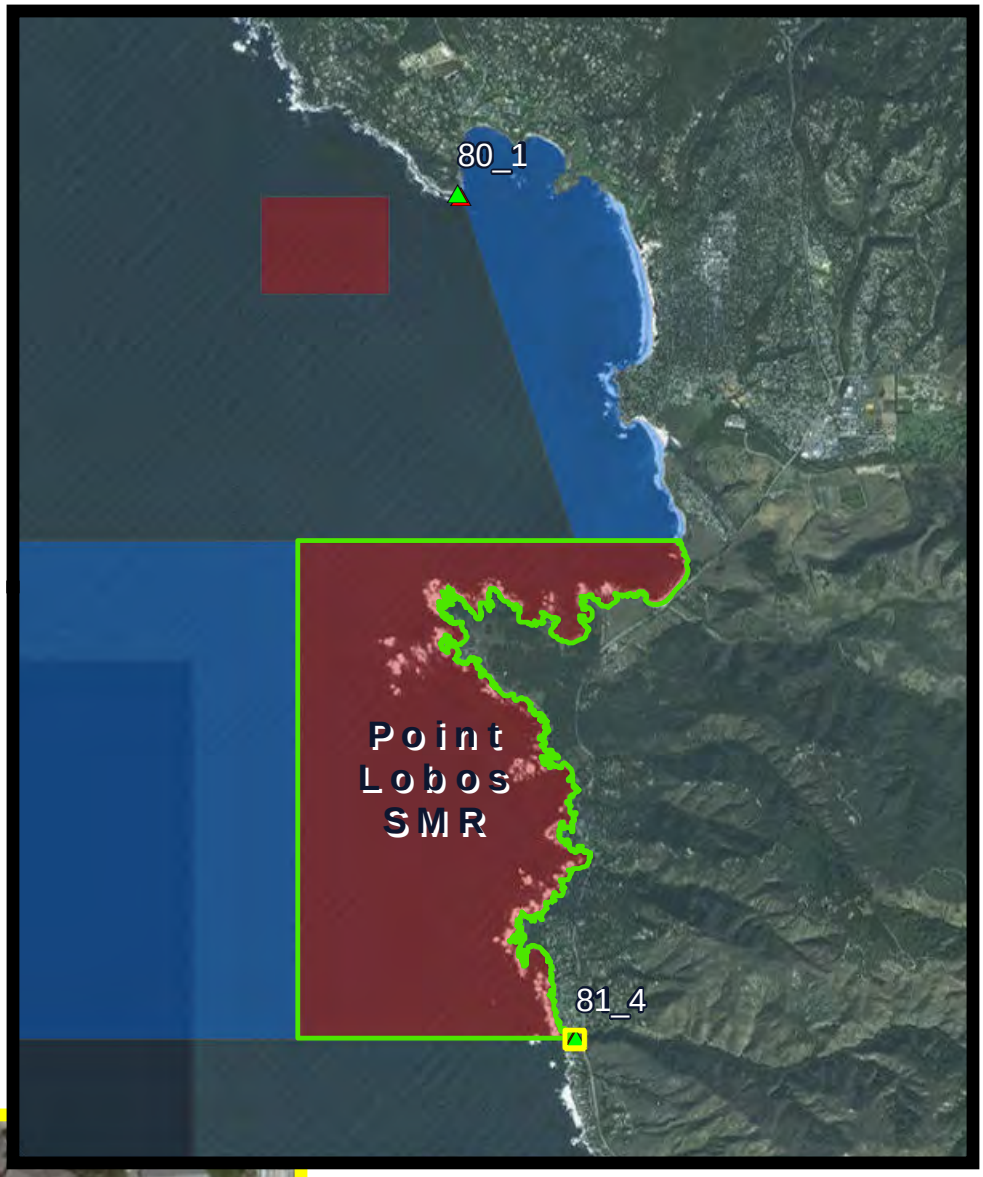
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





0 3,750 Meters

81_4

0 90 Meters

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Point Lobos SMCA

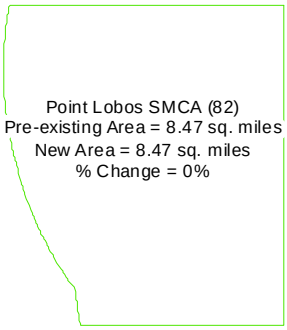
Legend

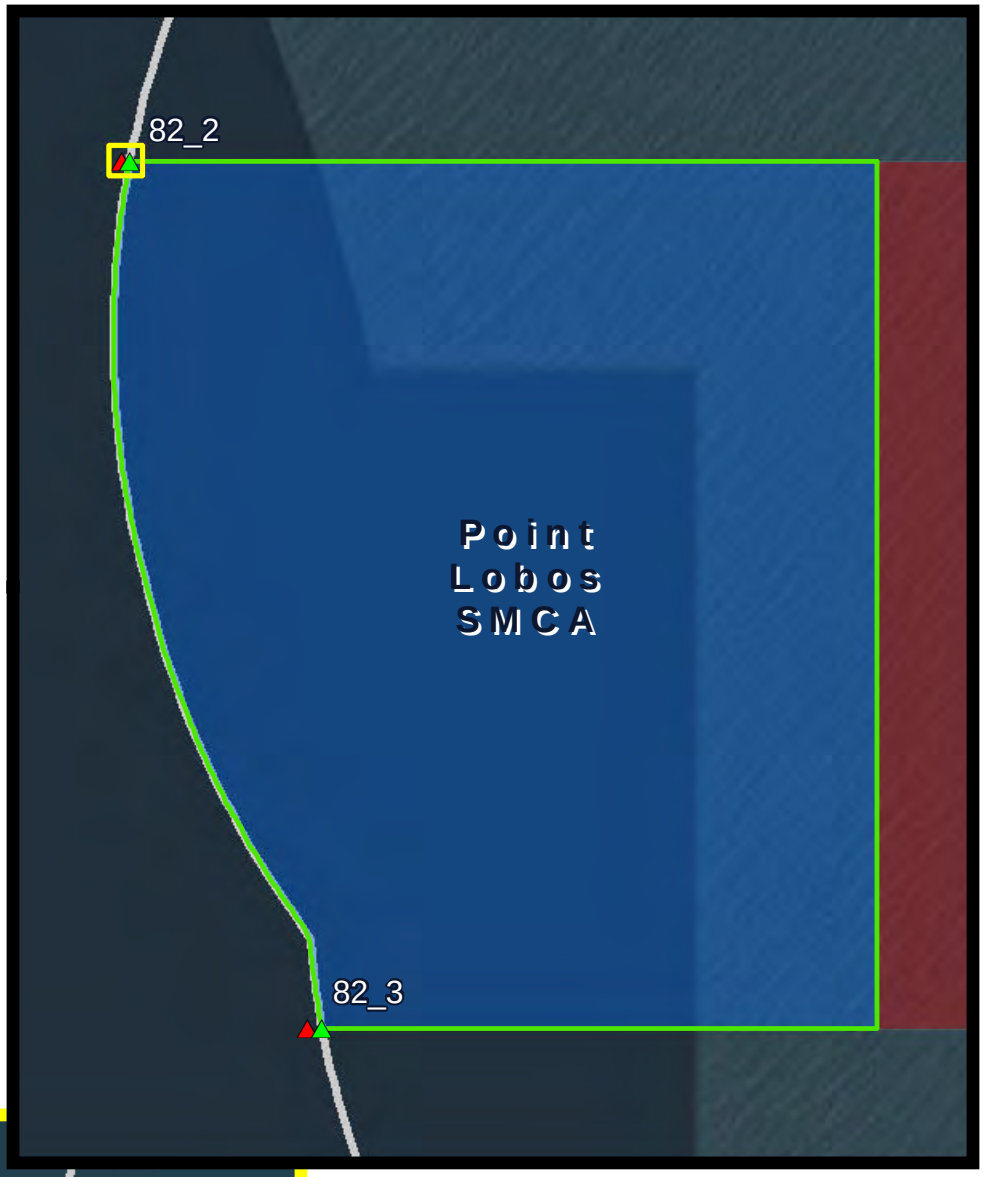
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

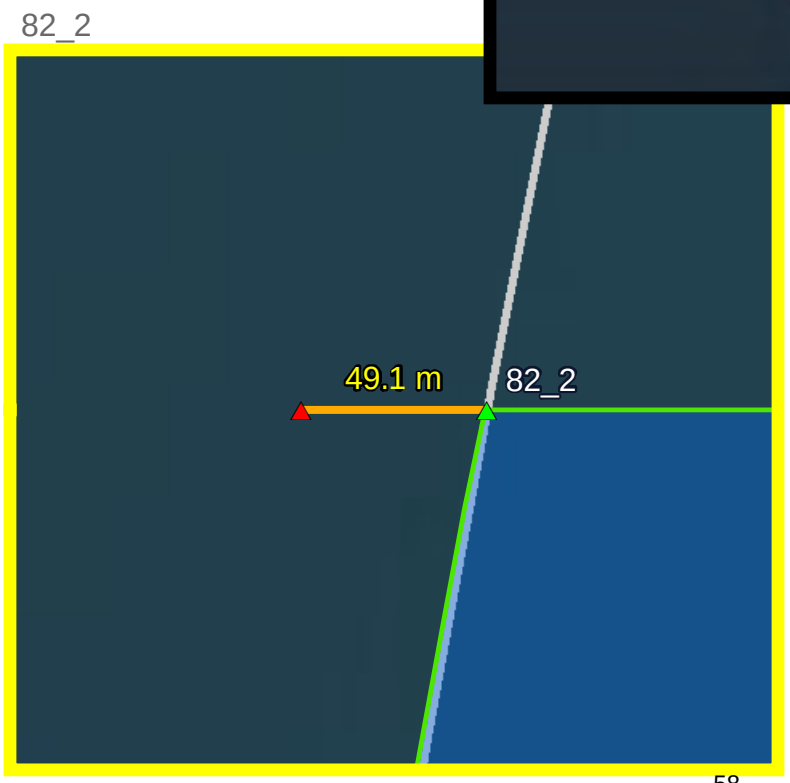
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





0 2,100 Meters



0 90 Meters

58

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Point Lobos SMCA

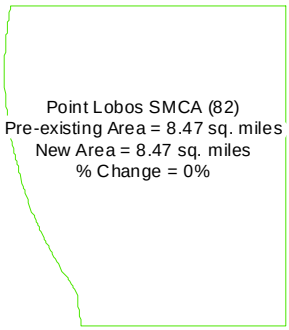
Legend

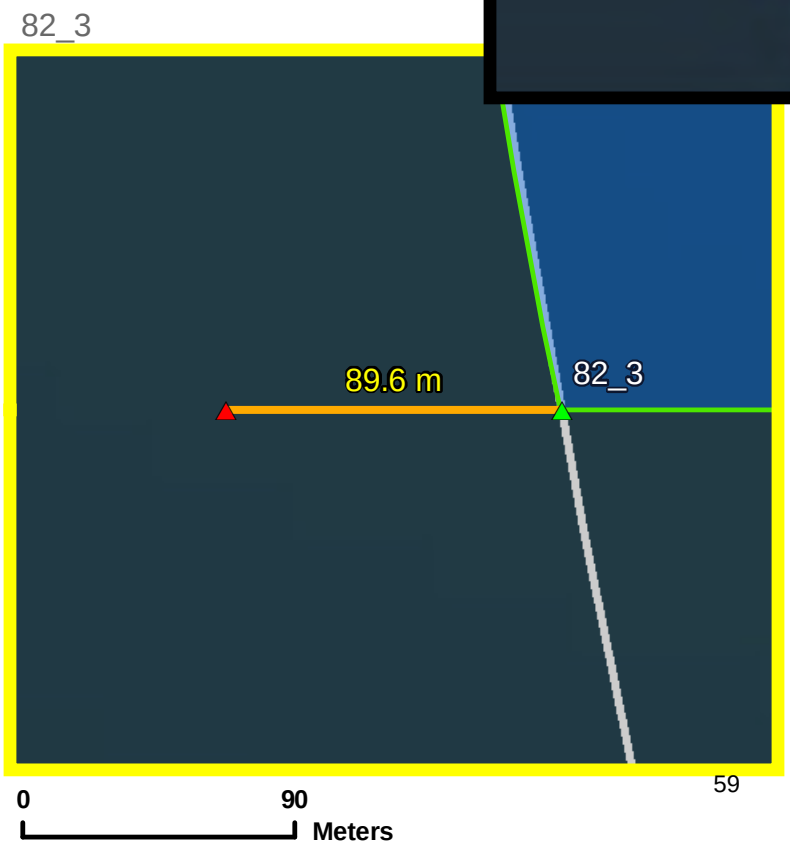
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





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Point Sur SMR

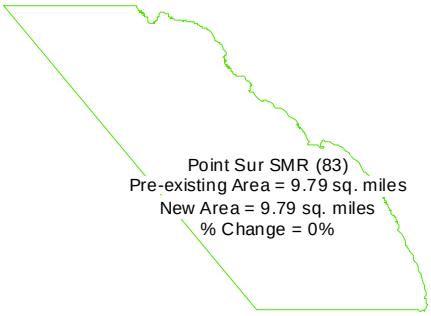
Legend

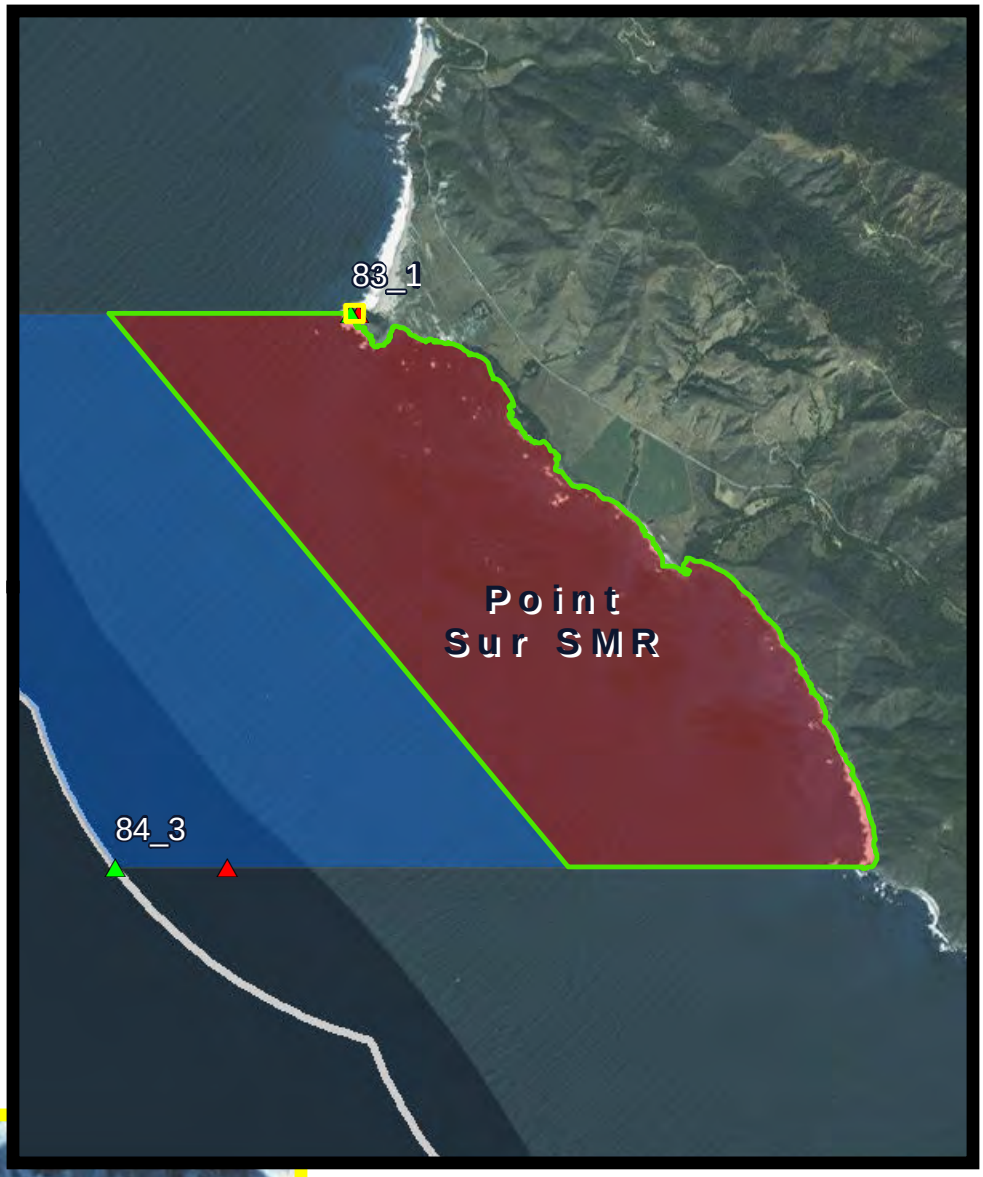
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

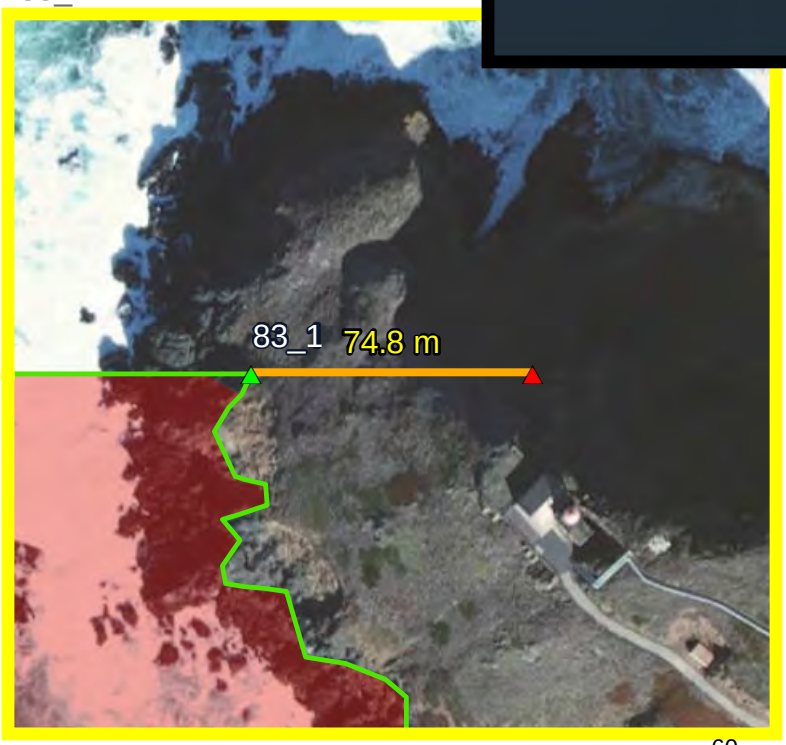
Summary of Proposed Refinements





0 4,100 Meters

83_1



0 90 Meters

60

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Point Sur SMCA

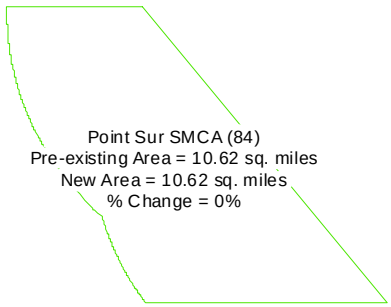
Legend

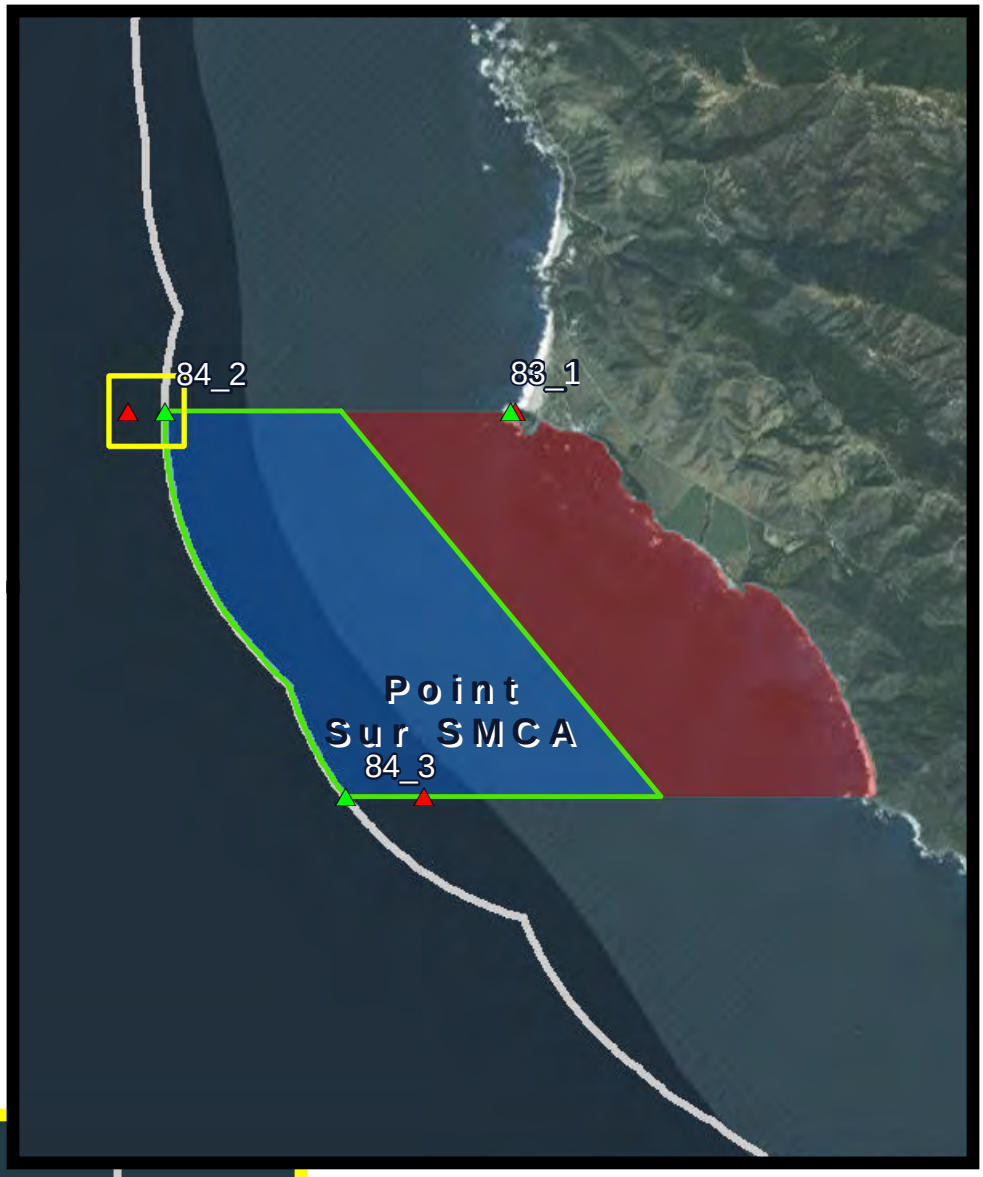
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

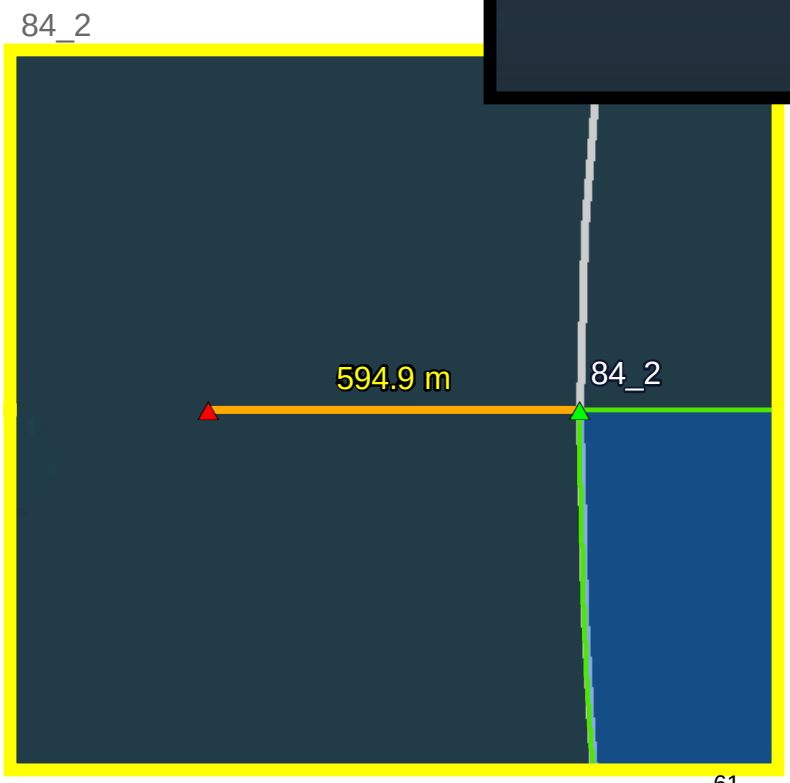
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements







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Point Sur SMCA

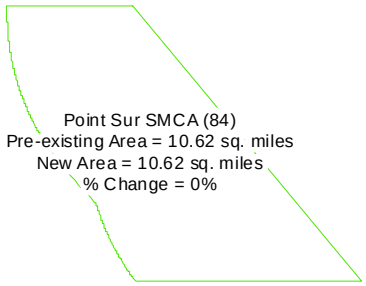
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

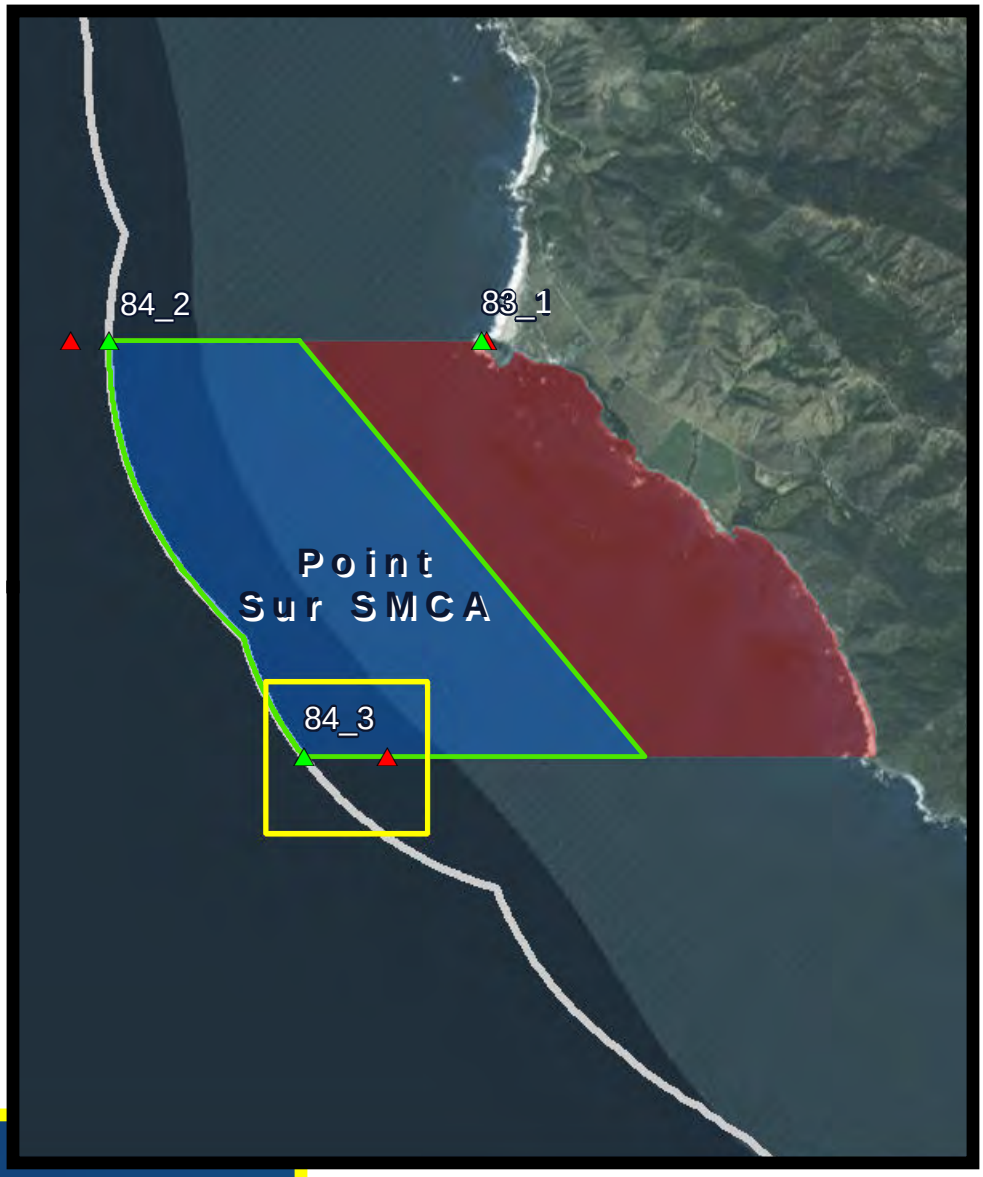
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

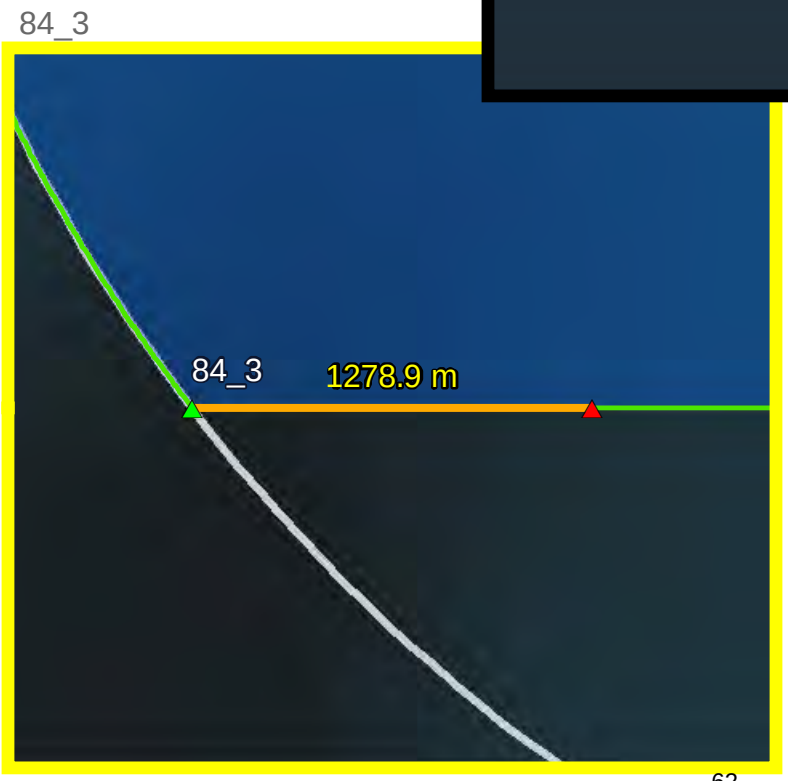
Summary of Proposed Refinements



Point Sur SMCA (84)
Pre-existing Area = 10.62 sq. miles
New Area = 10.62 sq. miles
% Change = 0%



0 5,400 Meters



0 1,100 Meters

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Big Creek SMR

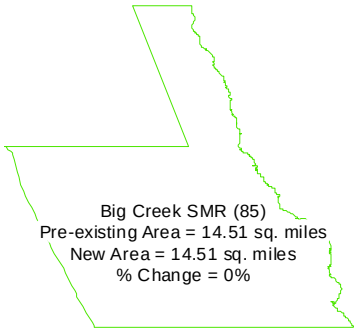
Legend

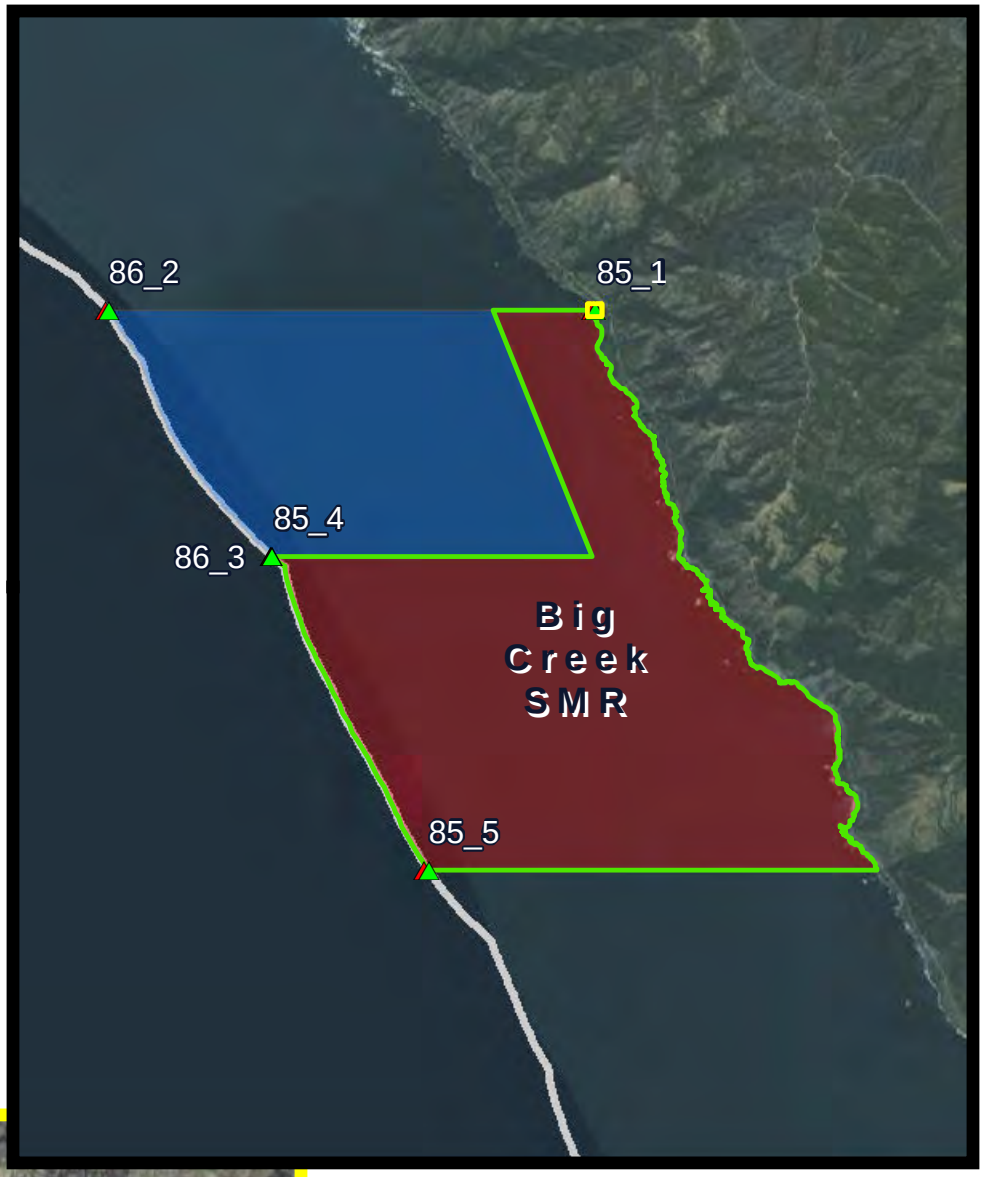
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





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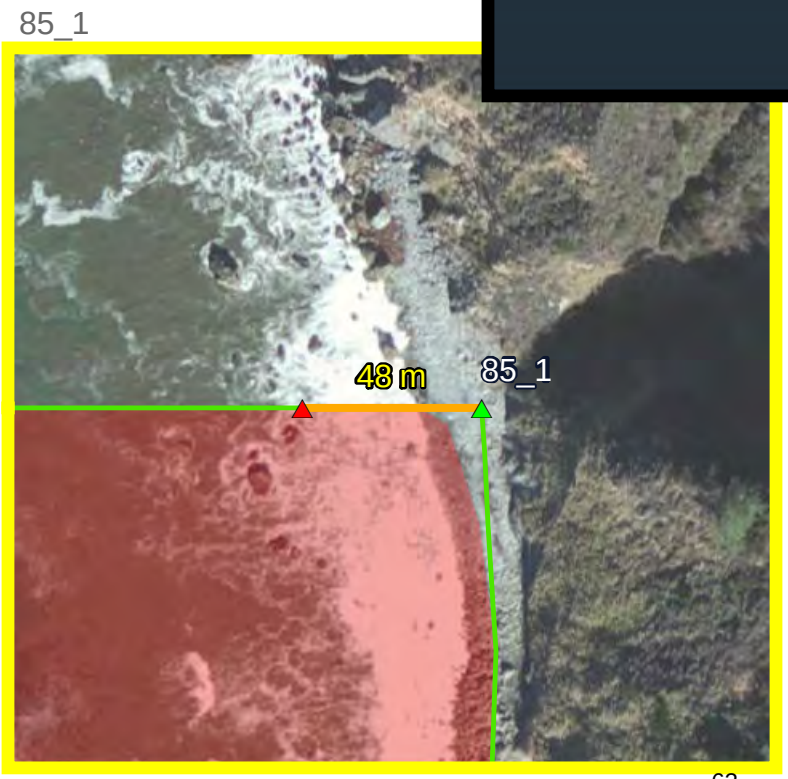

0 90 Meters

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mr_gis@wildlife.ca.gov
May 8, 2015

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Big Creek SMR and SMCA

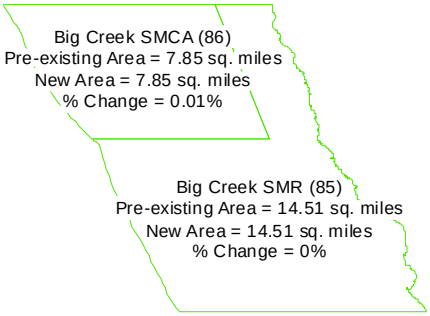
Legend

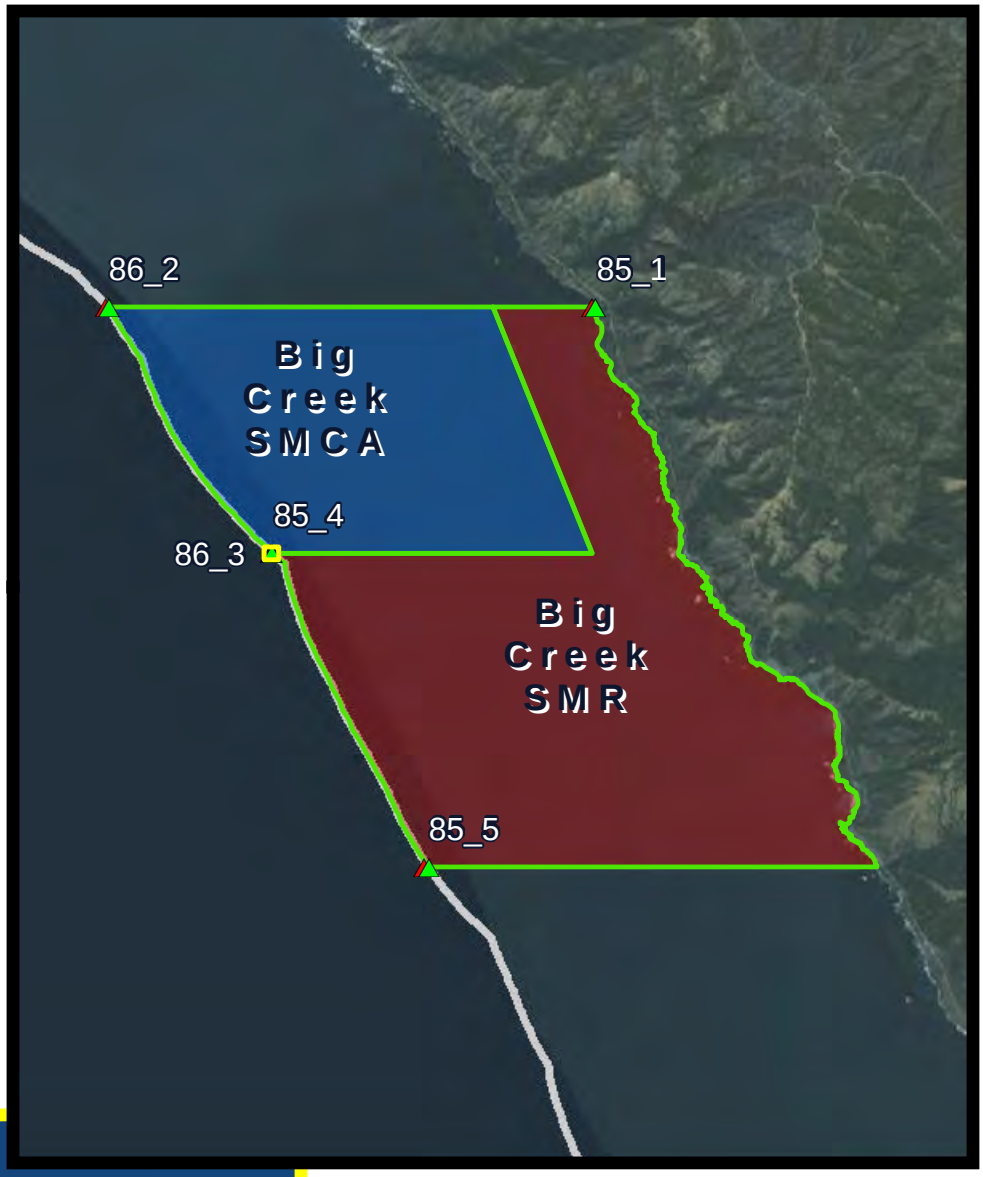
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

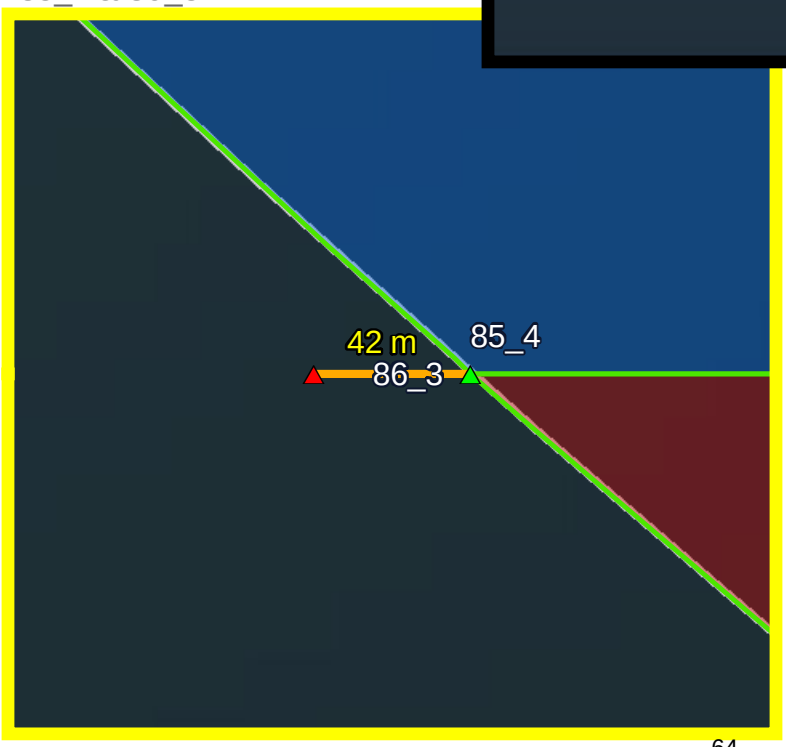
Summary of Proposed Refinements





0 5,400 Meters

85_4 & 86_3



0 90 Meters

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Big Creek SMR

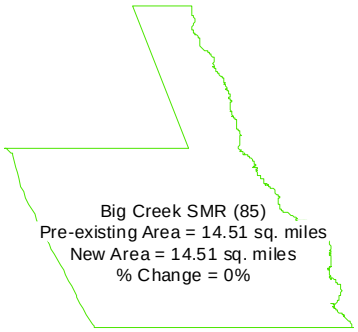
Legend

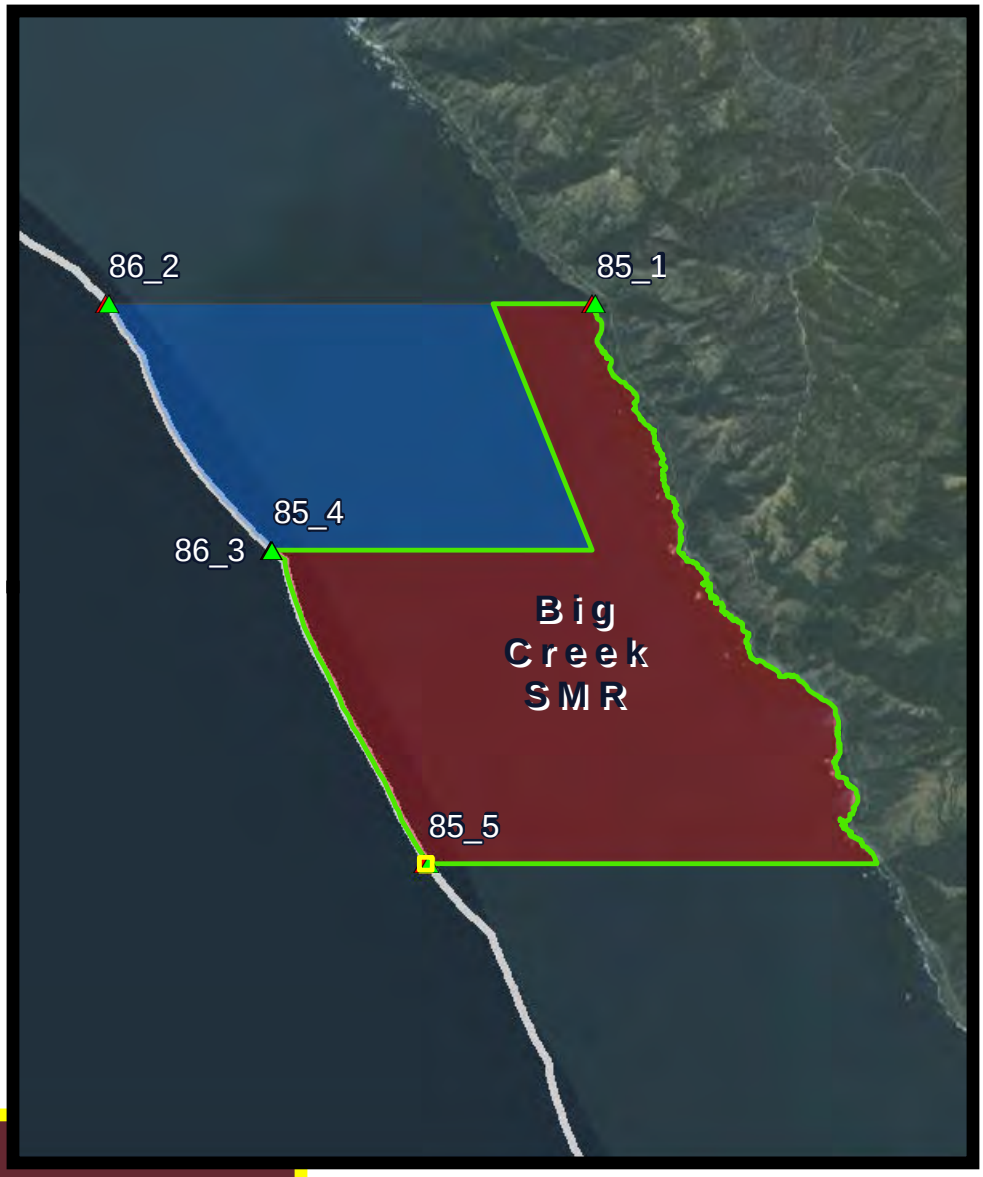
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

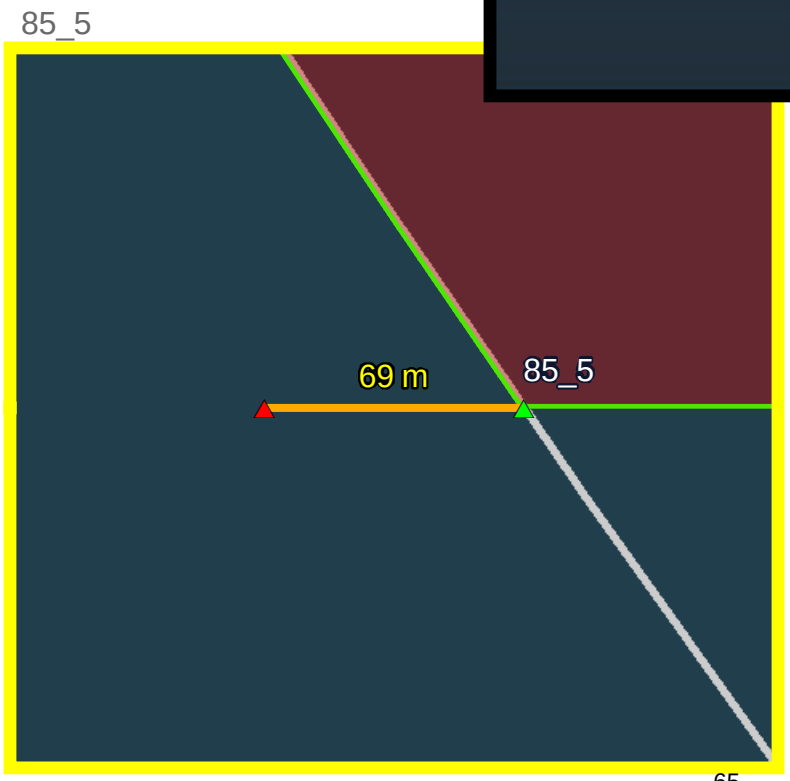
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements







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Big Creek SMCA

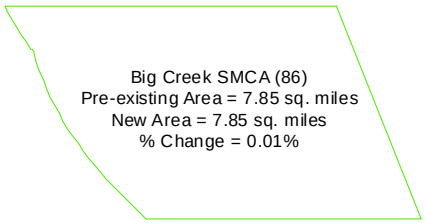
Legend

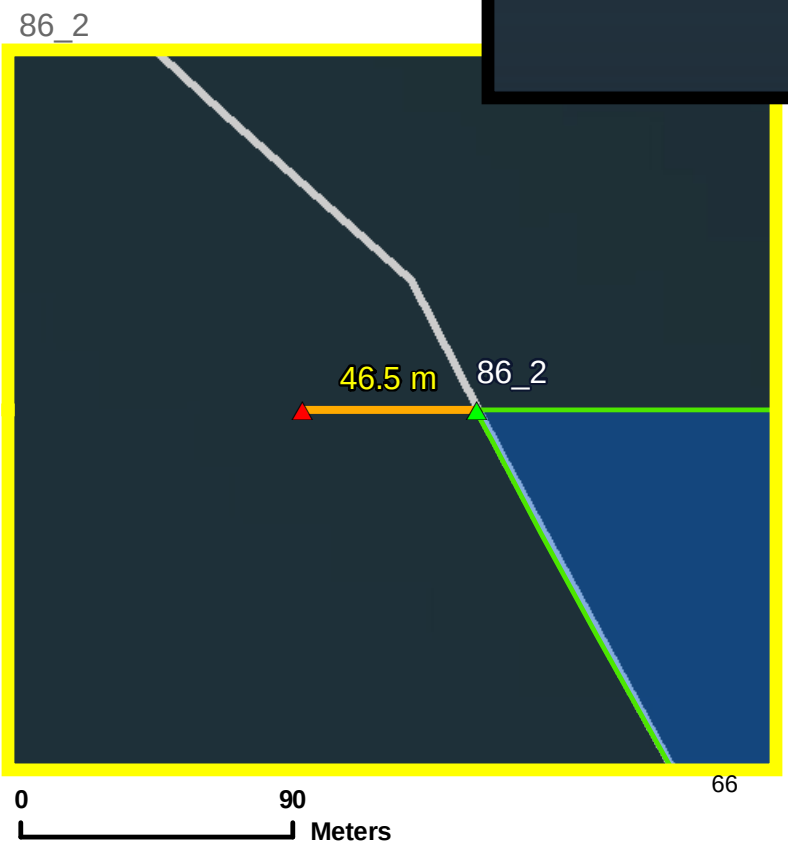
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





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Piedras Blancas SMR

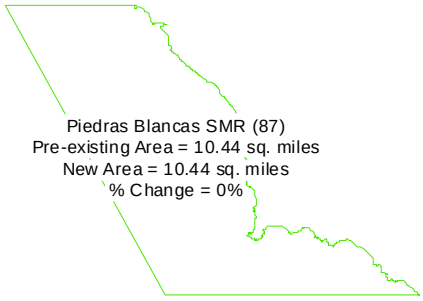
Legend

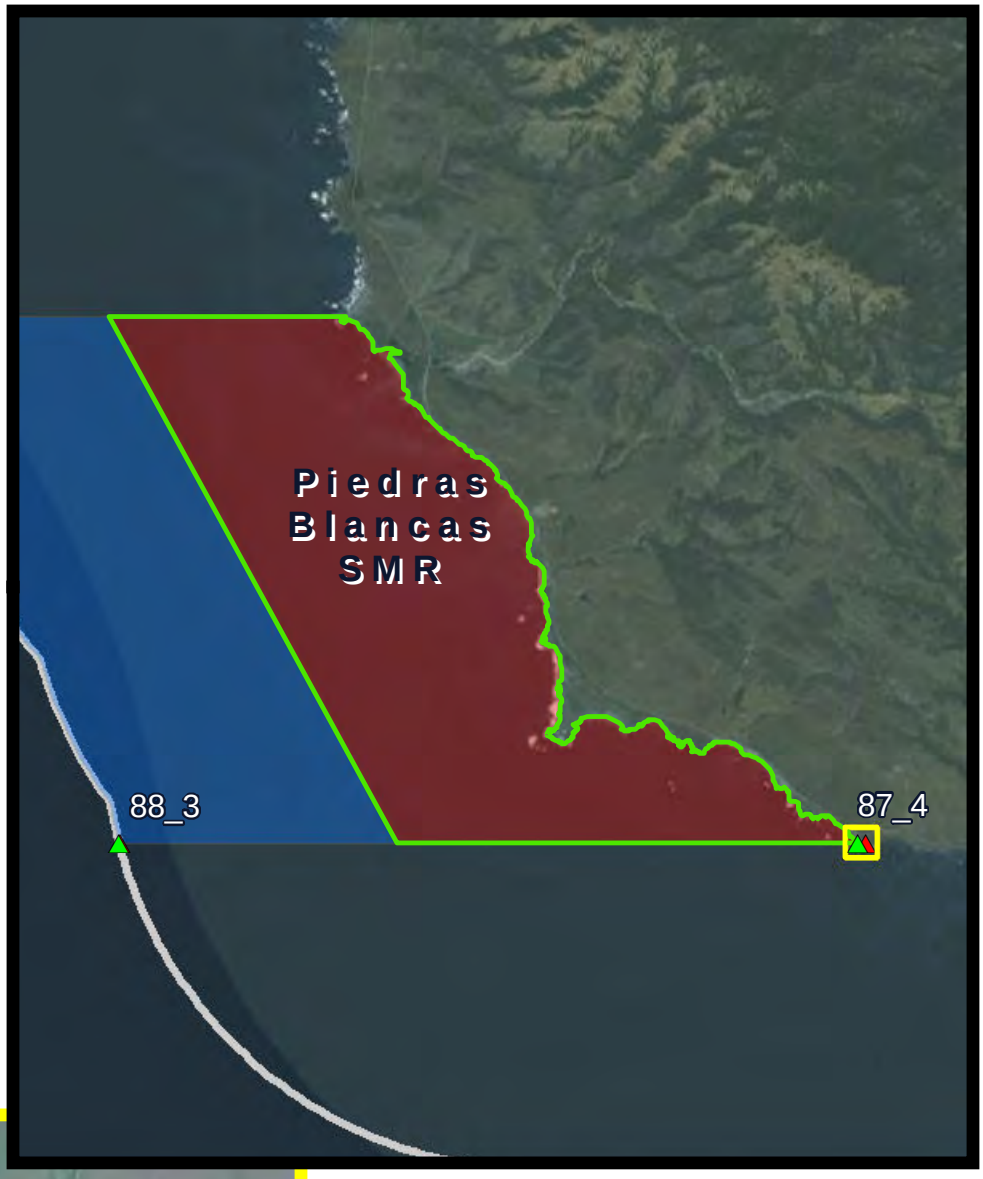
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





87_4

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Piedras Blancas SMCA

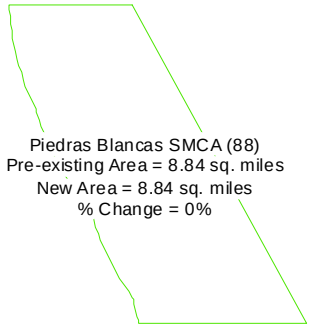
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

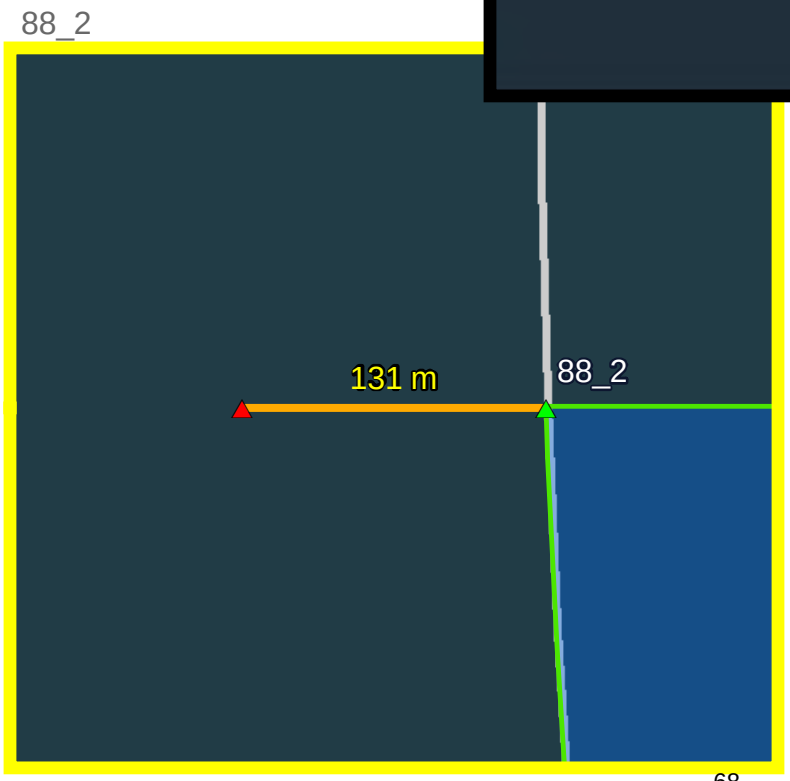
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Piedras Blancas SMCA (88)
Pre-existing Area = 8.84 sq. miles
New Area = 8.84 sq. miles
% Change = 0%

0 3,100 Meters



0 150 Meters

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Piedras Blancas SMCA

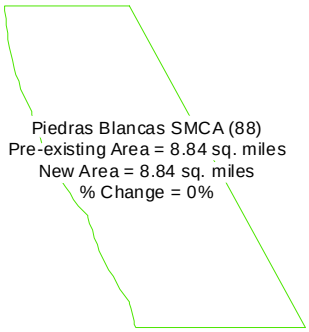
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

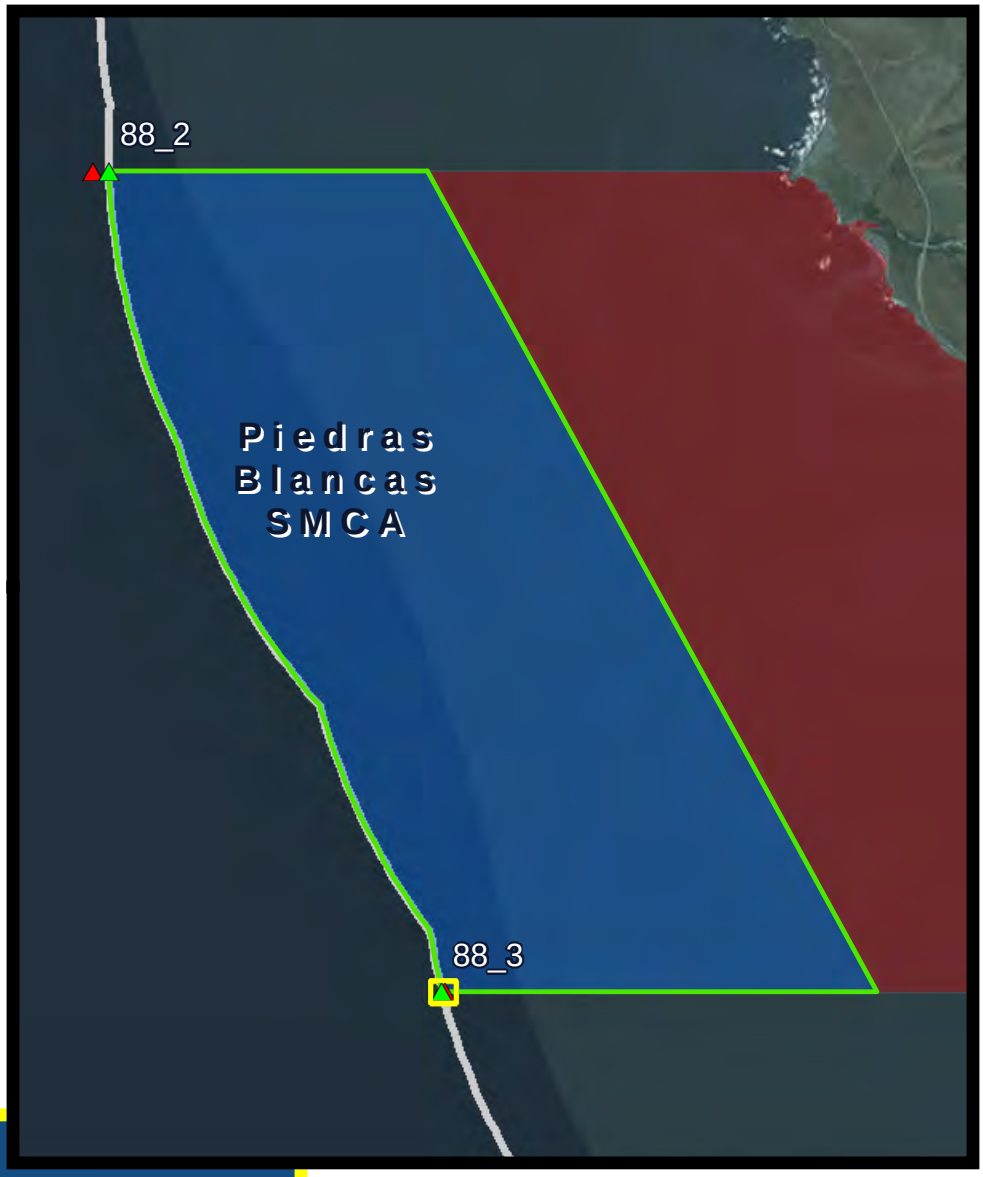
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

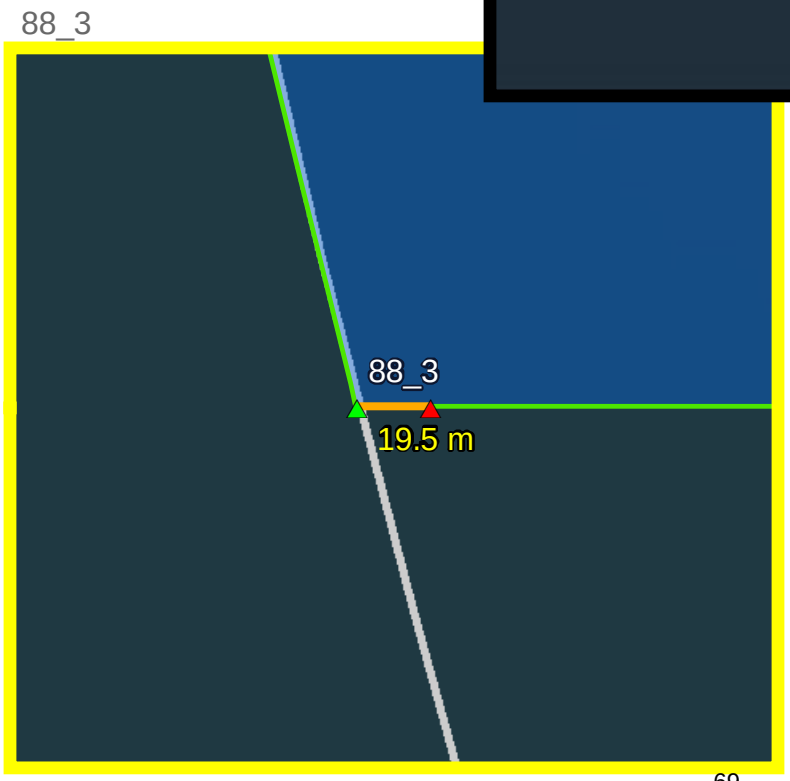
Summary of Proposed Refinements



Piedras Blancas SMCA (88)
Pre-existing Area = 8.84 sq. miles
New Area = 8.84 sq. miles
% Change = 0%



0 2,900 Meters



0 90 Meters

69

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Cambria SMCA

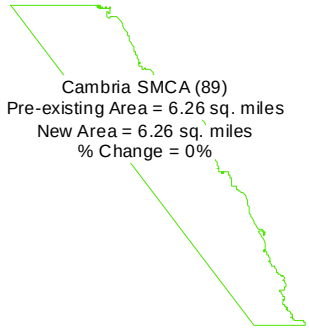
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Cambria SMCA (89)
Pre-existing Area = 6.26 sq. miles
New Area = 6.26 sq. miles
% Change = 0%

0 3,300 Meters

89_1

0 150 Meters

70

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Cambria SMCA and White Rock SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Cambria SMCA (89)
Pre-existing Area = 6.26 sq. miles
New Area = 6.26 sq. miles
% Change = 0%

White Rock (Cambria) SMCA (90)
Pre-existing Area = 2.91 sq. miles
New Area = 2.91 sq. miles
% Change = 0%

0 5,000 Meters

89_4 & 90_1

0 90 Meters

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White Rock SMCA

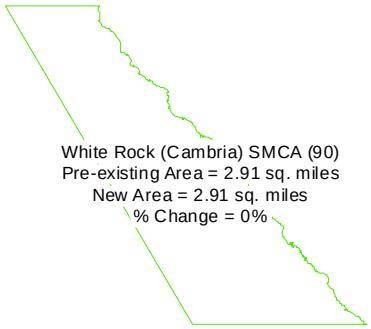
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



White Rock (Cambria) SMCA (90)
Pre-existing Area = 2.91 sq. miles
New Area = 2.91 sq. miles
% Change = 0%

0 2,300 Meters

90_4

0 90 Meters

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Point Buchon SMR

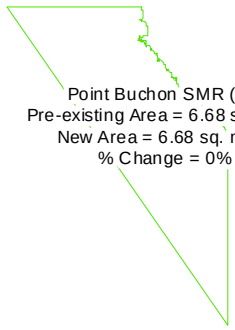
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

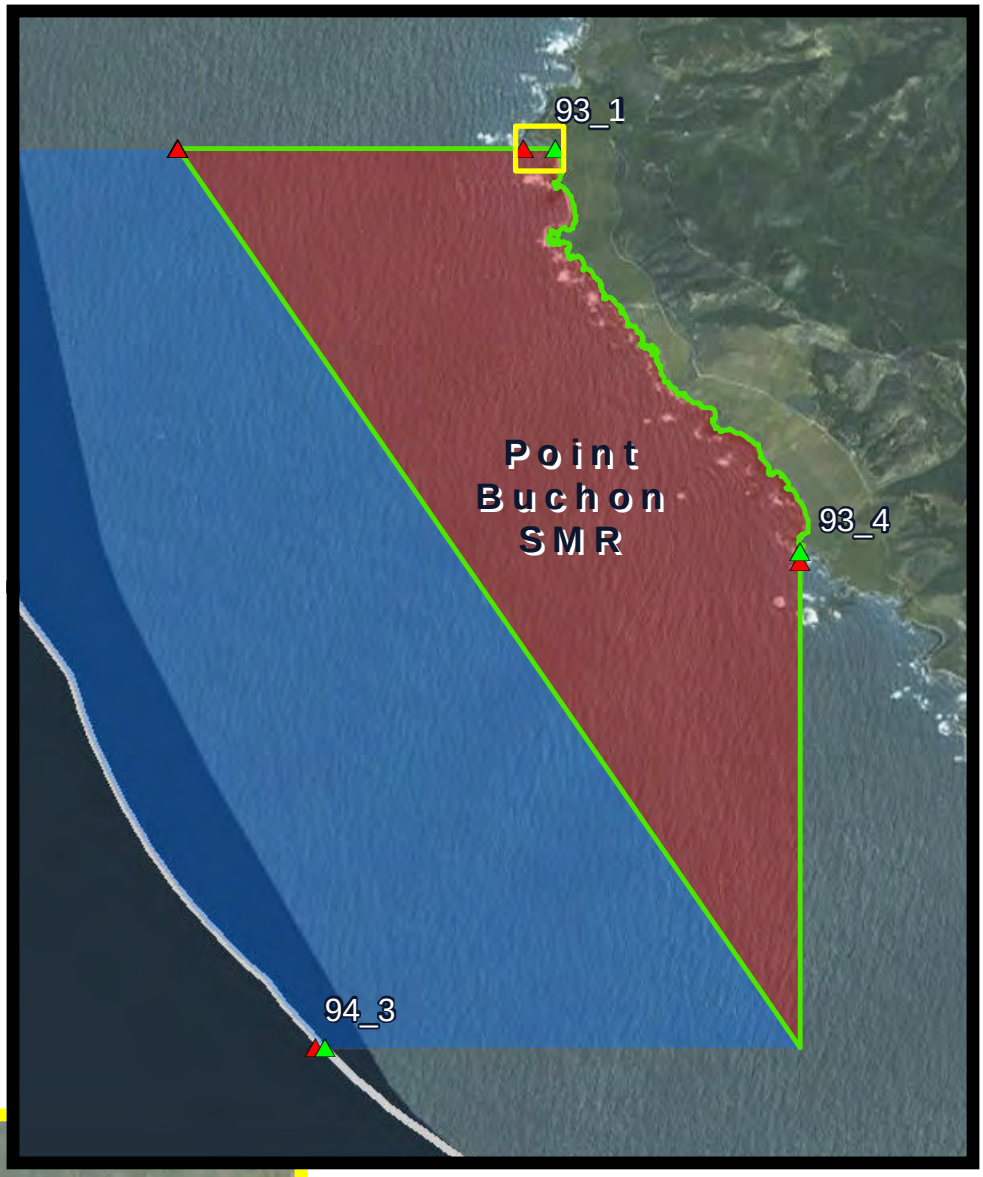
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

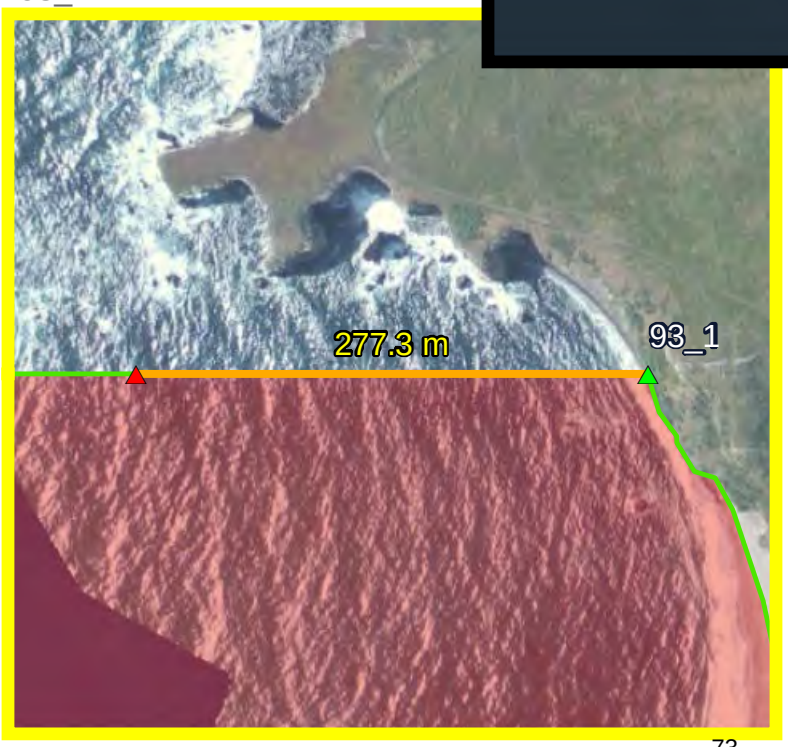


Point Buchon SMR (93)
Pre-existing Area = 6.68 sq. miles
New Area = 6.68 sq. miles
% Change = 0%



0 3,100 Meters

93_1



0 190 Meters

73

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Point Buchon SMR

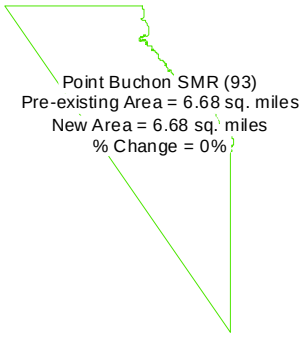
Legend

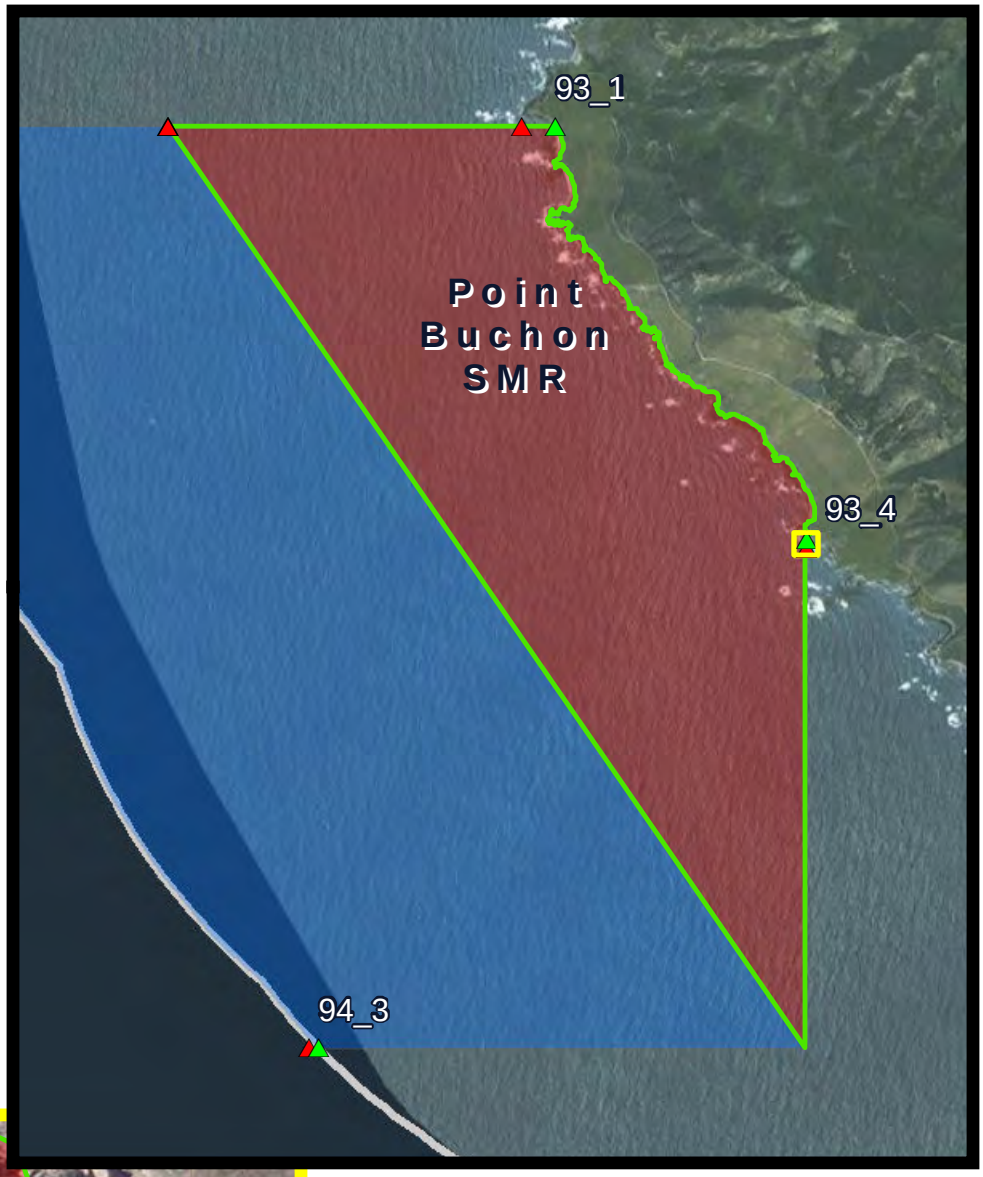
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

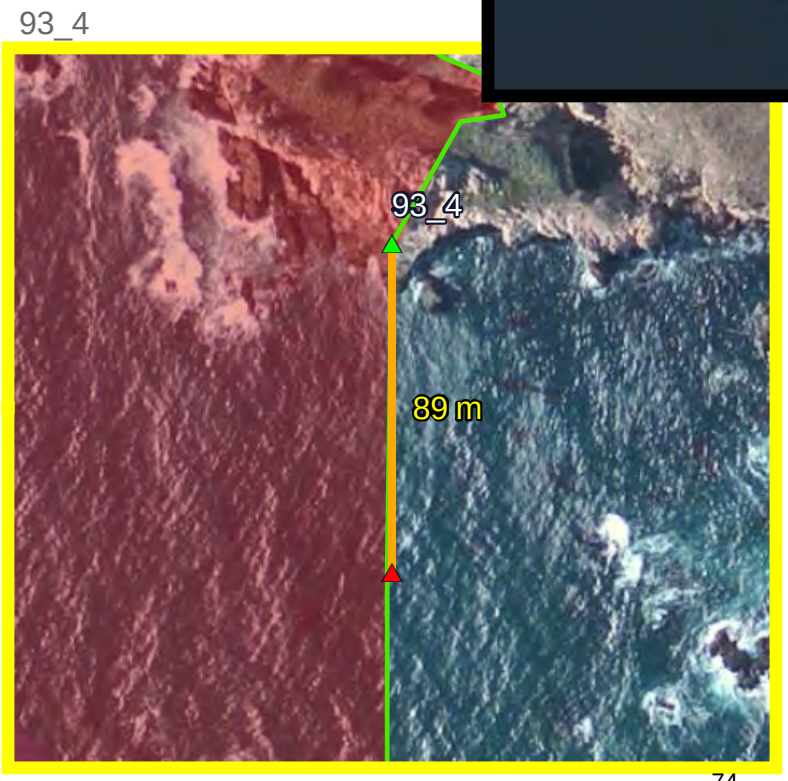
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements







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Point Buchon SMCA

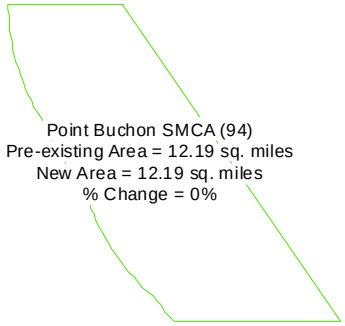
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

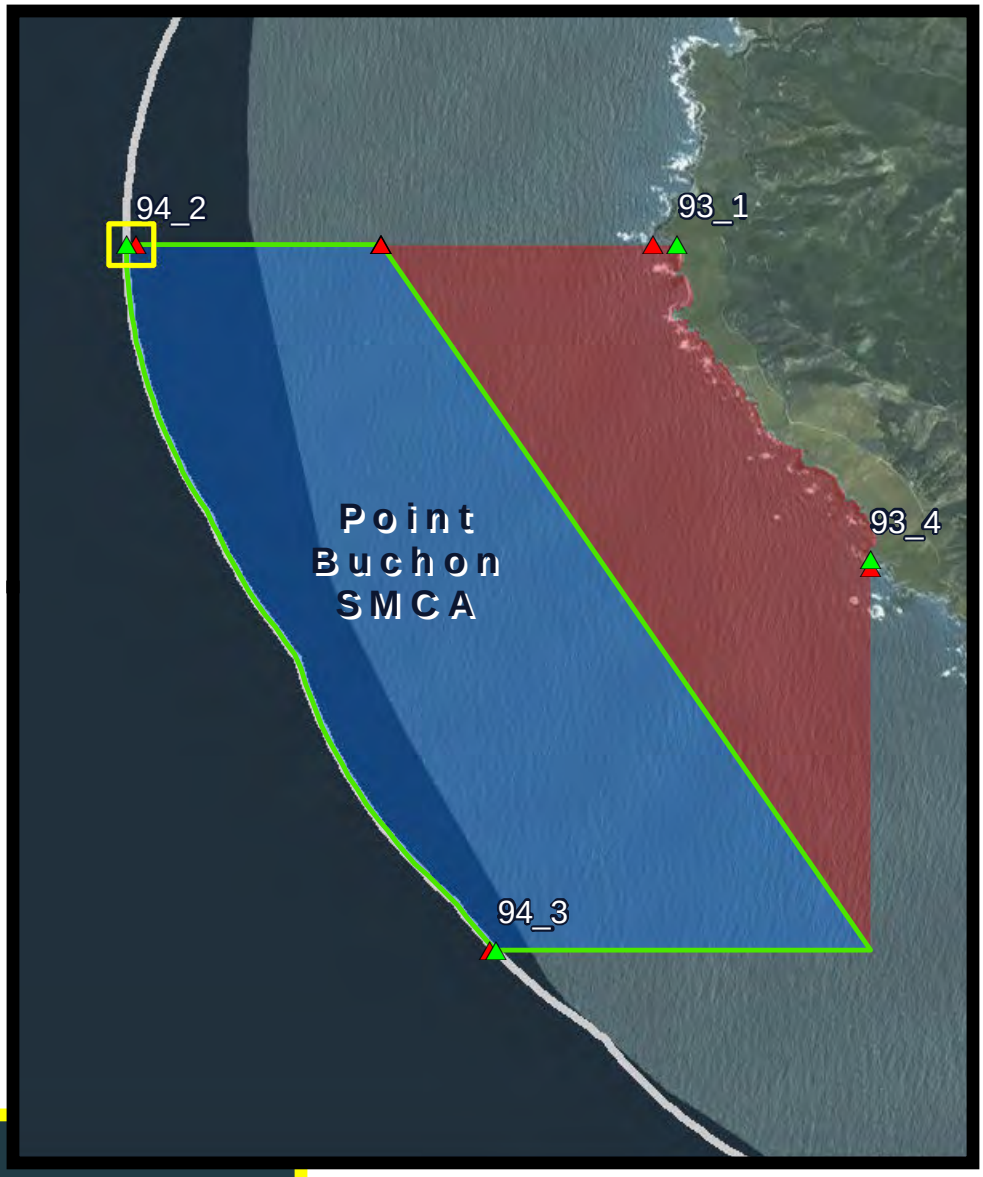
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Point Buchon SMCA (94)
Pre-existing Area = 12.19 sq. miles
New Area = 12.19 sq. miles
% Change = 0%



0 3,900 Meters

0 230 Meters

75

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Point Buchon SMCA

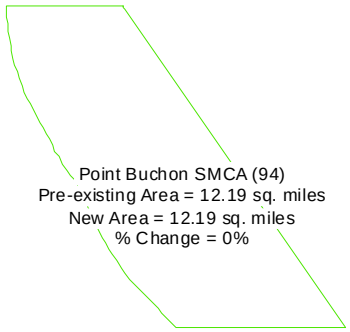
Legend

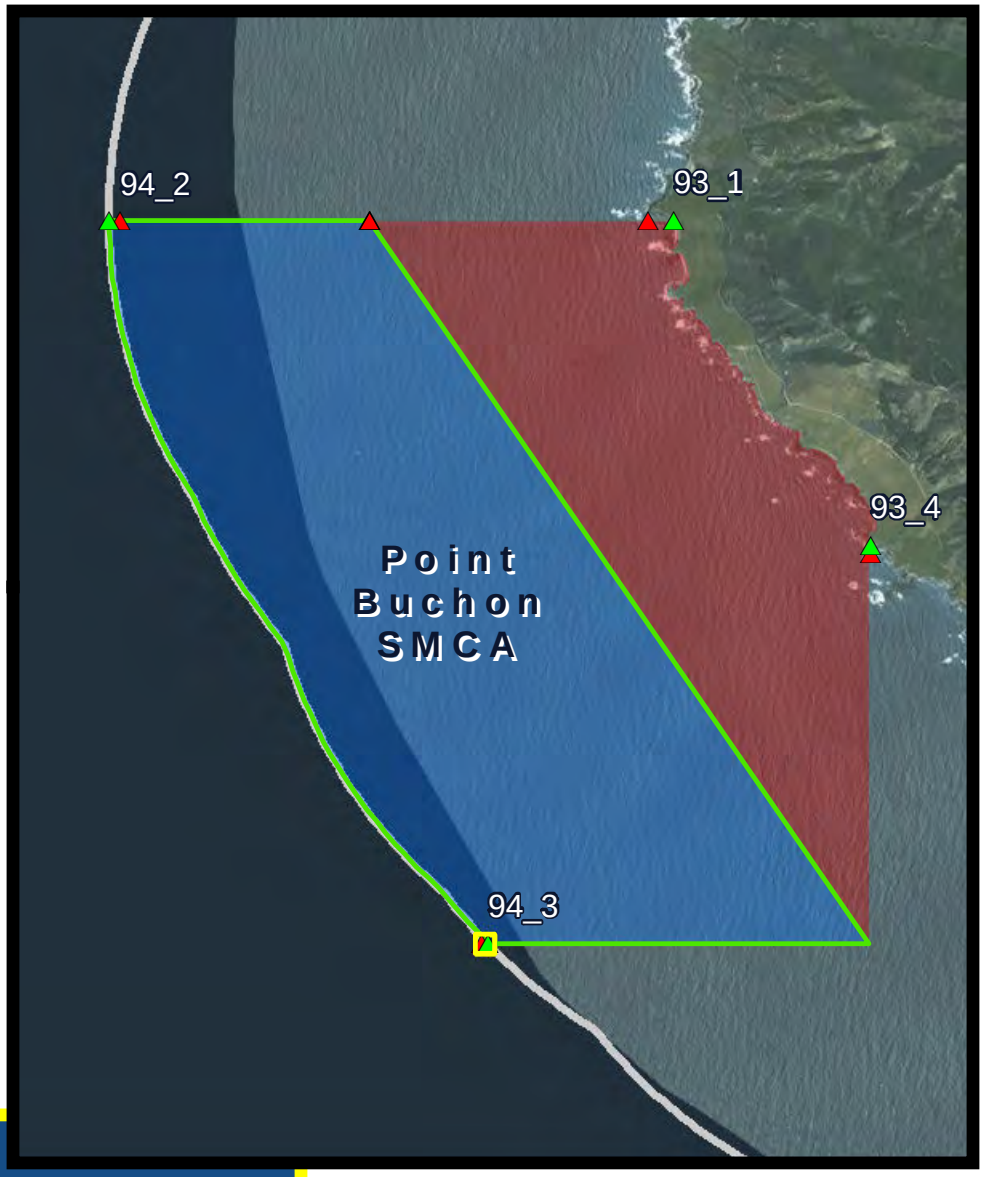
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

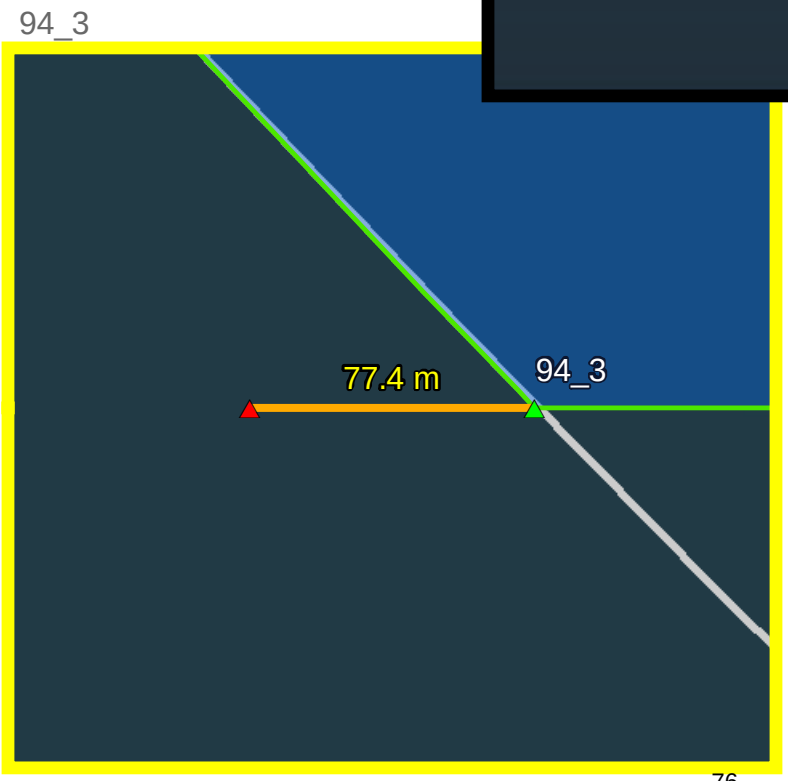
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements







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Vandenberg SMR

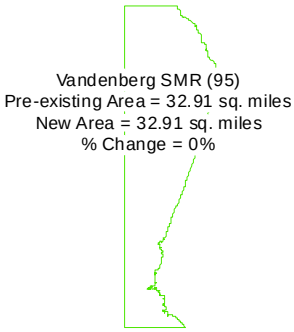
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

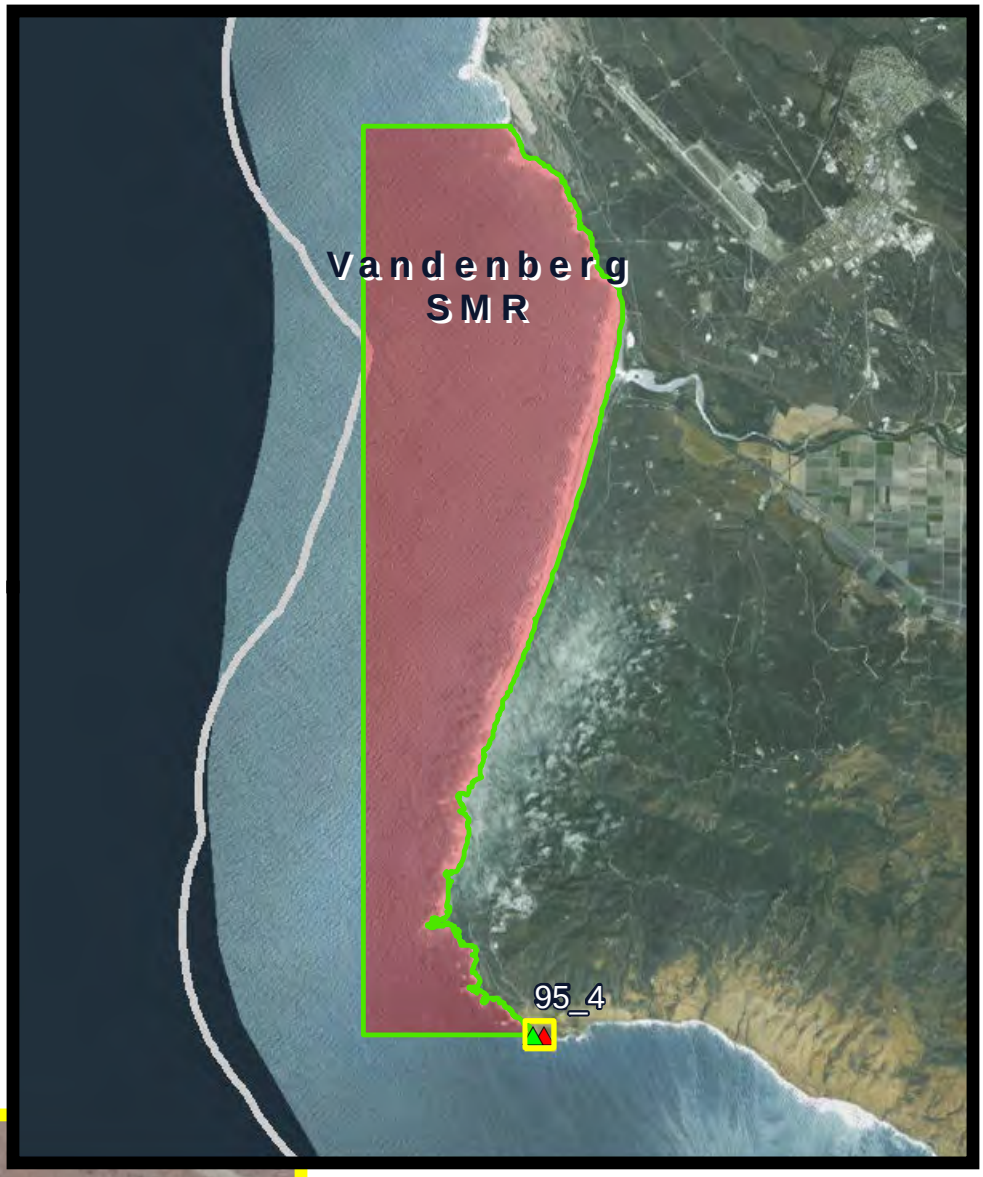
Current MPA Boundaries

State Marine Reserve (SMR)

Summary of Proposed Refinements

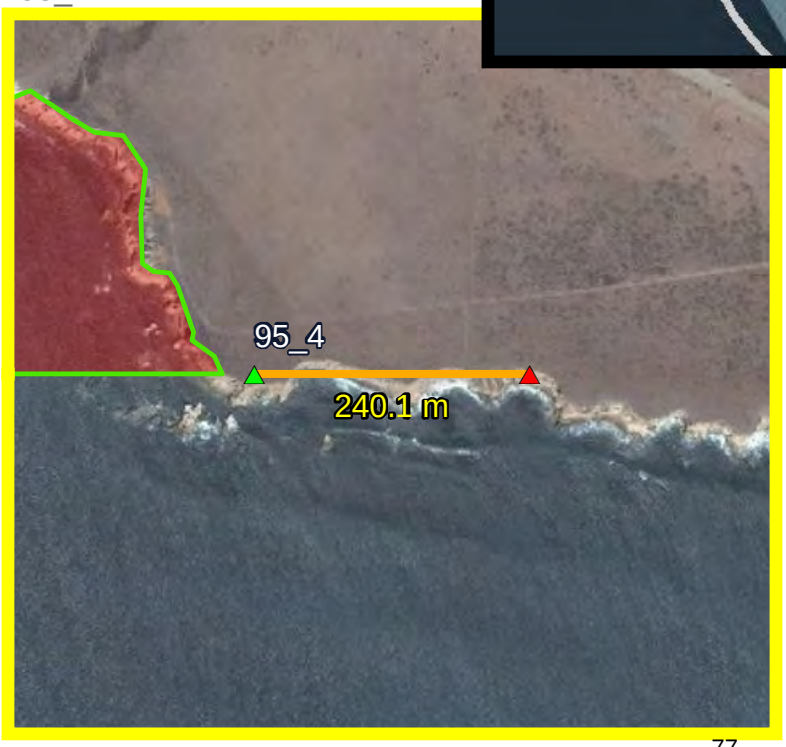


Vandenberg SMR (95)
Pre-existing Area = 32.91 sq. miles
New Area = 32.91 sq. miles
% Change = 0%



0 8,200 Meters

95_4



0 300 Meters

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Point Conception SMR

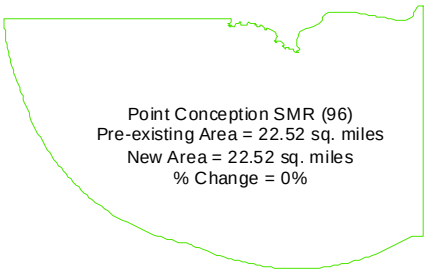
Legend

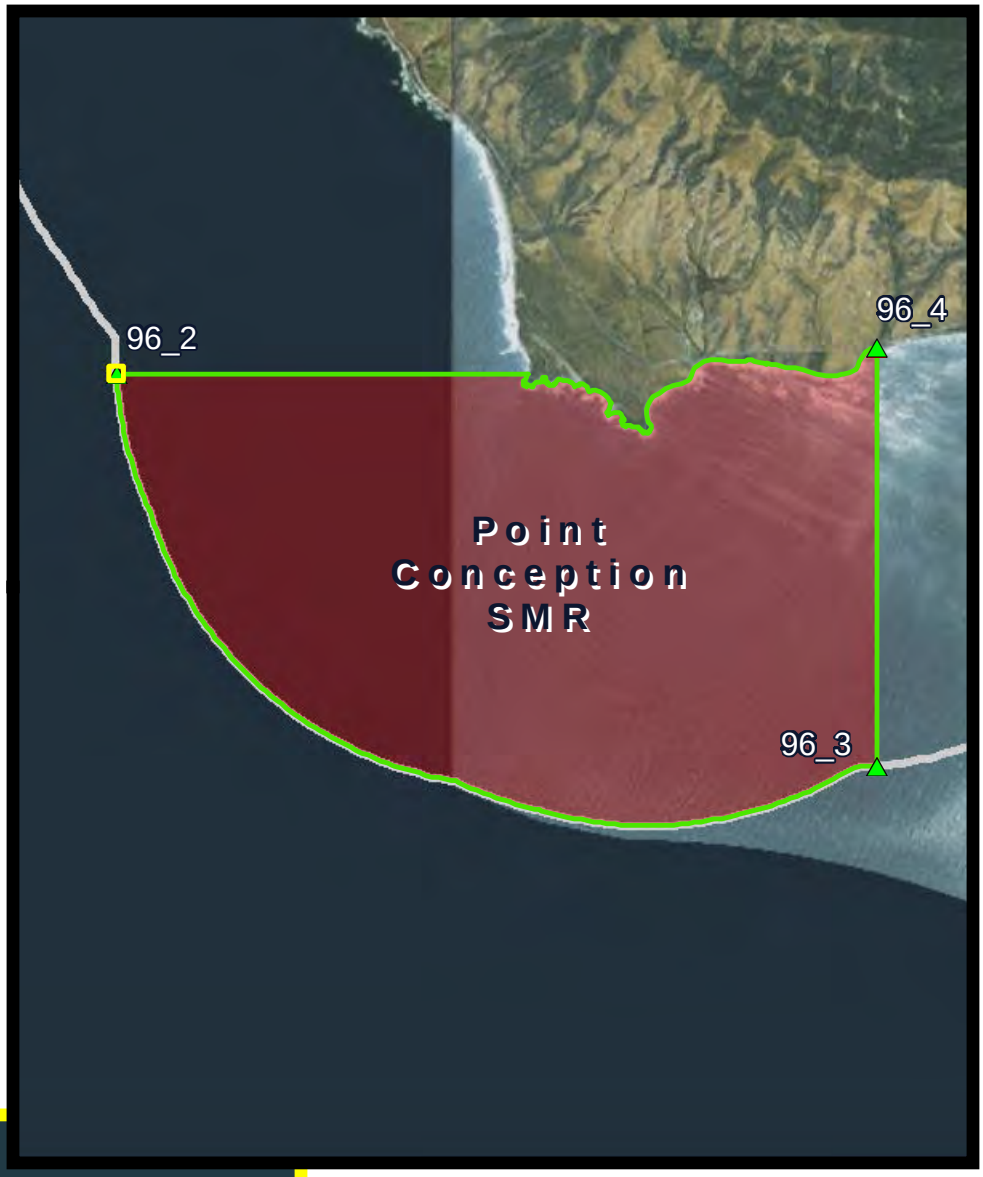
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

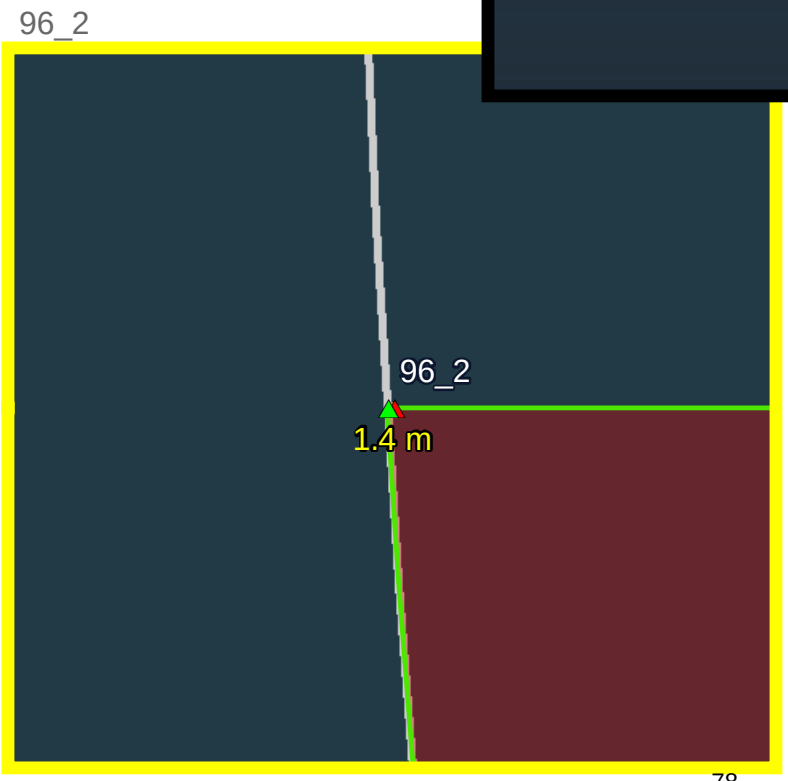
Current MPA Boundaries

- State Marine Reserve (SMR)

Summary of Proposed Refinements







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Point Conception SMR

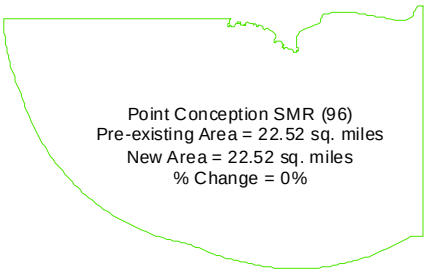
Legend

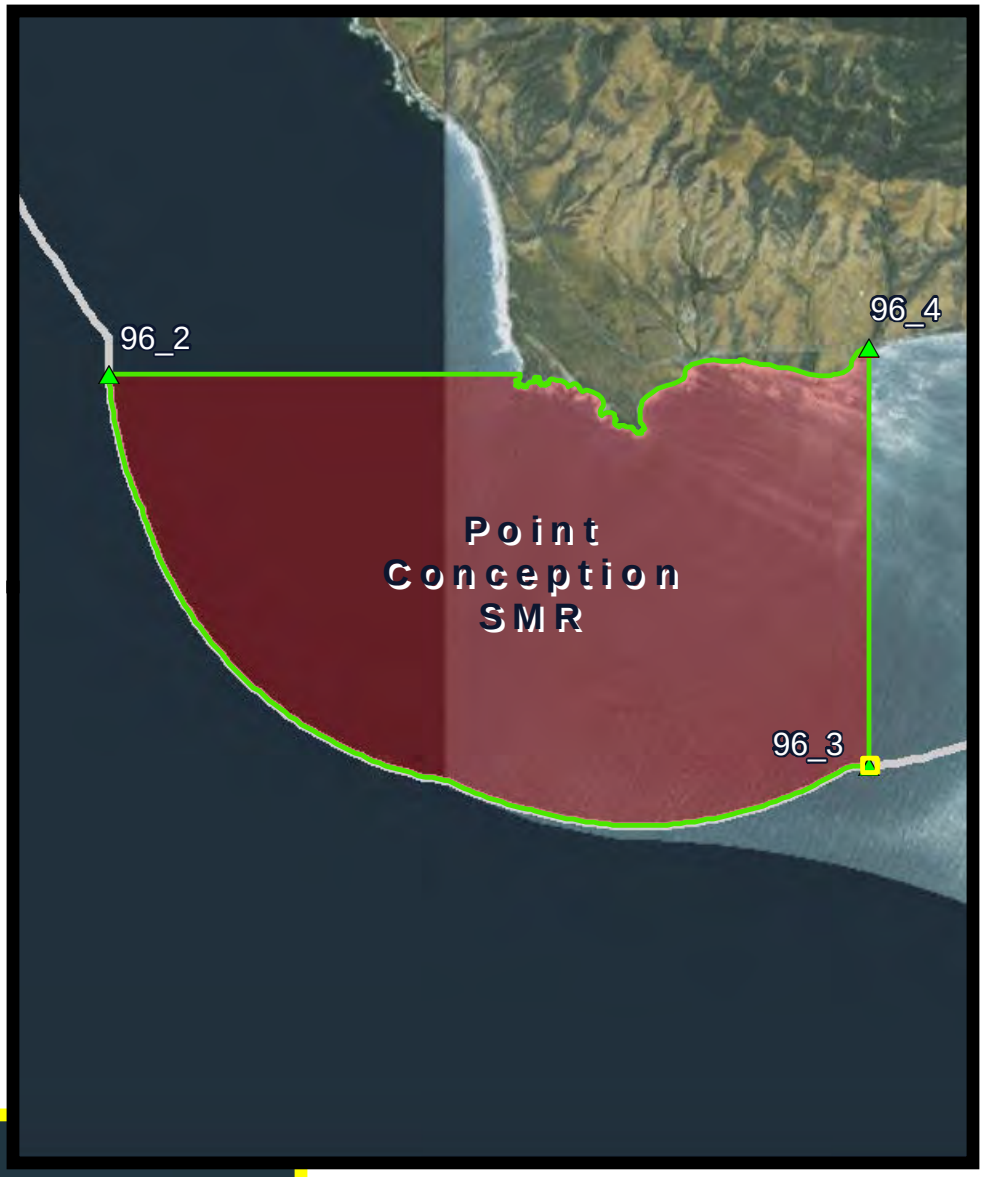
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

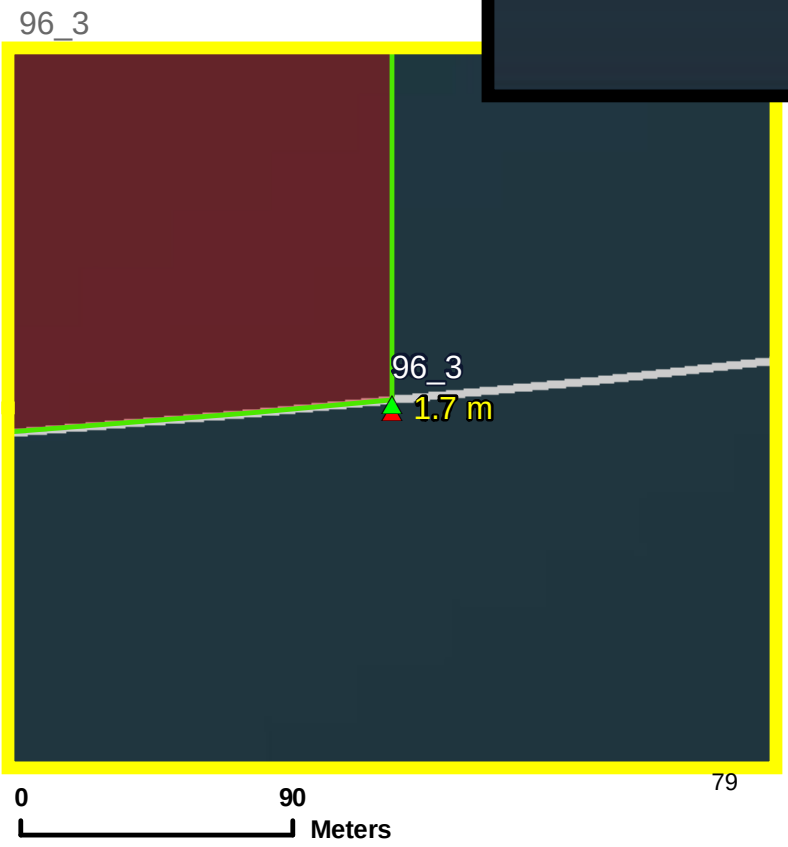
Current MPA Boundaries

- State Marine Reserve (SMR)

Summary of Proposed Refinements







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May 8, 2015

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Point Conception SMR

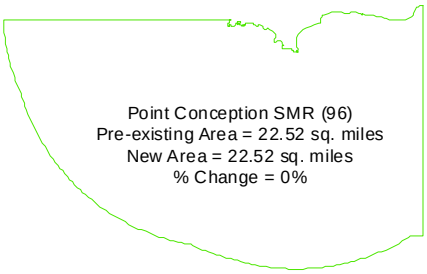
Legend

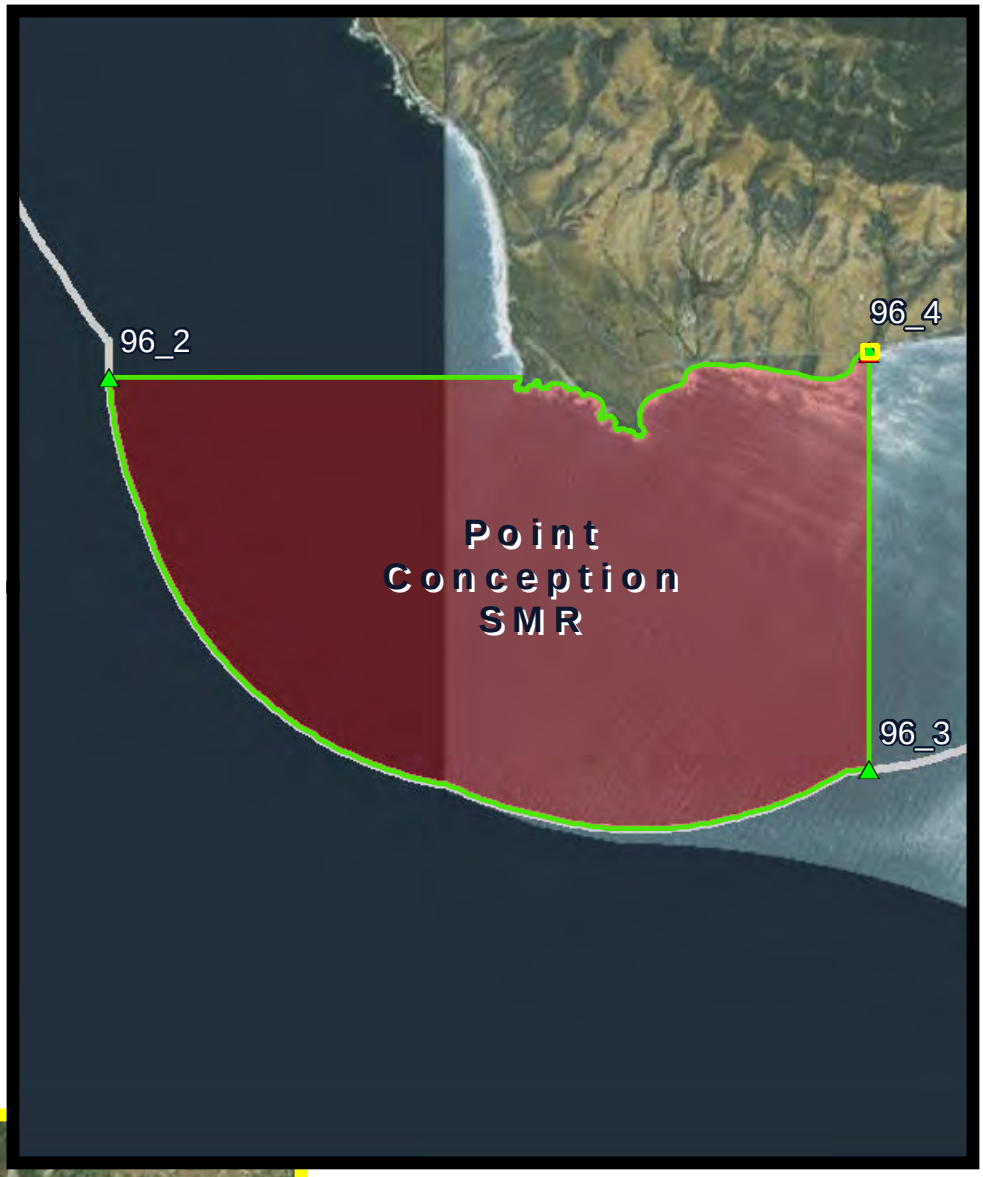
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Reserve (SMR)

Summary of Proposed Refinements





0 5,000 Meters

96_4

0 90 Meters

80

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Naples SMCA

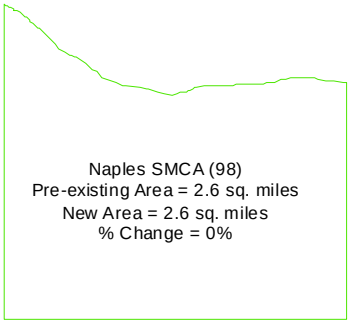
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Naples SMCA (98)
Pre-existing Area = 2.6 sq. miles
New Area = 2.6 sq. miles
% Change = 0%

0 1,400 Meters

98_1

0 90 Meters

81

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Naples SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Naples SMCA (98)
Pre-existing Area = 2.6 sq. miles
New Area = 2.6 sq. miles
% Change = 0%

0 1,400 Meters

98_4

0 90 Meters

82

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Campus Point SMCA

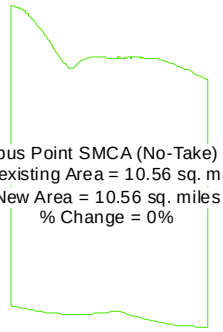
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

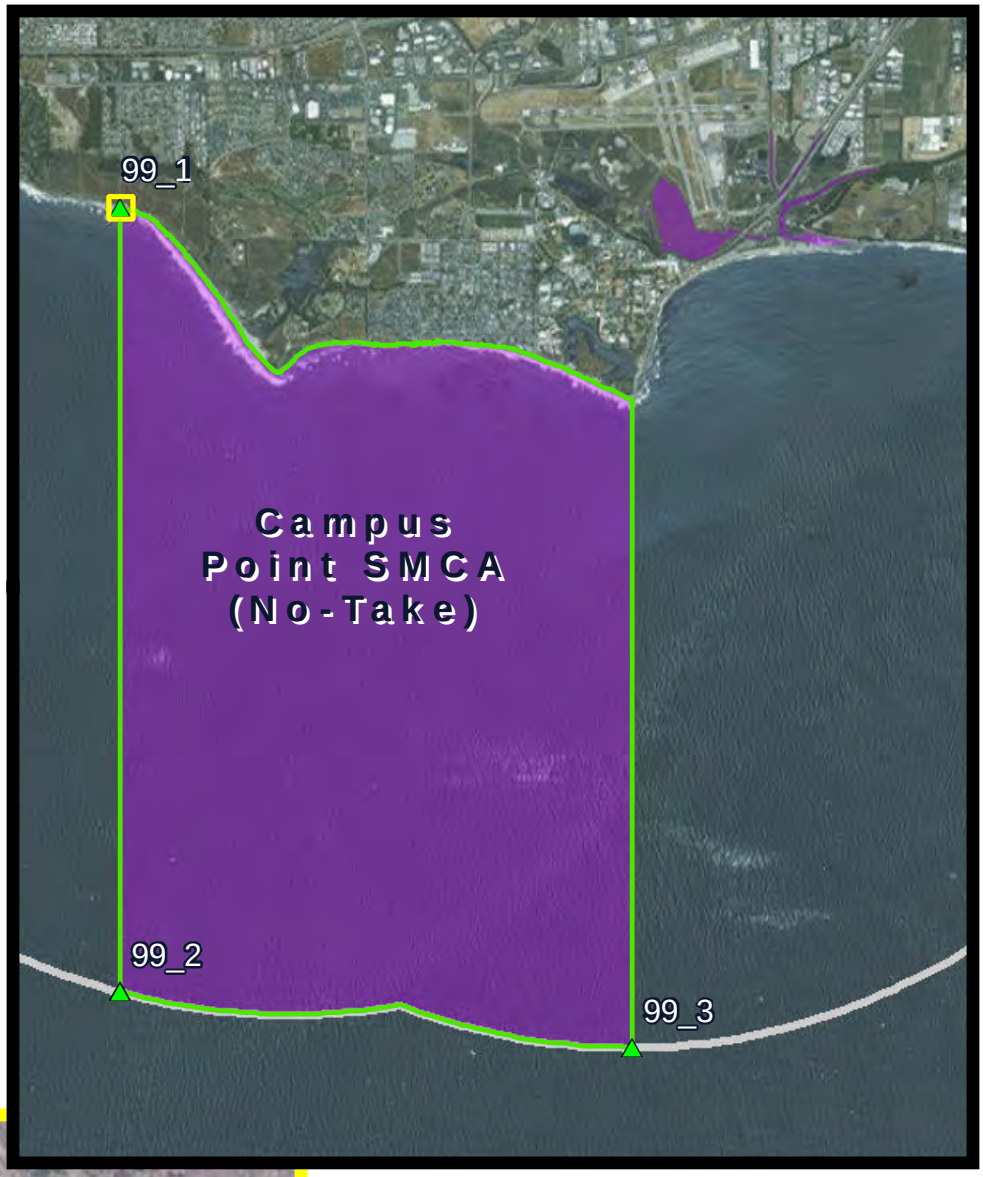
Current MPA Boundaries

State Marine Conservation Area (SMCA No-Take)

Summary of Proposed Refinements

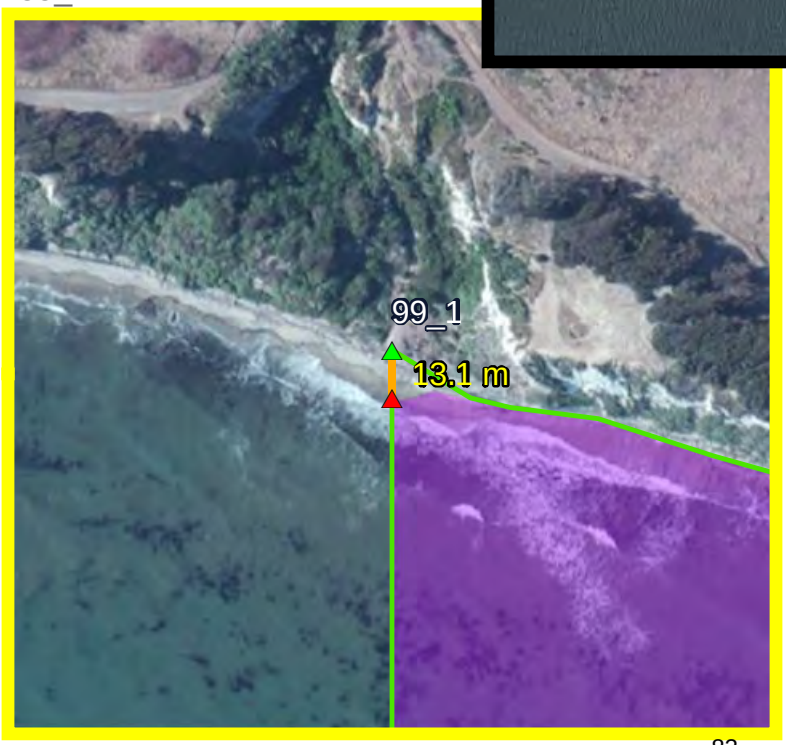


Campus Point SMCA (No-Take) (99)
Pre-existing Area = 10.56 sq. miles
New Area = 10.56 sq. miles
% Change = 0%



0 3,100 Meters

99_1



0 90 Meters

83

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Campus Point SMCA

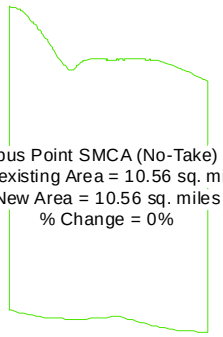
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

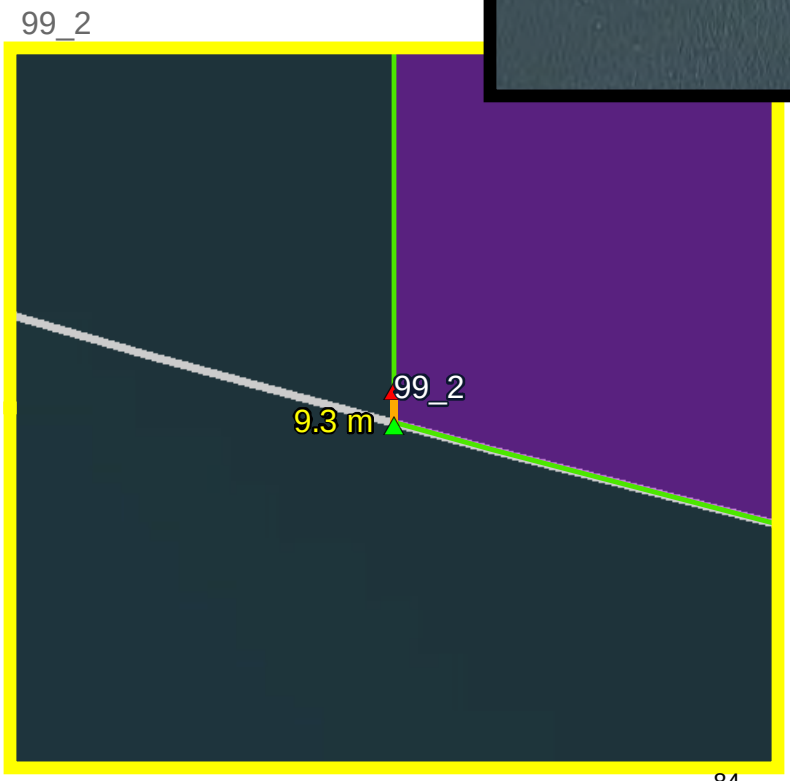
State Marine Conservation Area (SMCA No-Take)

Summary of Proposed Refinements



Campus Point SMCA (No-Take) (99)
Pre-existing Area = 10.56 sq. miles
New Area = 10.56 sq. miles
% Change = 0%

0 2,800 Meters



0 90 Meters

84

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Campus Point SMCA

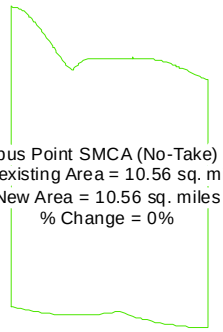
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

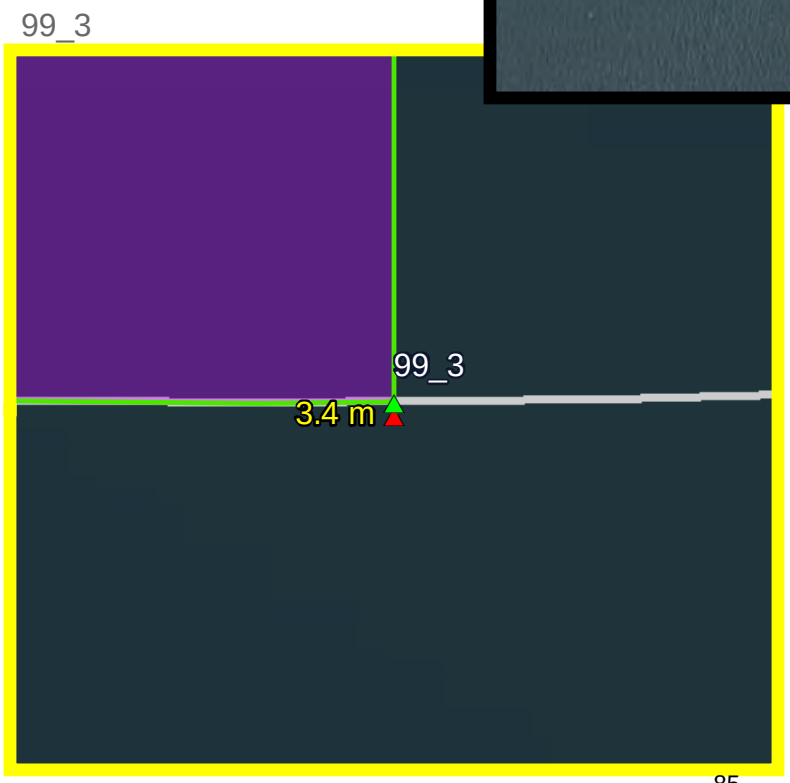
State Marine Conservation Area (SMCA No-Take)

Summary of Proposed Refinements



Campus Point SMCA (No-Take) (99)
Pre-existing Area = 10.56 sq. miles
New Area = 10.56 sq. miles
% Change = 0%

0 2,800 Meters



0 90 Meters

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Judith Rock SMR

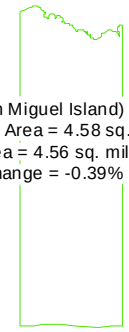
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Reserve (SMR)
- Special Closure

Summary of Proposed Refinements



Judith Rock (San Miguel Island) SMR (104)
Pre-existing Area = 4.58 sq. miles
New Area = 4.56 sq. miles
% Change = -0.39%

0 2,400 Meters

0 90 Meters

86

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Judith Rock SMR

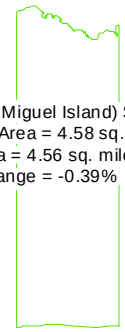
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

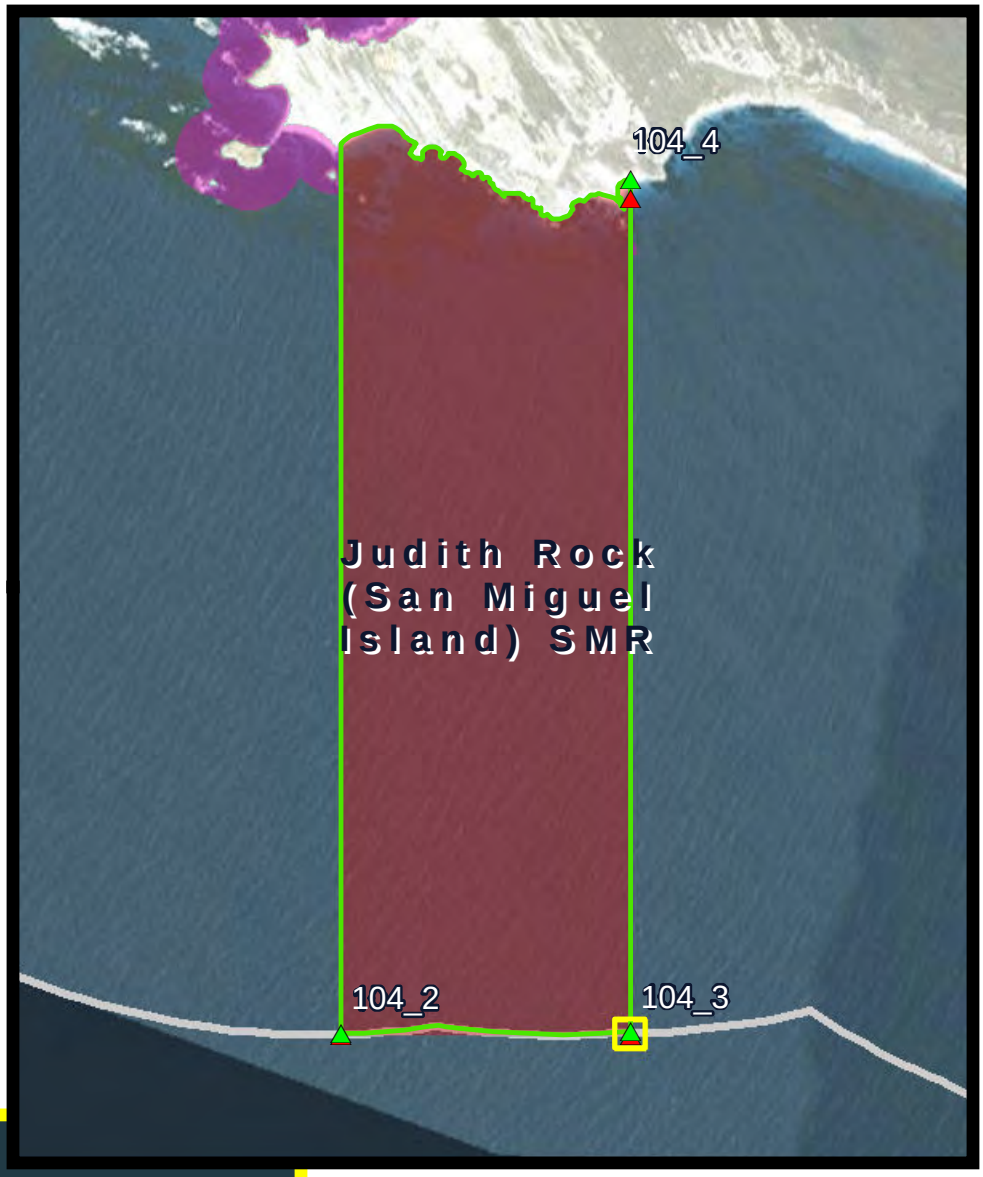
Current MPA Boundaries

- State Marine Reserve (SMR)
- Special Closure

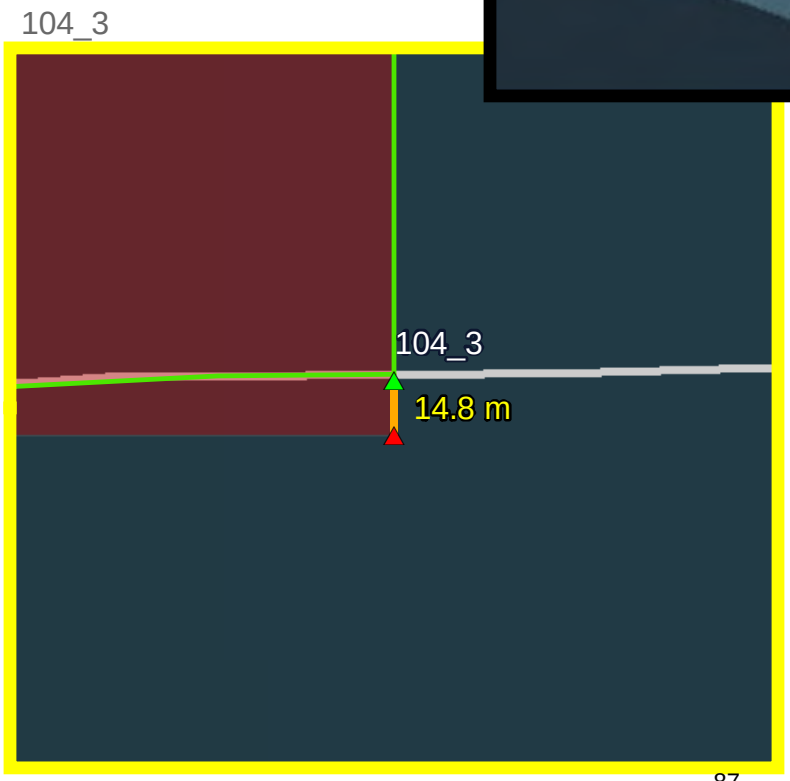
Summary of Proposed Refinements



Judith Rock (San Miguel Island) SMR (104)
Pre-existing Area = 4.58 sq. miles
New Area = 4.56 sq. miles
% Change = -0.39%



0 2,400 Meters



0 90 Meters

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Judith Rock SMR

Legend

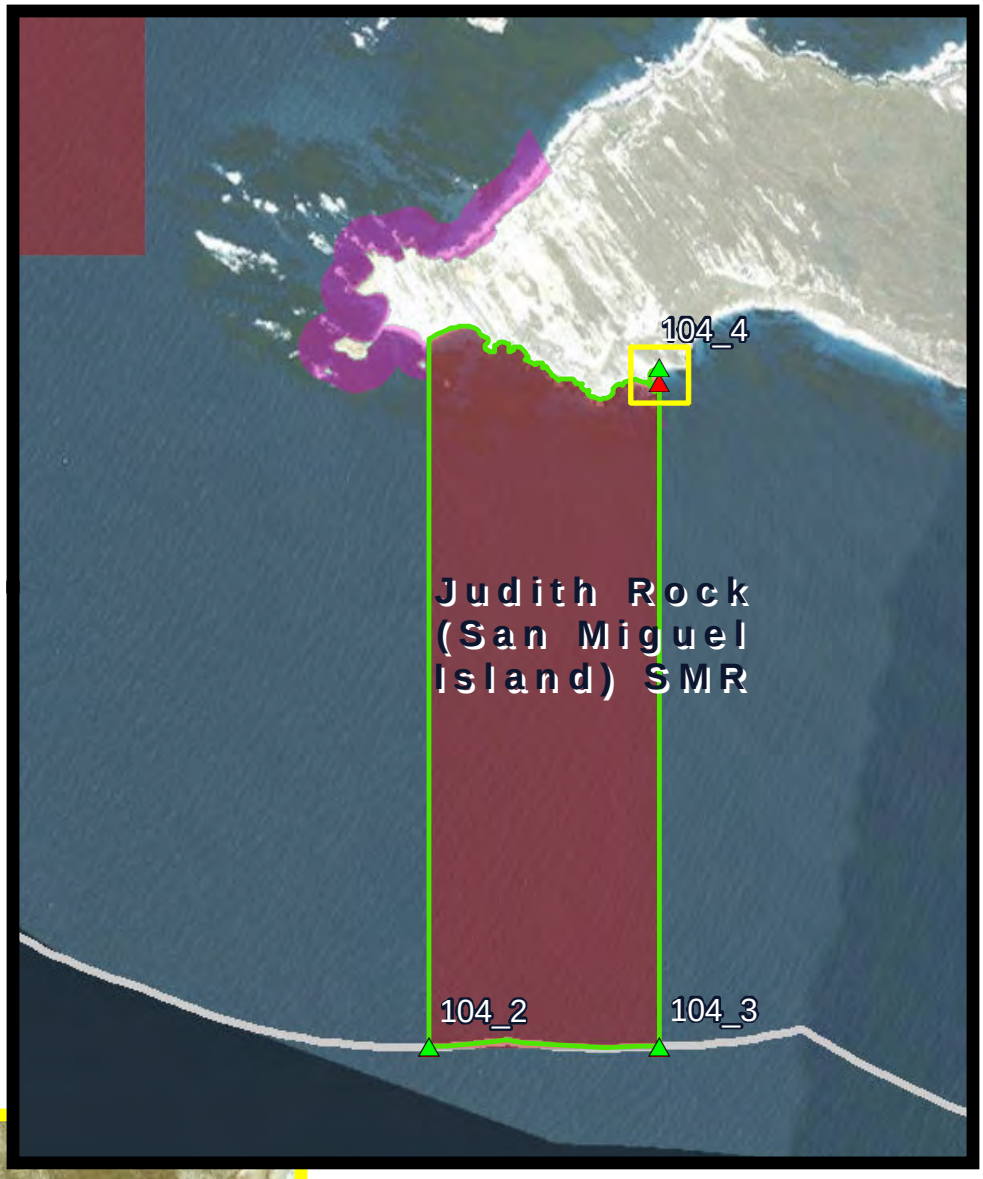
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- Special Closure

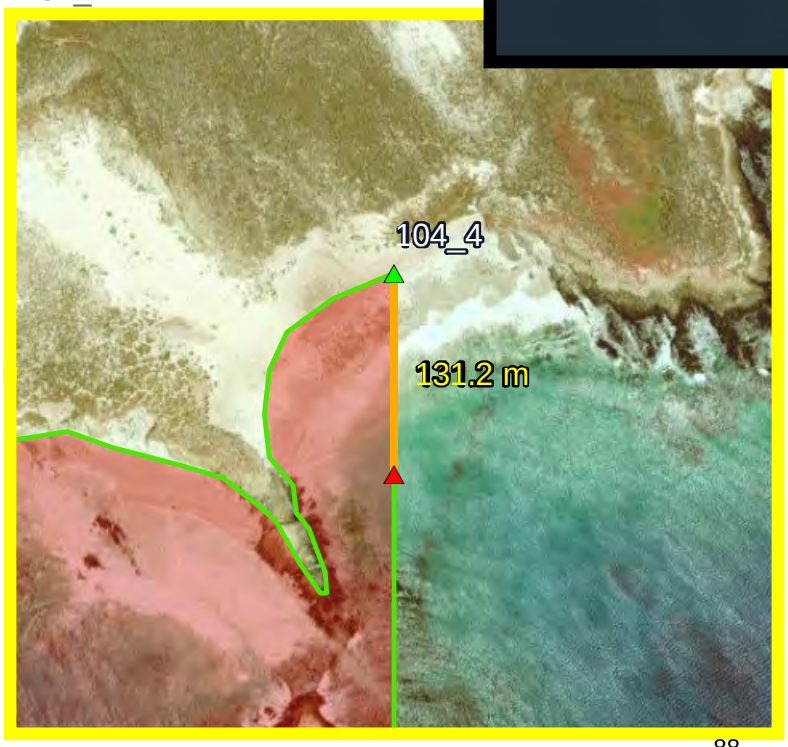
Summary of Proposed Refinements

Judith Rock (San Miguel Island) SMR (104)
Pre-existing Area = 4.58 sq. miles
New Area = 4.56 sq. miles
% Change = -0.39%



0 3,000 Meters

104_4



0 230 Meters

88

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Carrington Point SMR

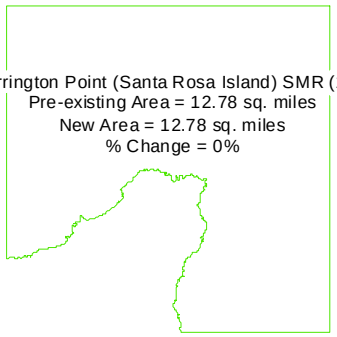
Legend

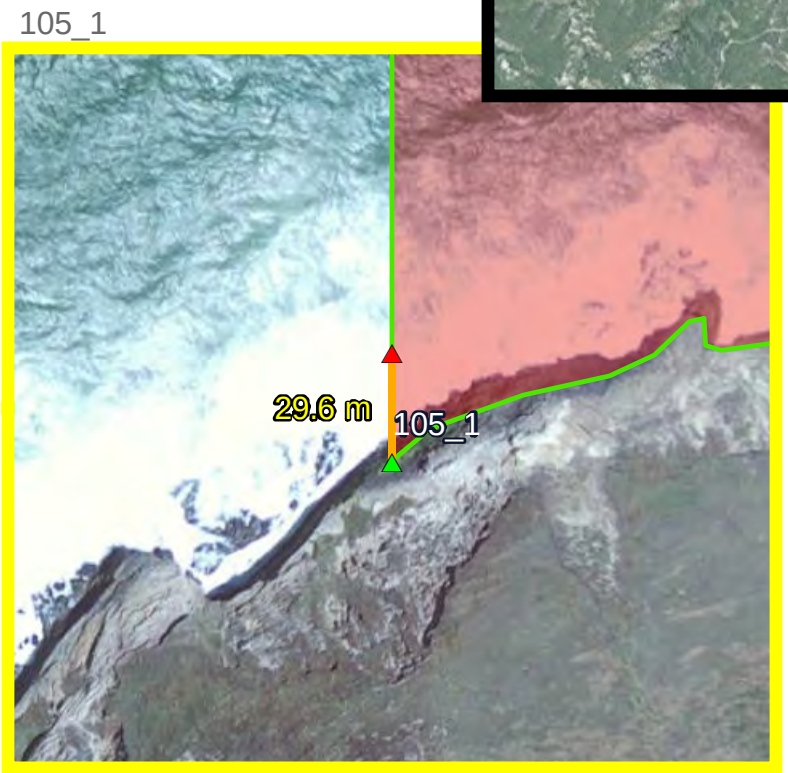
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Reserve (SMR)

Summary of Proposed Refinements





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Skunk Point SMR

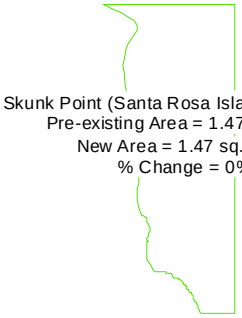
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

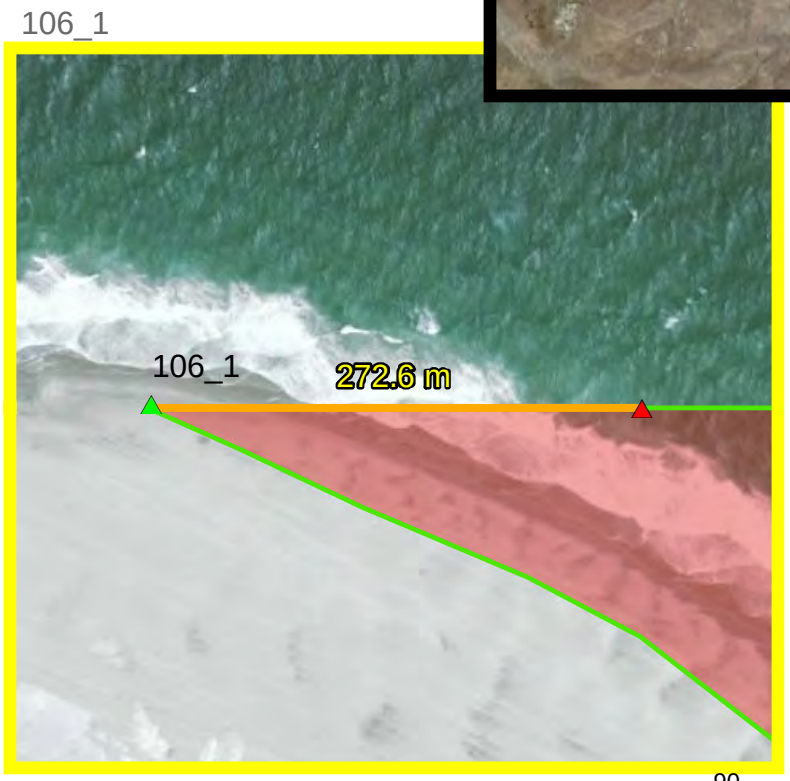
- State Marine Reserve (SMR)

Summary of Proposed Refinements



Skunk Point (Santa Rosa Island) SMR (106)
Pre-existing Area = 1.47 sq. miles
New Area = 1.47 sq. miles
% Change = 0%

0 1,400 Meters



0 190 Meters

90

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Gull Island SMR

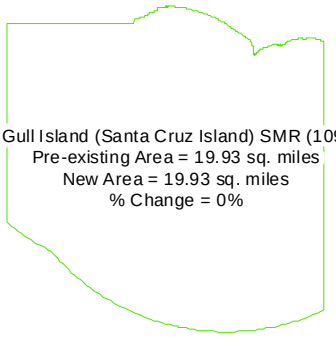
Legend

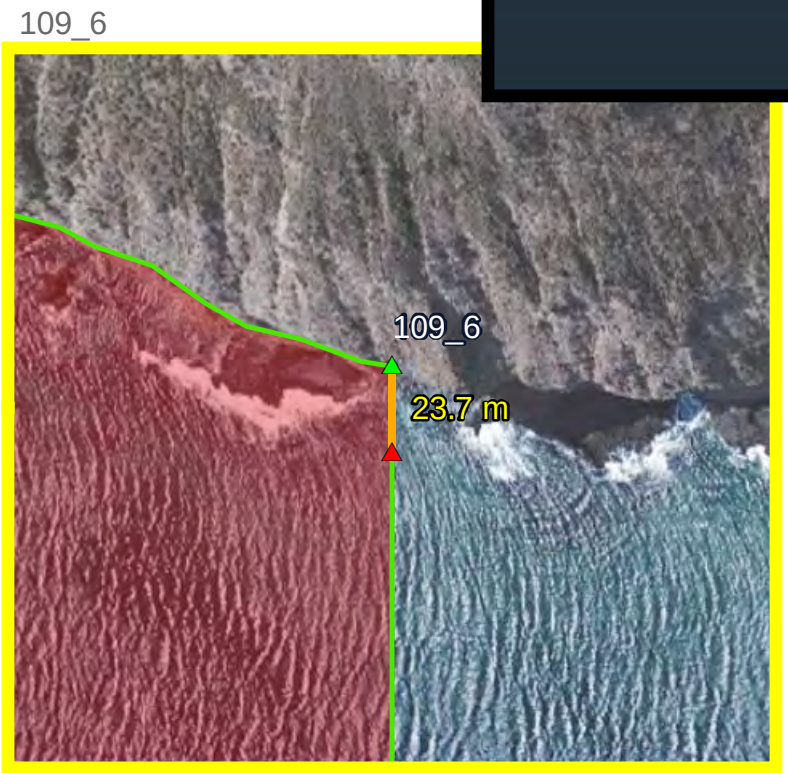
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Reserve (SMR)

Summary of Proposed Refinements





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Anacapa Island SMR, SMCA and Special Closure

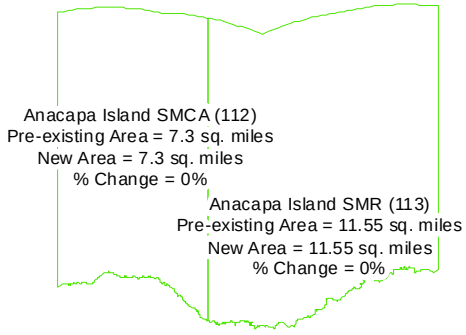
Legend

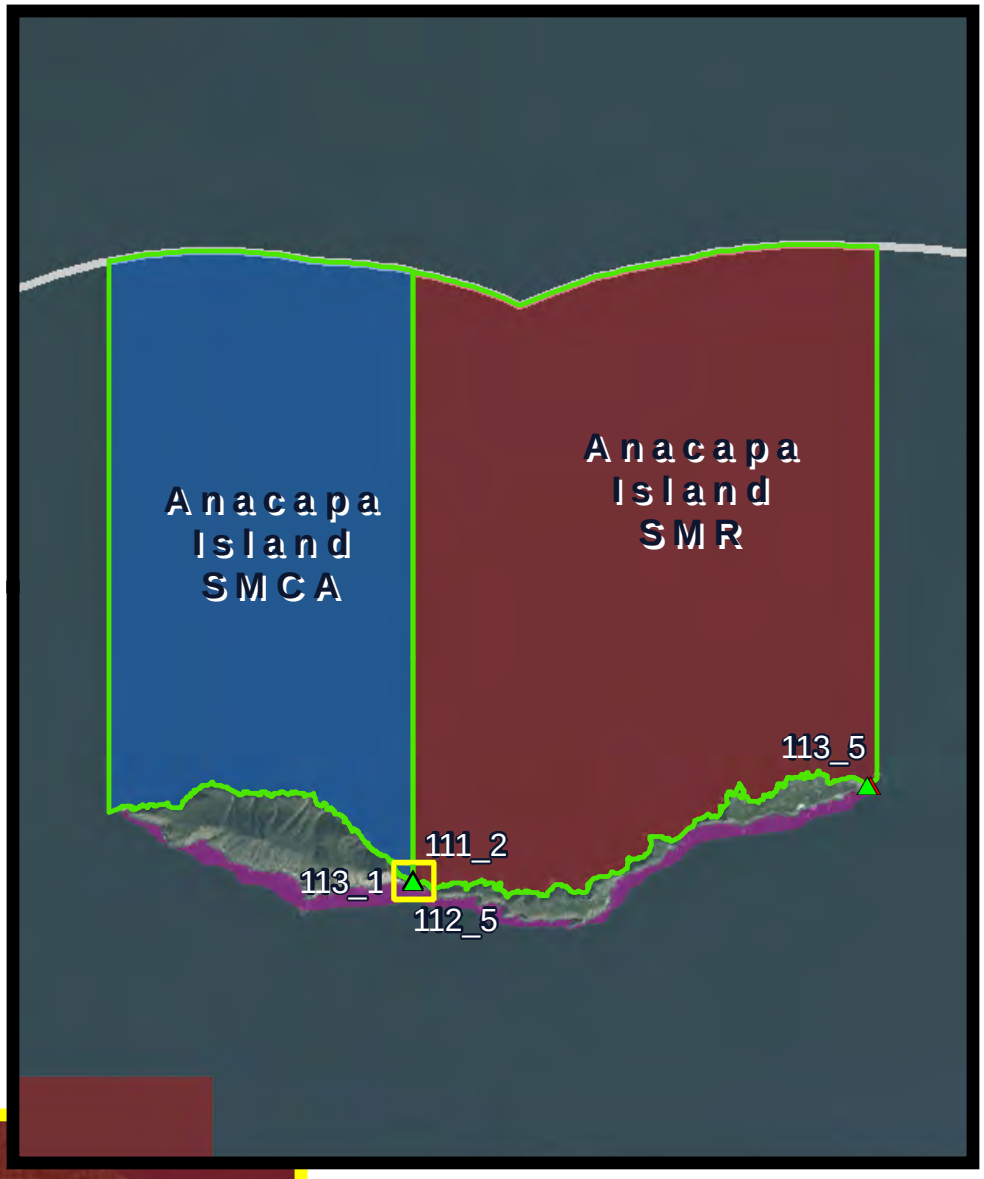
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)
- Special Closure

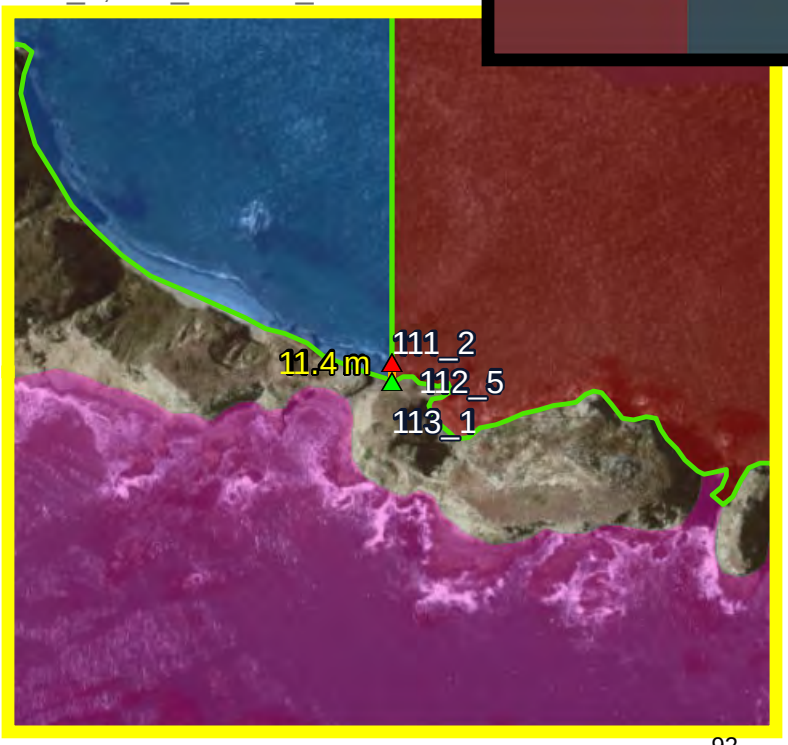
Summary of Proposed Refinements





0 3,700 Meters

111_2, 112_5 & 113_1



0 190 Meters

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Anacapa Island SMR

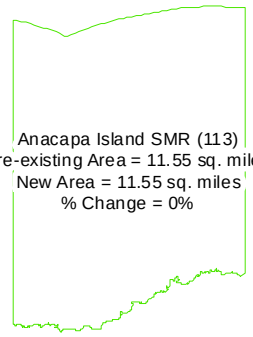
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

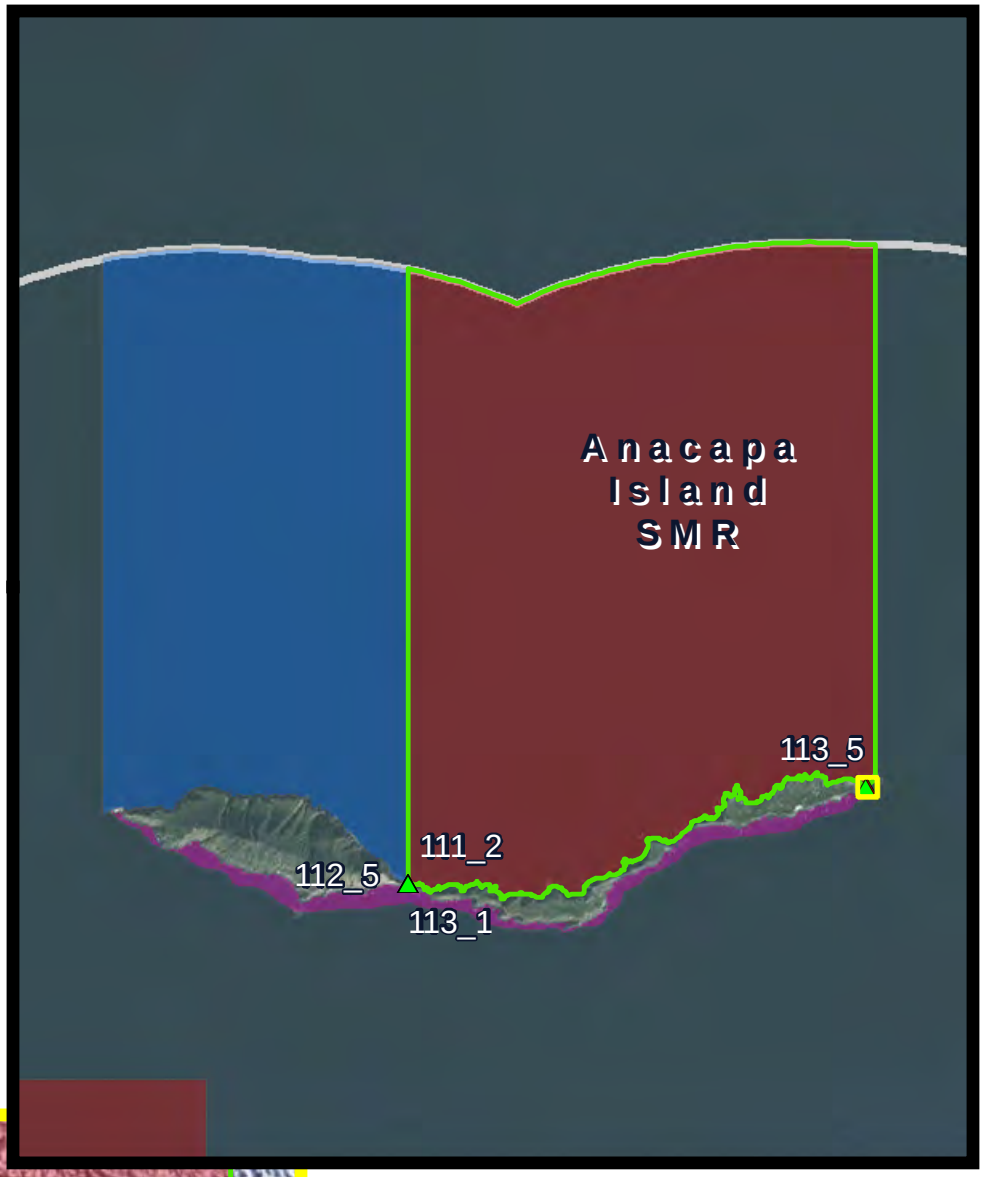
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)
- Special Closure

Summary of Proposed Refinements

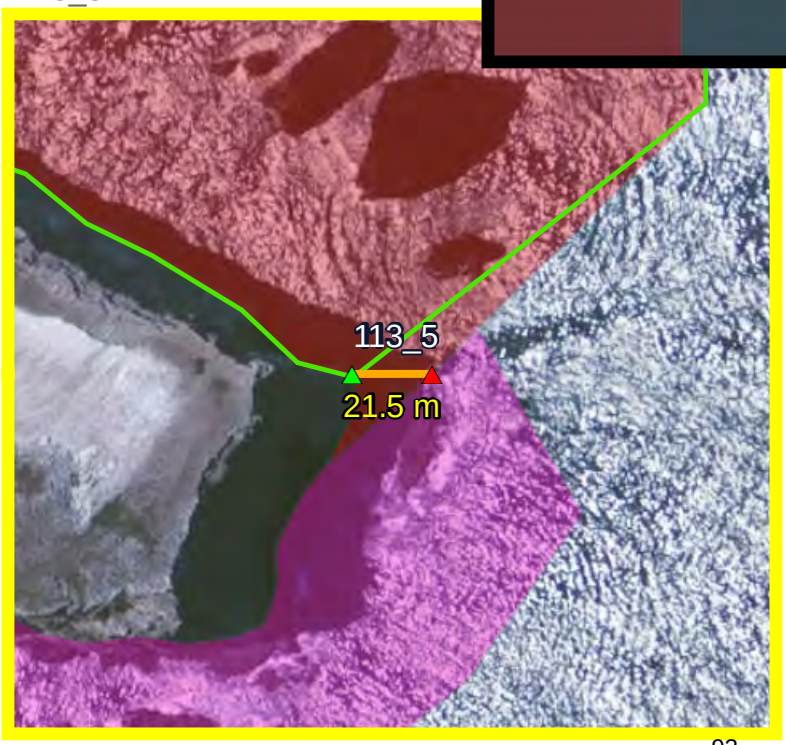


Anacapa Island SMR (113)
Pre-existing Area = 11.55 sq. miles
New Area = 11.55 sq. miles
% Change = 0%



0 3,600 Meters

113_5



0 90 Meters

93

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Begg Rock SMR

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

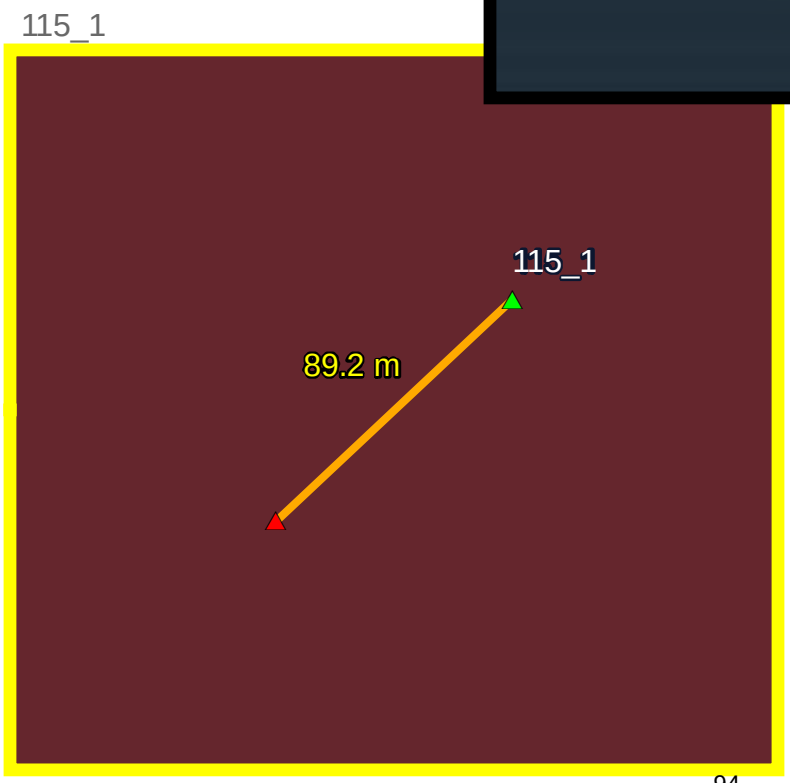
Current MPA Boundaries

- State Marine Reserve (SMR)

Summary of Proposed Refinements

Begg Rock (San Nicolas Island) SMR (115)
Pre-existing Area = 37.96 sq. miles
New Area = 37.96 sq. miles
% Change = 0%

0 5,000 Meters



0 90 Meters

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Santa Barbara Island SMR

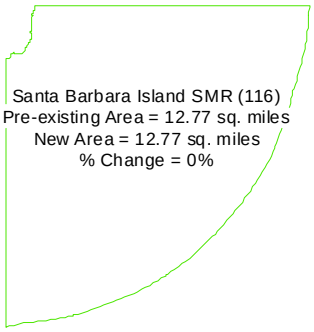
Legend

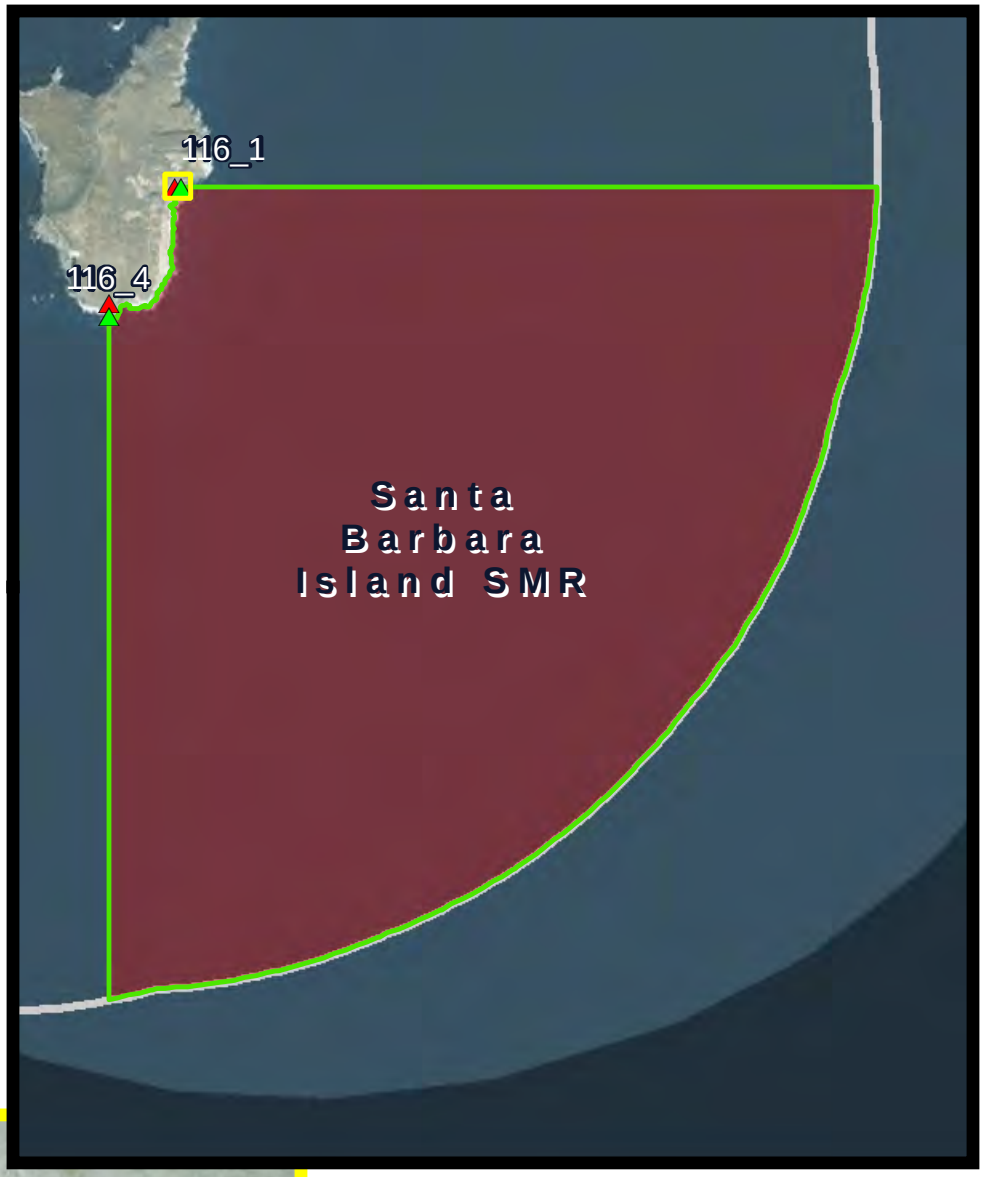
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)

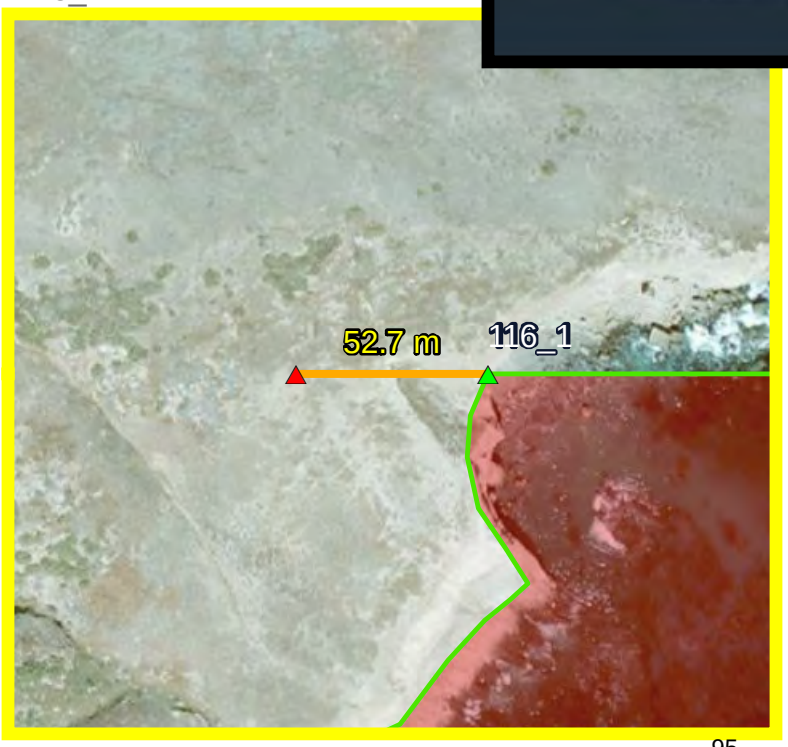
Summary of Proposed Refinements





0 2,900 Meters

116_1



0 90 Meters

95

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Santa Barbara Island SMR

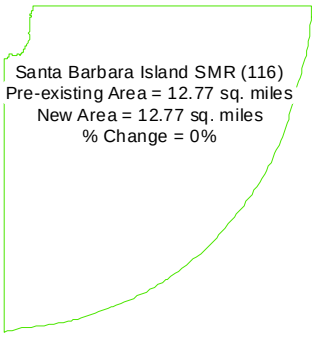
Legend

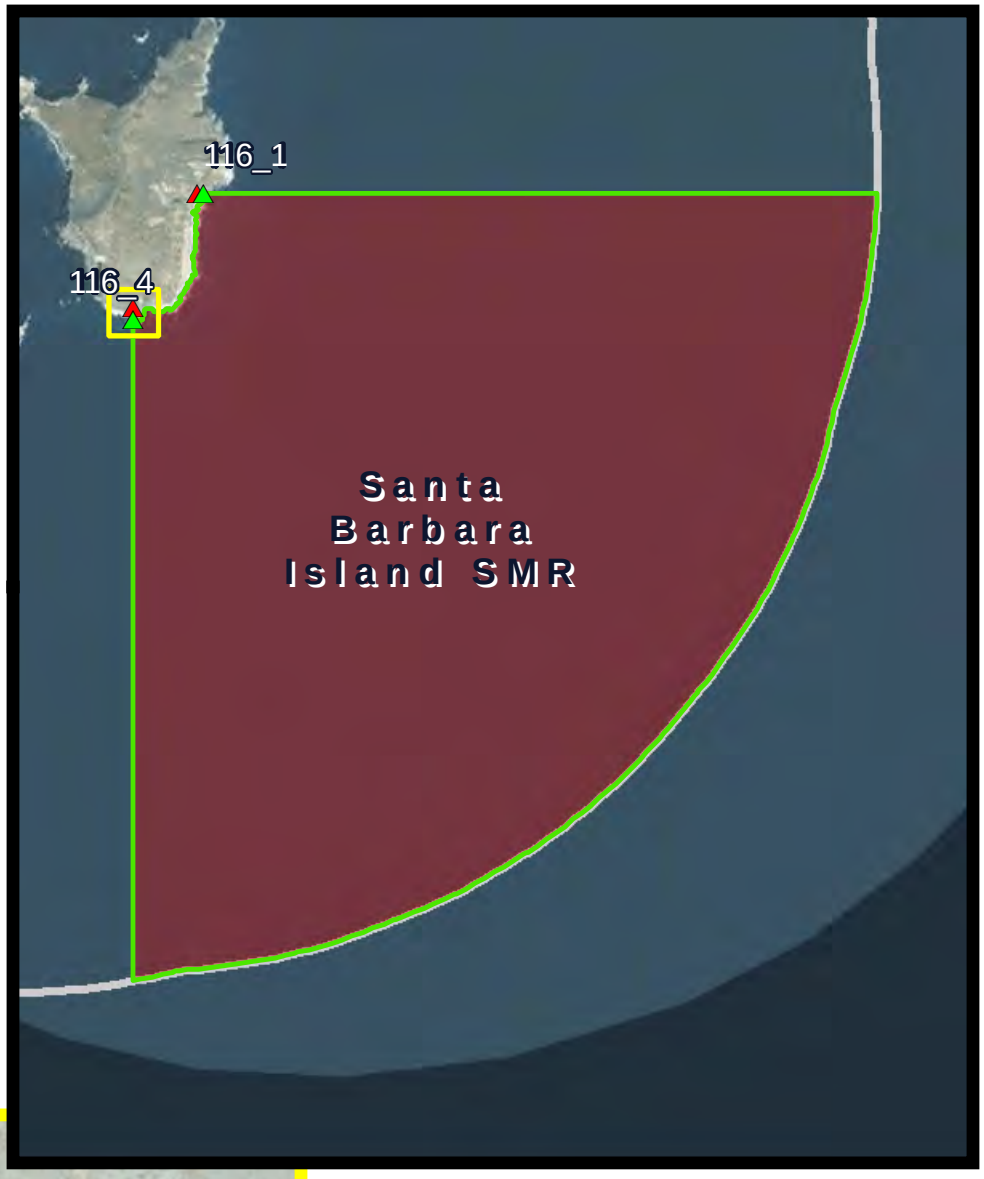
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Reserve (SMR)

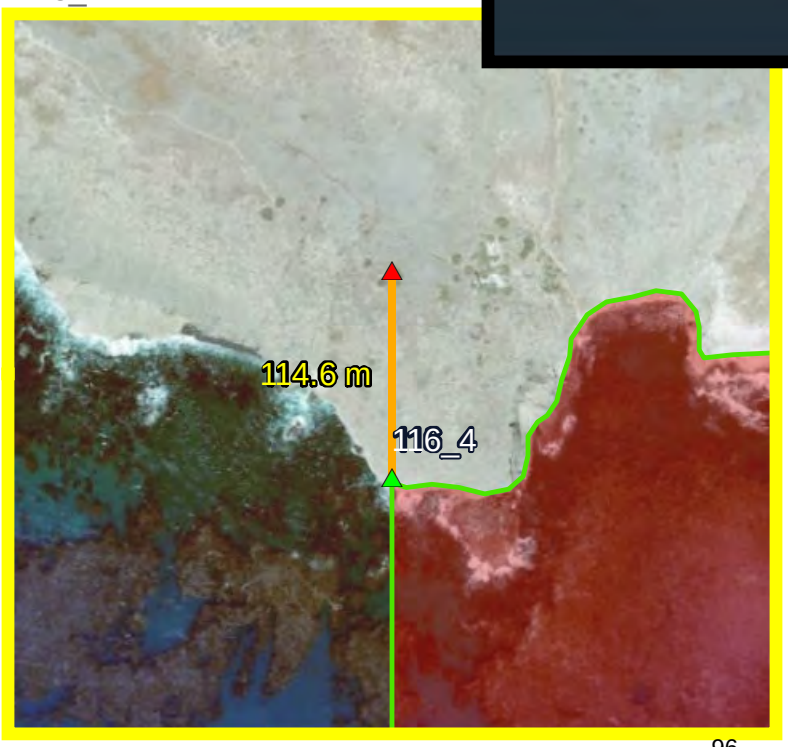
Summary of Proposed Refinements





0 3,000 Meters

116_4



0 190 Meters

96

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Point Dume SMCA

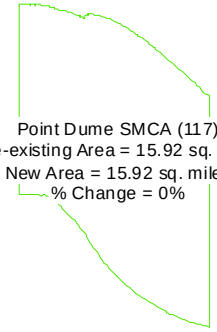
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

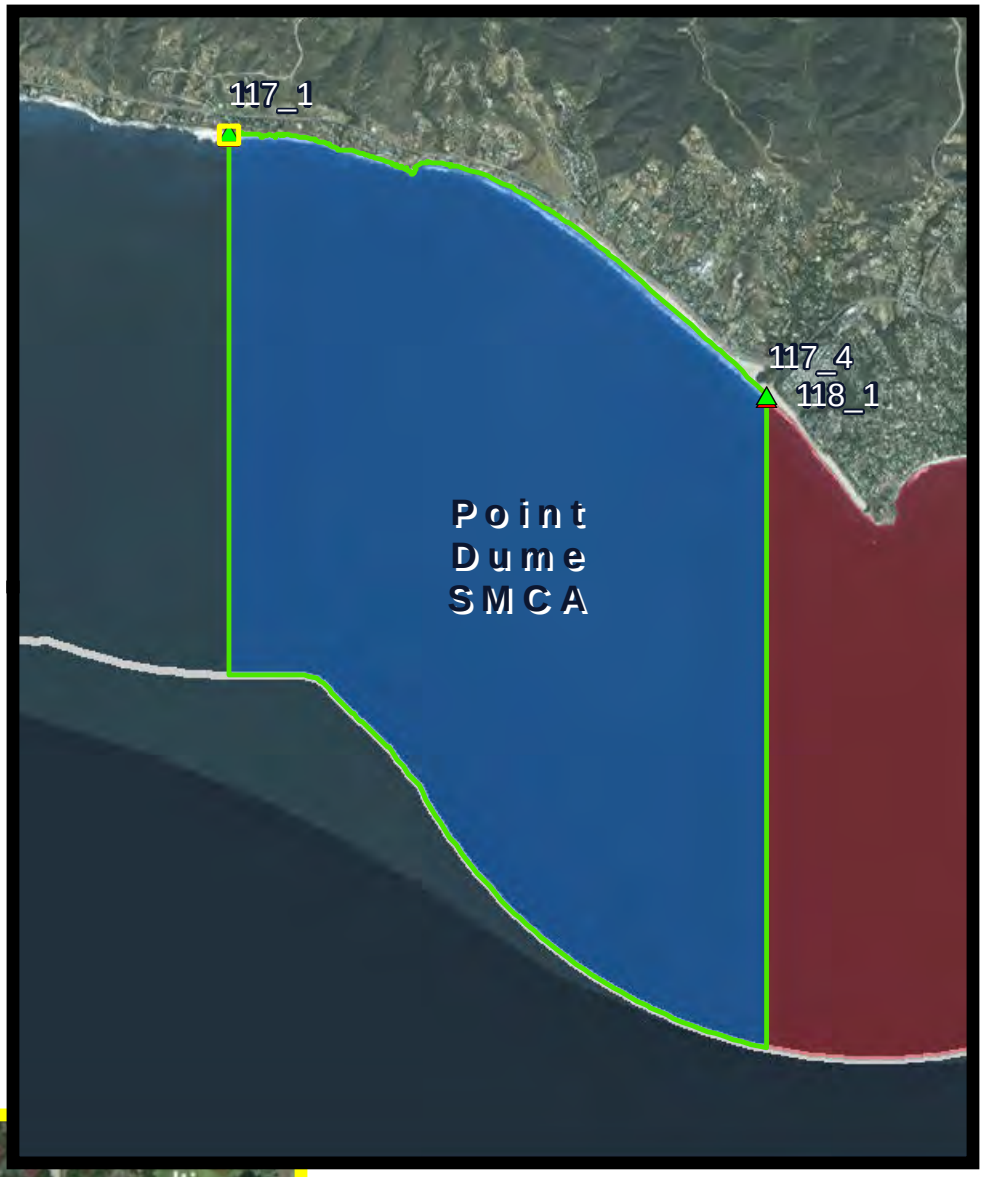
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Point Dume SMCA (117)
Pre-existing Area = 15.92 sq. miles
New Area = 15.92 sq. miles
% Change = 0%



0 3,750 Meters

117_1

97

0 90 Meters

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Point Dume SMR and SMCA

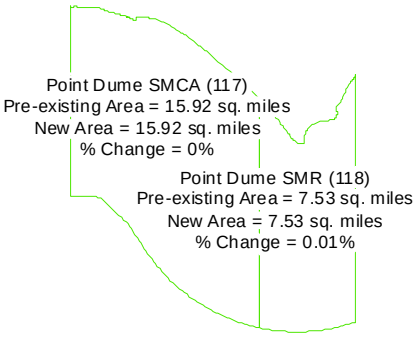
Legend

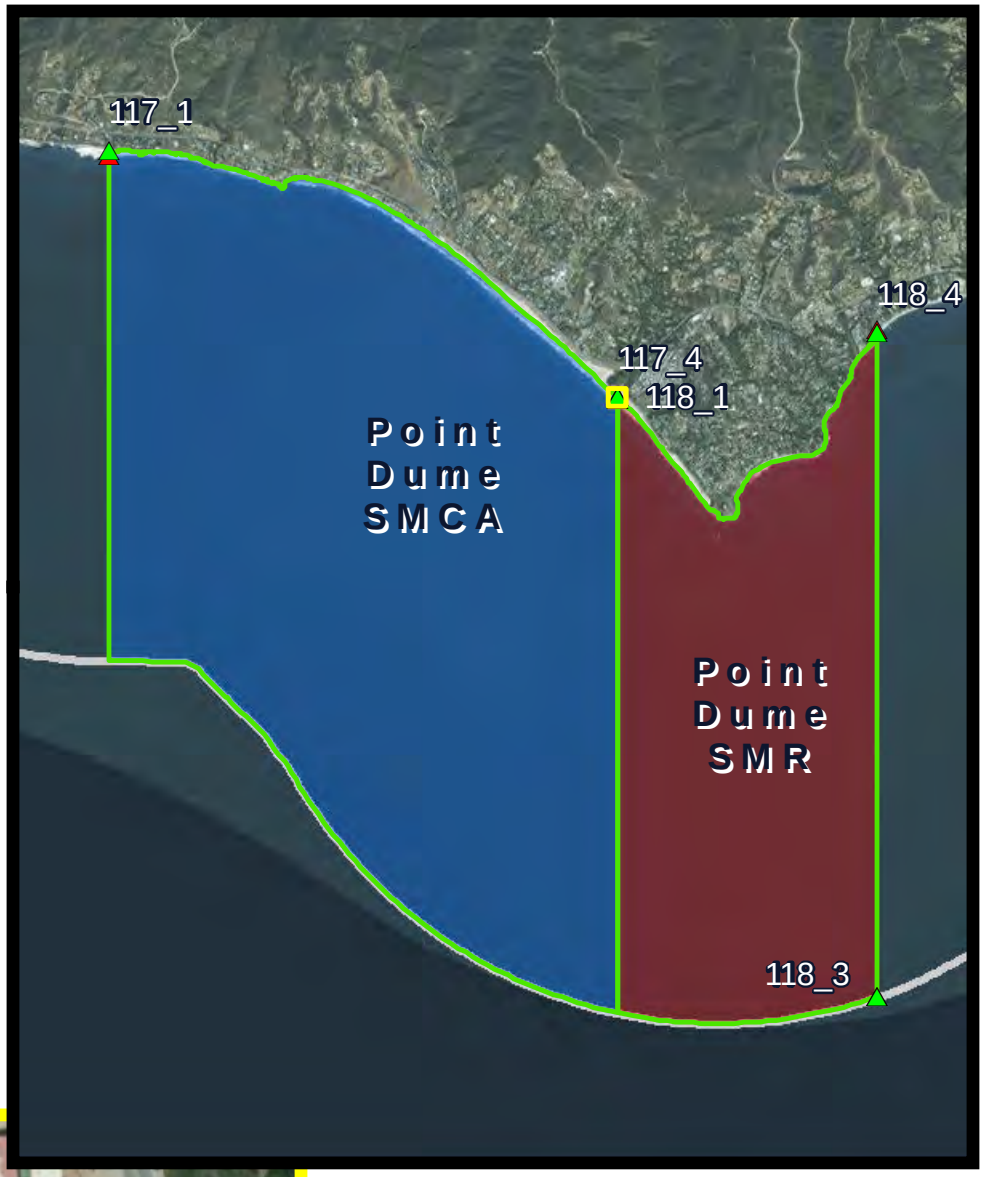
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

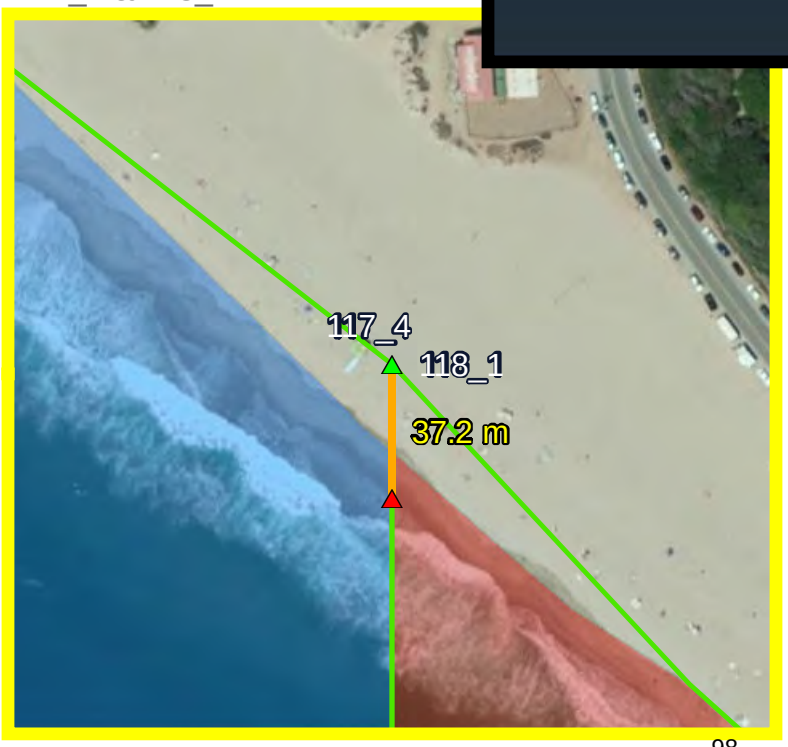
Summary of Proposed Refinements





0 4,000 Meters

117_4 & 118_1



0 90 Meters

98

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Point Dume SMR

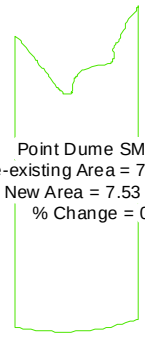
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

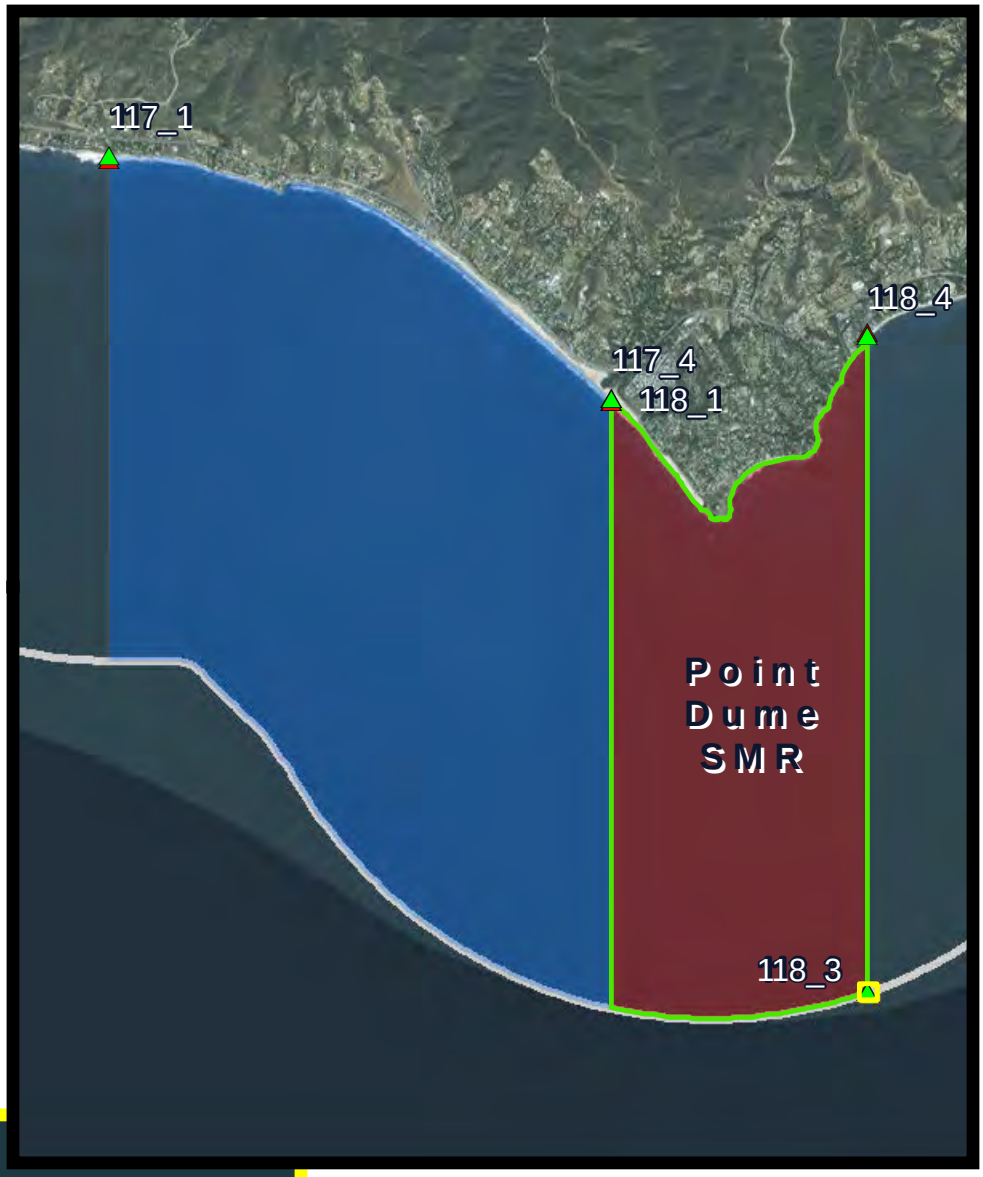
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

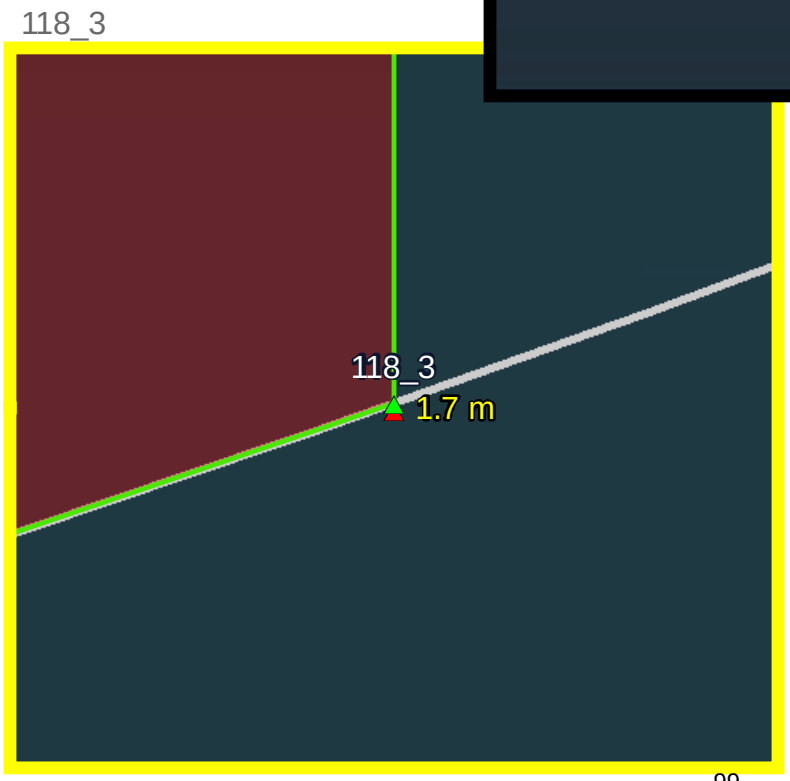
Summary of Proposed Refinements



Point Dume SMR (118)
Pre-existing Area = 7.53 sq. miles
New Area = 7.53 sq. miles
% Change = 0.01%



0 4,000 Meters



0 90 Meters

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Point Dume SMR

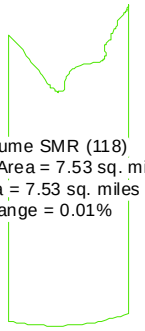
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

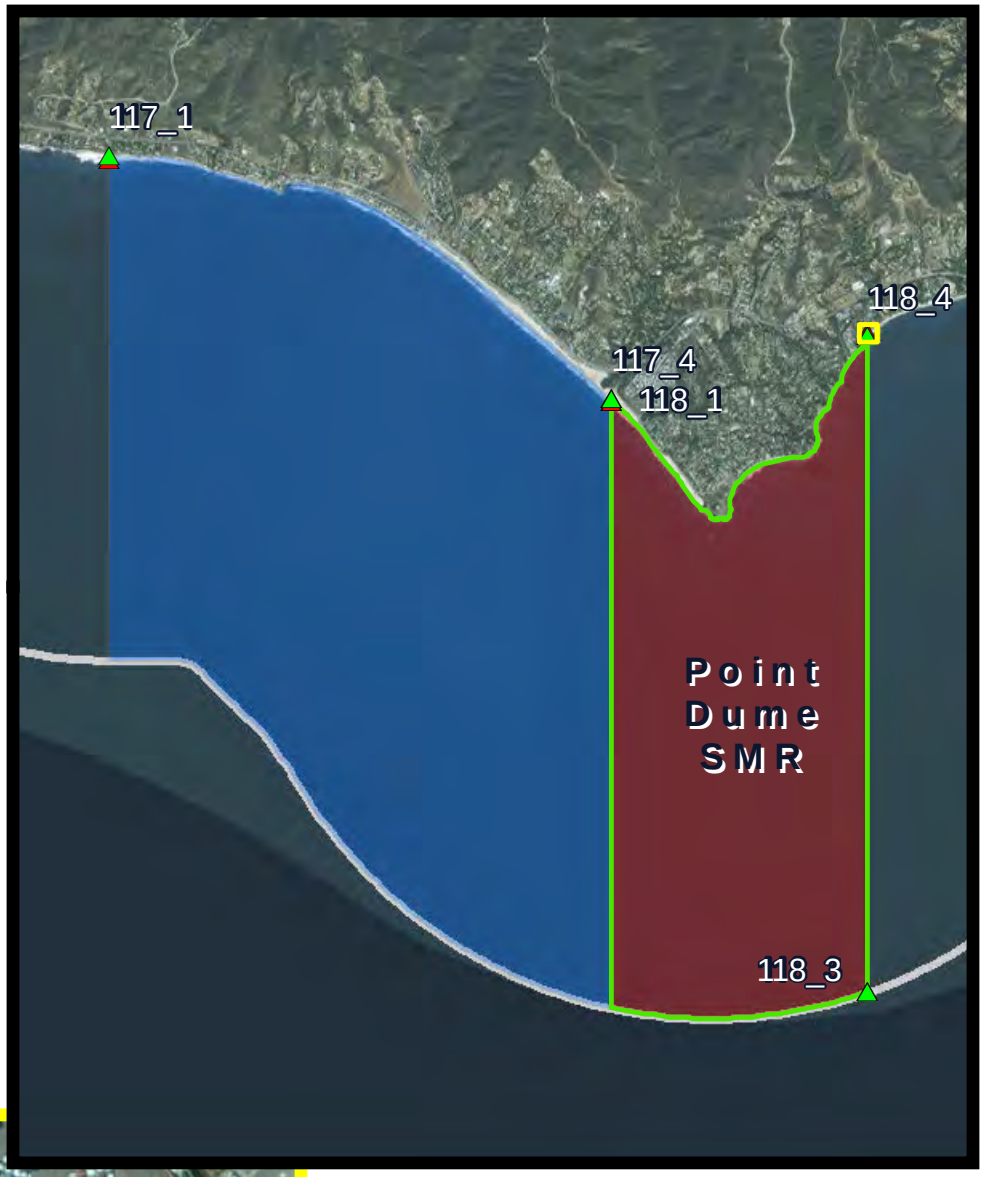
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Point Dume SMR (118)
Pre-existing Area = 7.53 sq. miles
New Area = 7.53 sq. miles
% Change = 0.01%



0 4,000 Meters

118_4

0 90 100 Meters

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Point Vicente SMCA

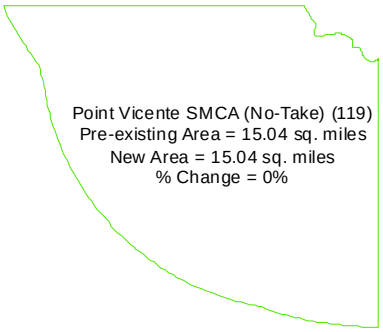
Legend

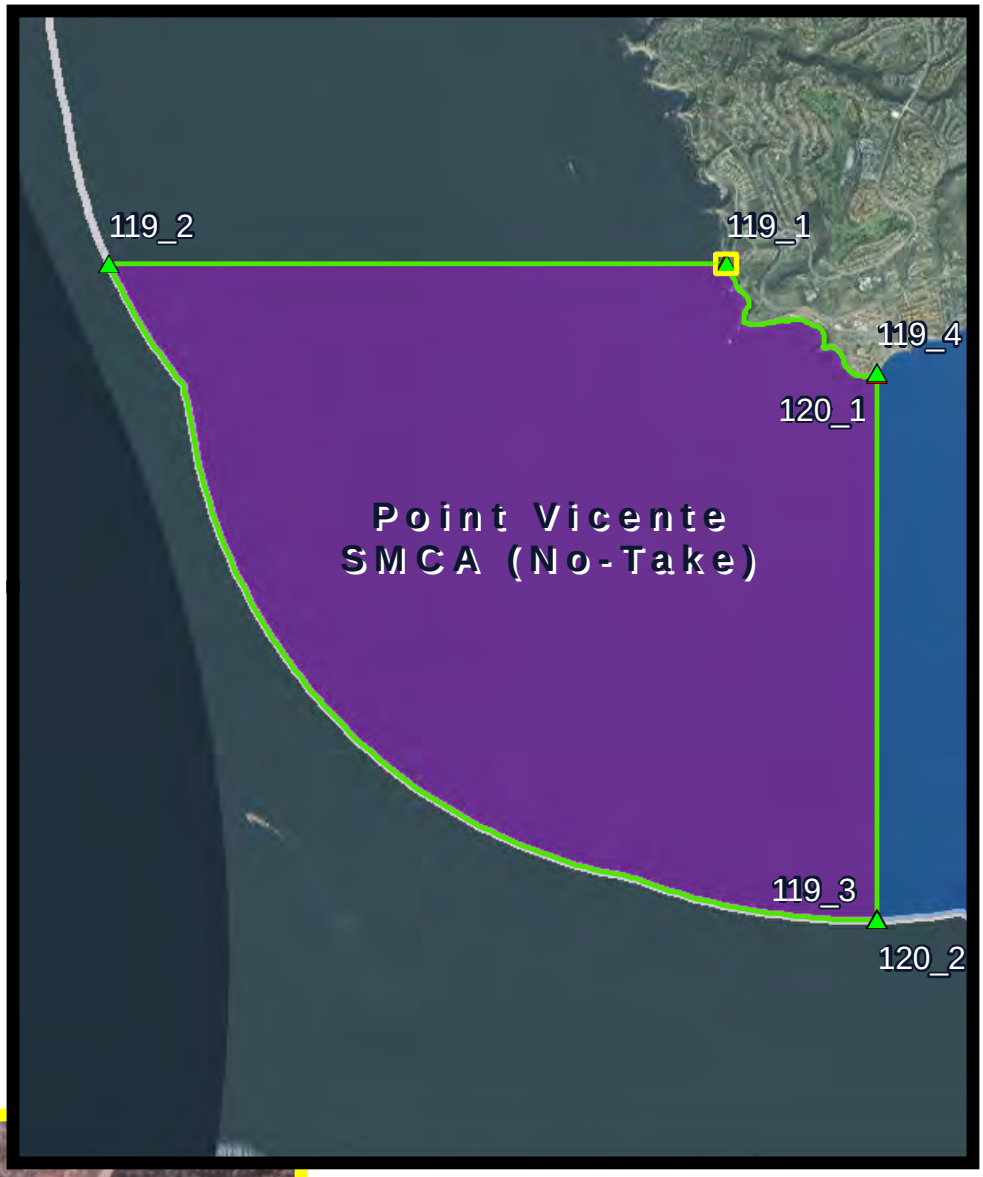
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





0 3,600 Meters

119_1

0 90 Meters

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May 8, 2015

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Point Vicente SMCA

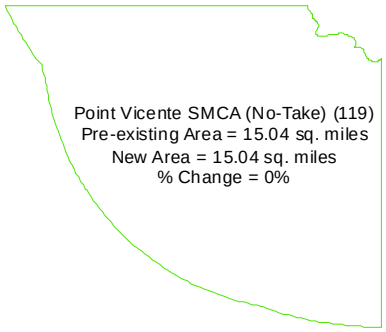
Legend

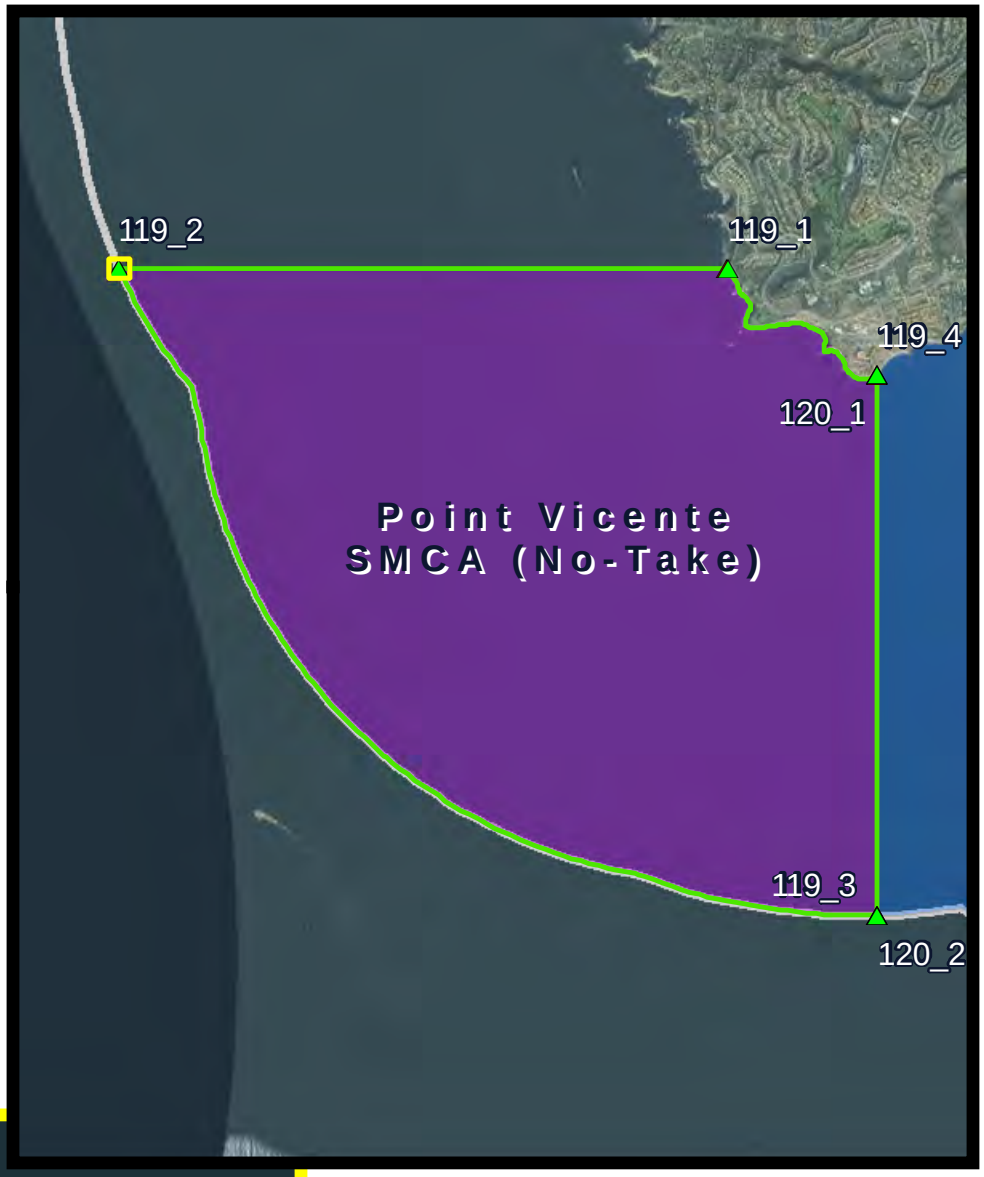
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





0 3,600 Meters

0 90 Meters

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Point Vicente SMCA and Abalone Cove SMCA

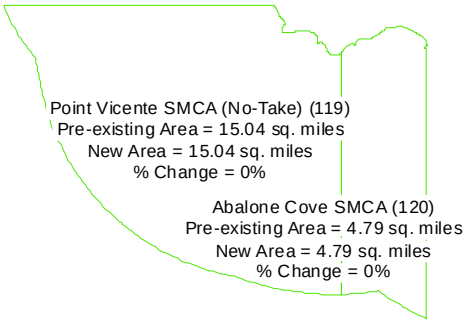
Legend

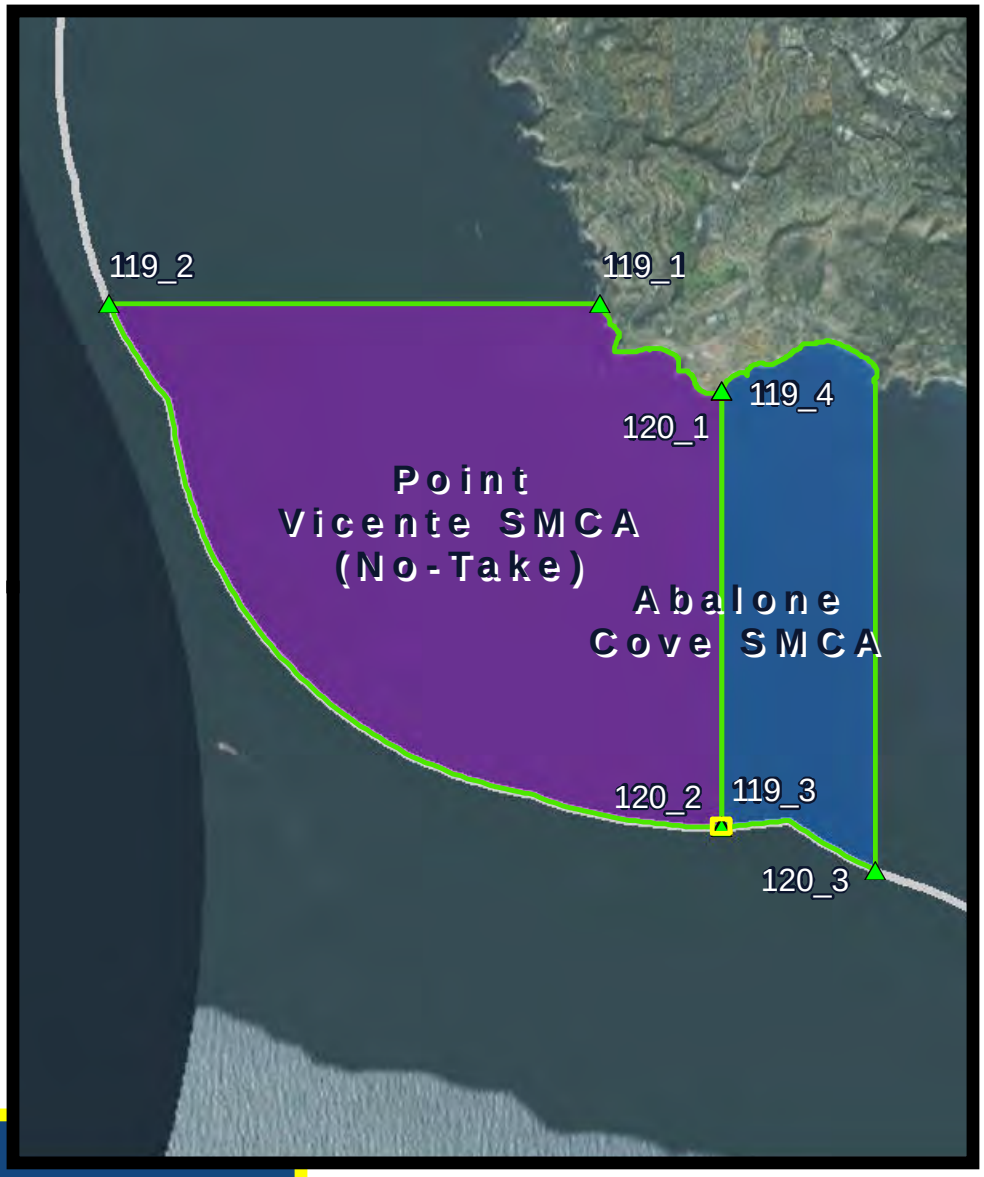
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

Current MPA Boundaries

- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

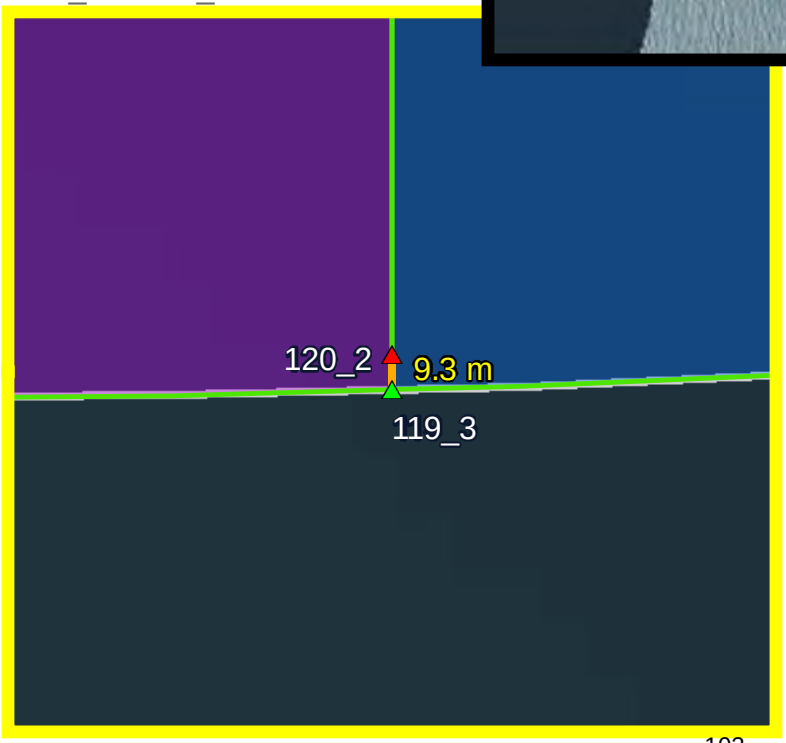
Summary of Proposed Refinements





0 4,500 Meters

119_3 & 120_2



0 90 Meters

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Point Vicente SMCA and Abalone Cove SMCA

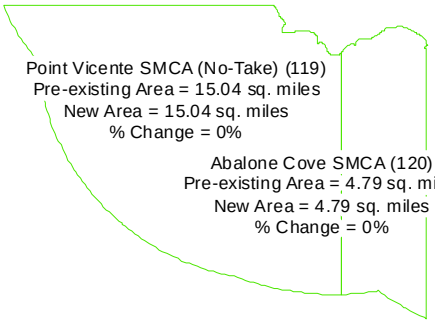
Legend

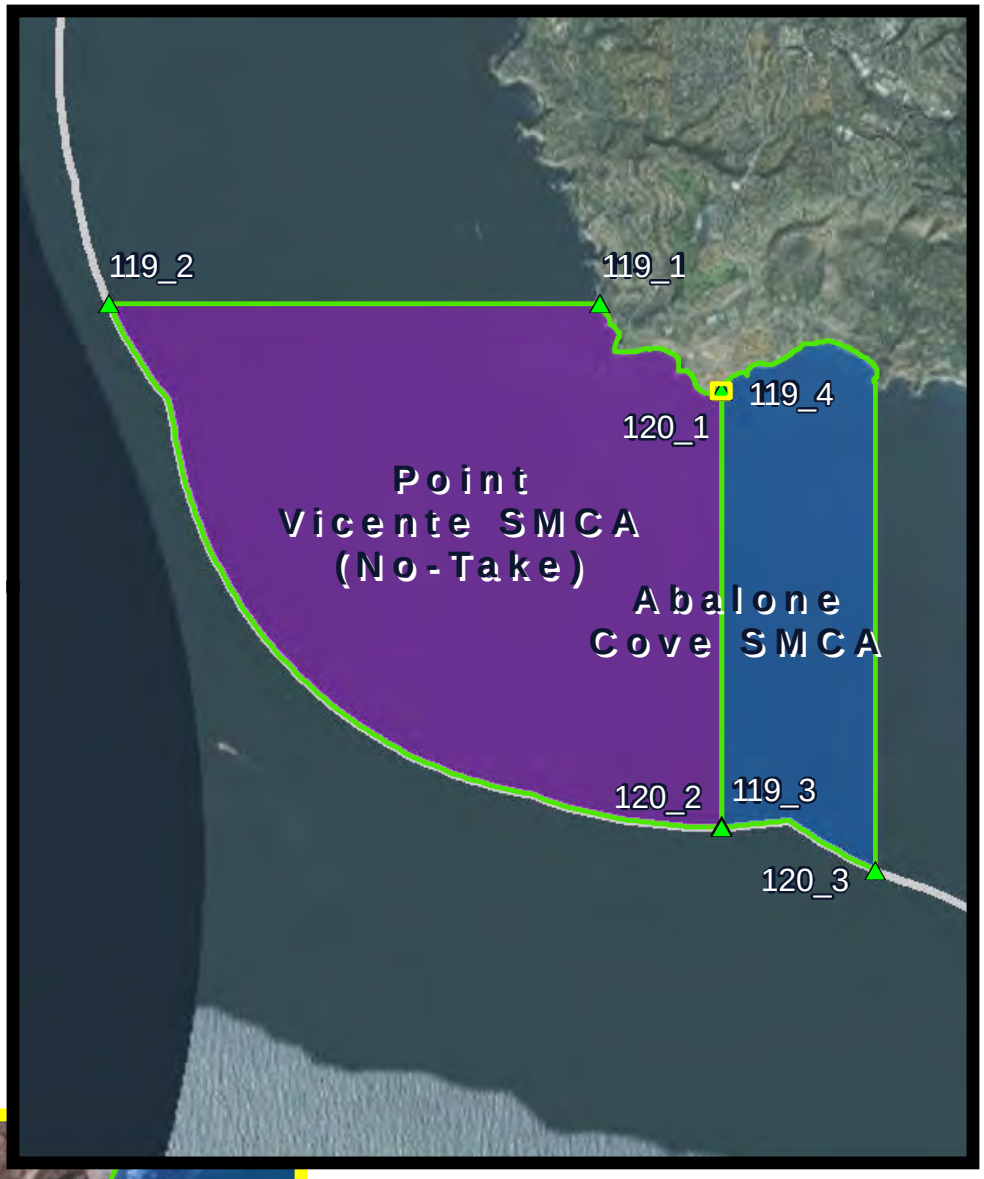
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

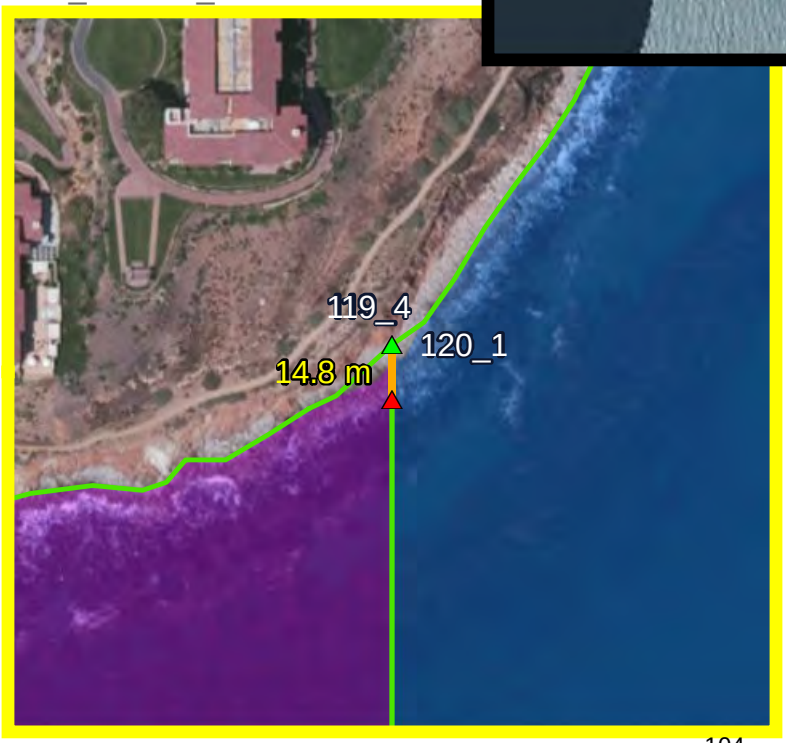
Summary of Proposed Refinements





0 4,500 Meters

119_4 & 120_1



0 90 Meters

104

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Abalone Cove SMCA

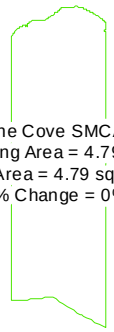
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

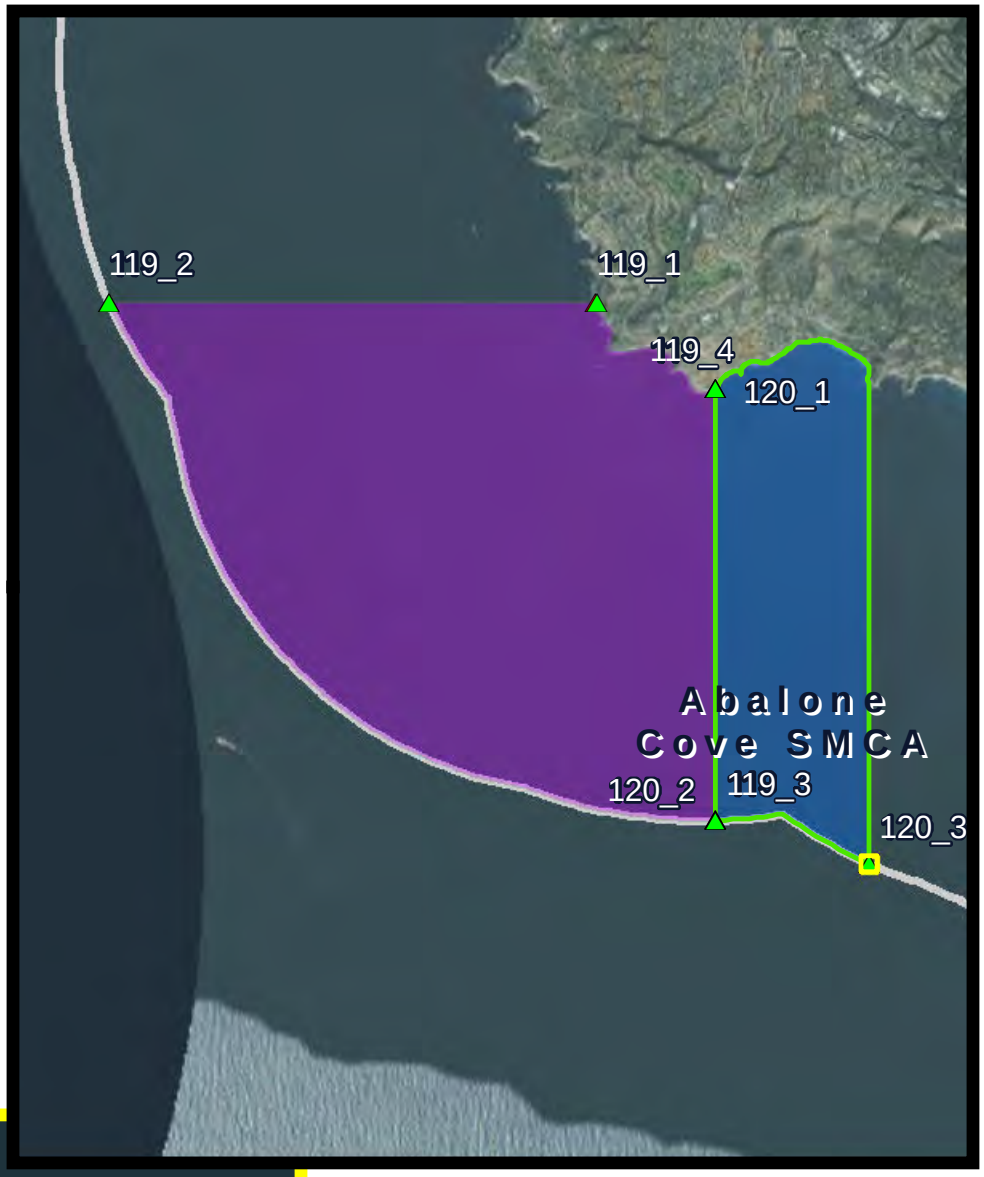
Current MPA Boundaries

- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

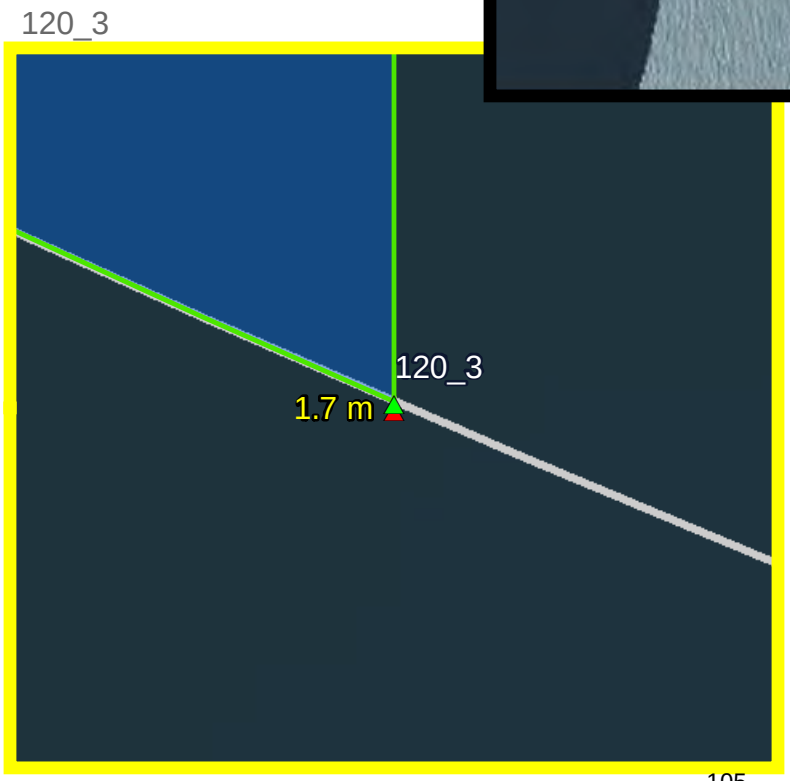
Summary of Proposed Refinements



Abalone Cove SMCA (120)
Pre-existing Area = 4.79 sq. miles
New Area = 4.79 sq. miles
% Change = 0%



0 4,500 Meters



0 90 105 Meters

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Bolsa Bay SMCA

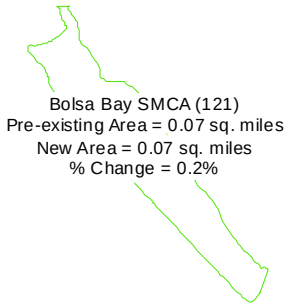
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Bolsa Bay SMCA (121)
Pre-existing Area = 0.07 sq. miles
New Area = 0.07 sq. miles
% Change = 0.2%

0 1,200 Meters

121_1 & 121_2

0 90 Meters

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Bolsa Bay SMCA and Bolsa Chica Basin SMCA

Legend

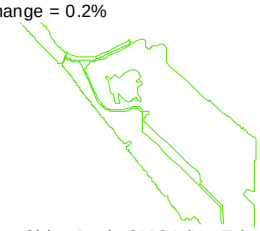
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

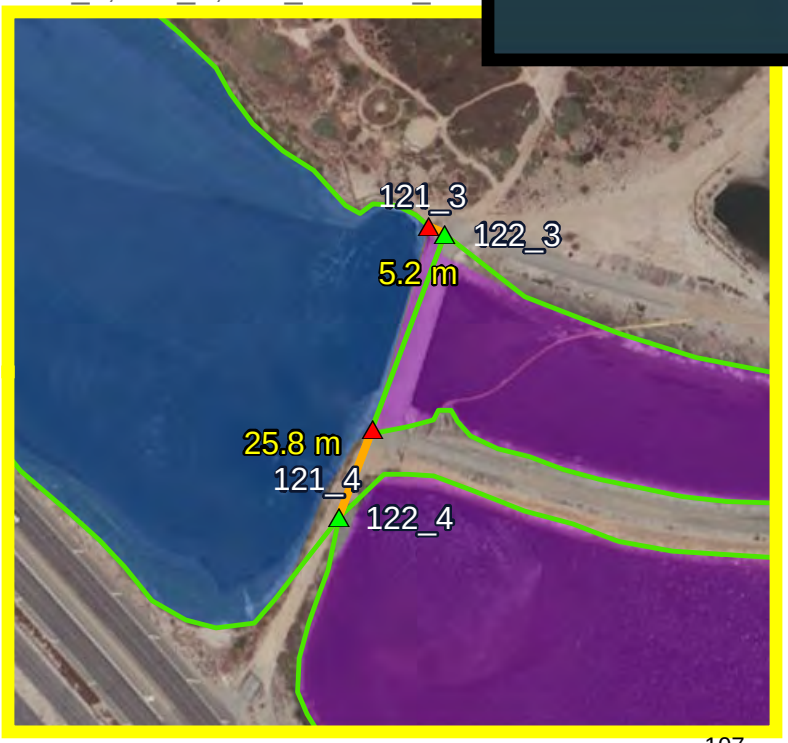
Bolsa Bay SMCA (121)
Pre-existing Area = 0.07 sq. miles
New Area = 0.07 sq. miles
% Change = 0.2%



Bolsa Chica Basin SMCA (No-Take) (122)
Pre-existing Area = 0.7 sq. miles
New Area = 0.7 sq. miles
% Change = 0%

0 1,200 Meters

121_3, 121_4, 122_3 & 122_4



0 90 Meters

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Bolsa Chica Basin SMCA

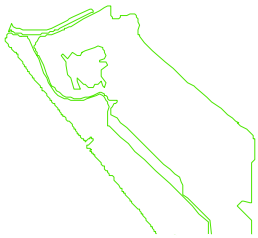
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Bolsa Chica Basin SMCA (No-Take) (122)
Pre-existing Area = 0.7 sq. miles
New Area = 0.7 sq. miles
% Change = 0%

0 940 Meters

122_1 & 122_2

0 90 Meters

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May 8, 2015

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Arrow Point to Lion Head Point SMCA

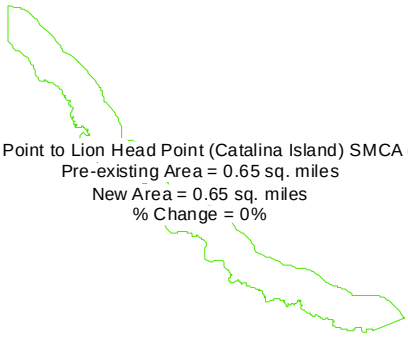
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Conservation Area (SMCA)

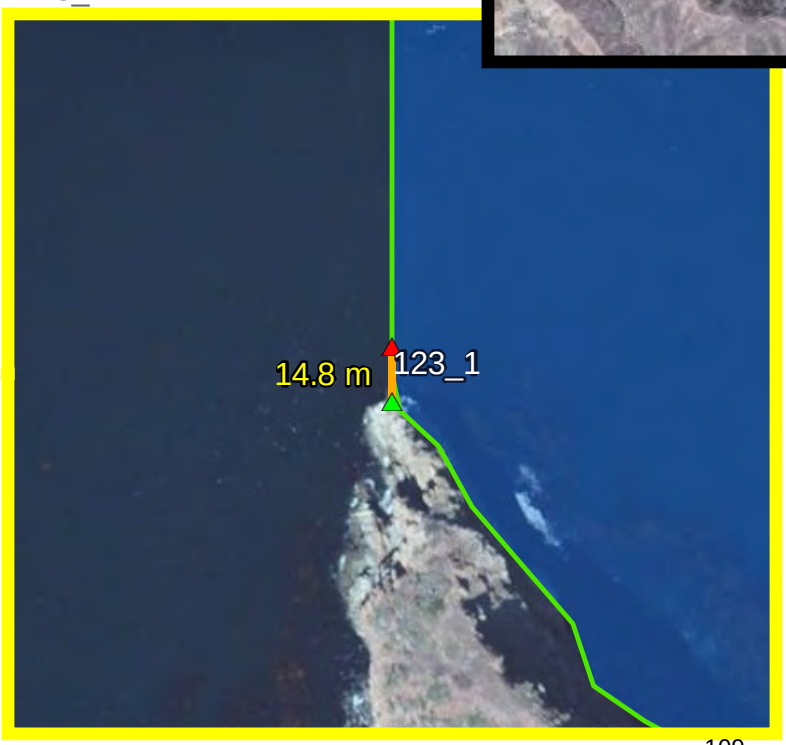
Summary of Proposed Refinements



Arrow Point to Lion Head Point (Catalina Island) SMCA (123)
Pre-existing Area = 0.65 sq. miles
New Area = 0.65 sq. miles
% Change = 0%

0 1,700 Meters

123_1



0 90 Meters

109

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Arrow Point to Lion Head Point SMCA

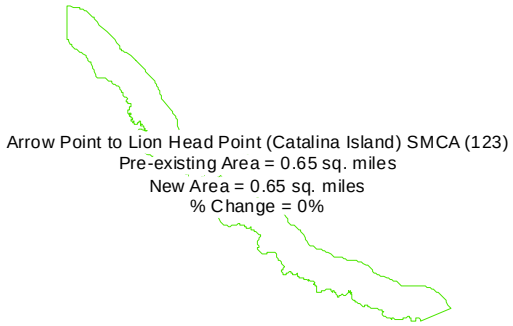
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Arrow Point to Lion Head Point (Catalina Island) SMCA (123)
Pre-existing Area = 0.65 sq. miles
New Area = 0.65 sq. miles
% Change = 0%

0 1,600 Meters

123_4

0 90 110 Meters

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Long Point SMR

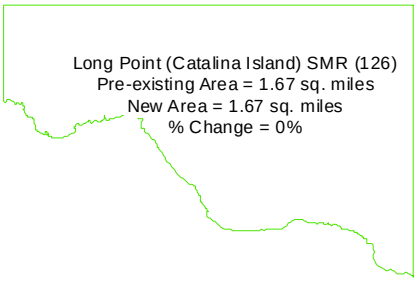
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

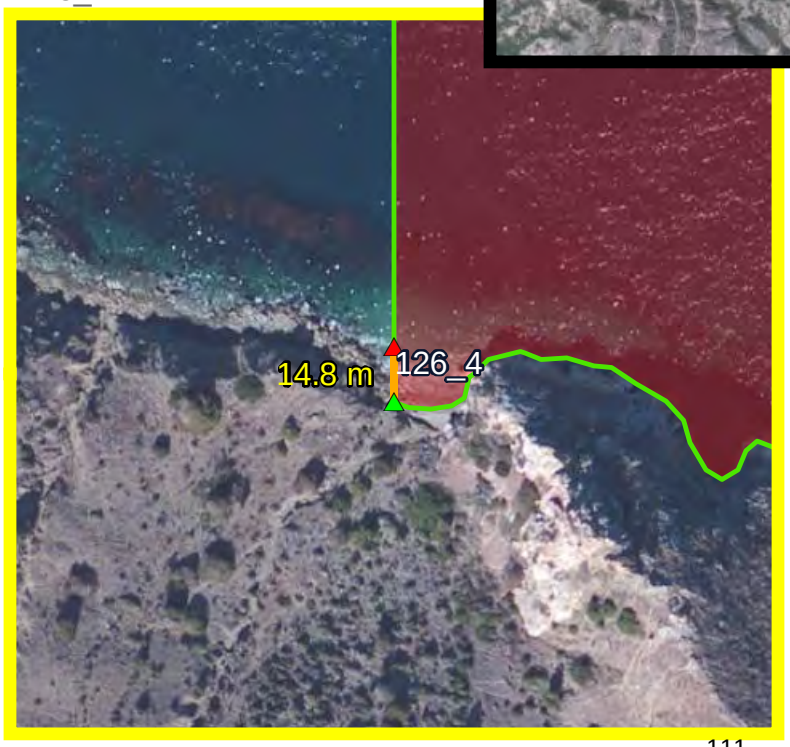
Current MPA Boundaries

State Marine Reserve (SMR)

Summary of Proposed Refinements



126_4



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Farnsworth Offshore SMCA

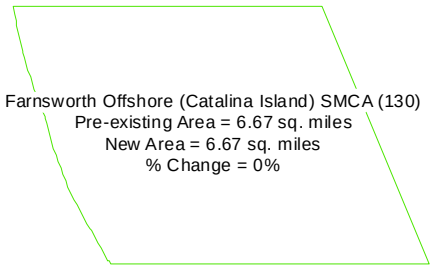
Legend

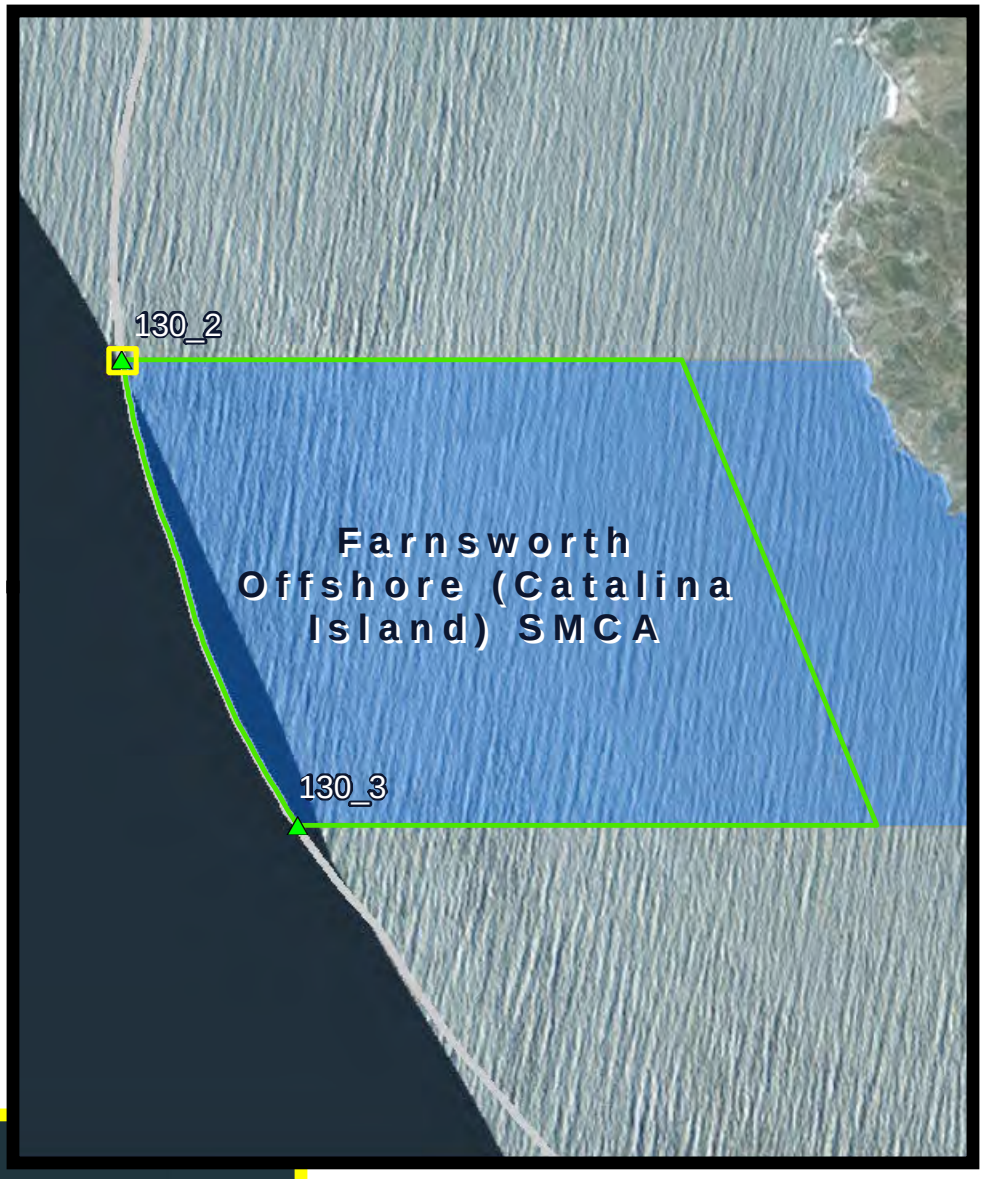
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

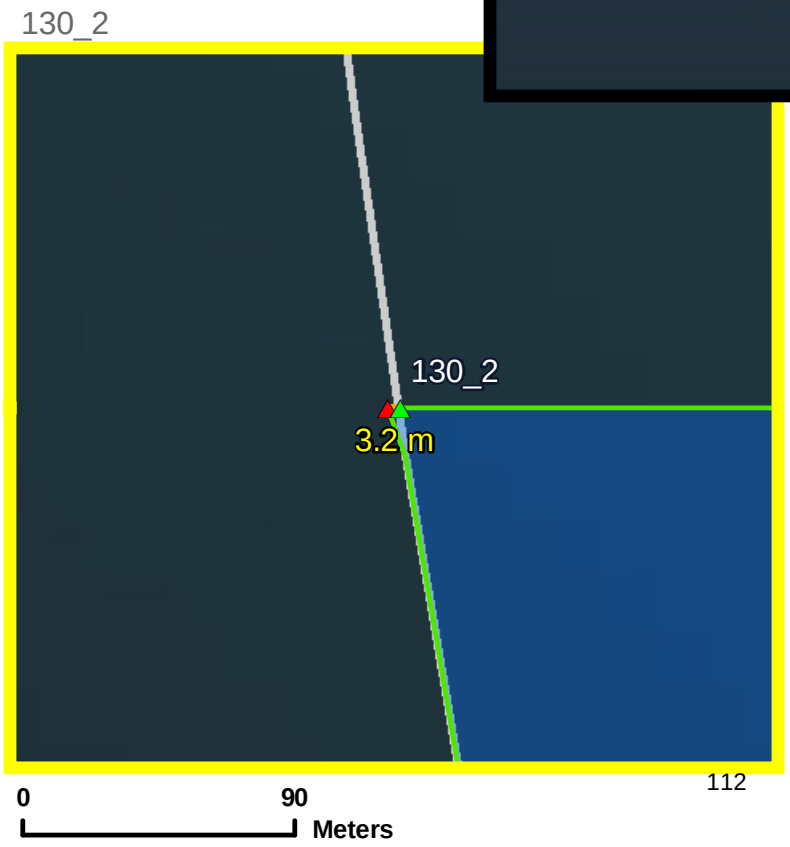
Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements







California Department of Fish and Wildlife
Marine Region GIS
mr_gis@wildlife.ca.gov
May 8, 2015

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Farnsworth Offshore SMCA

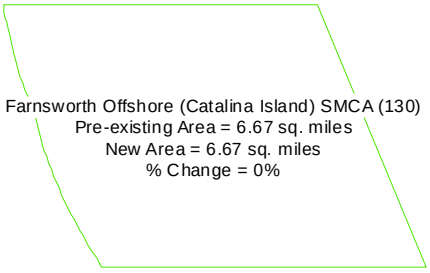
Legend

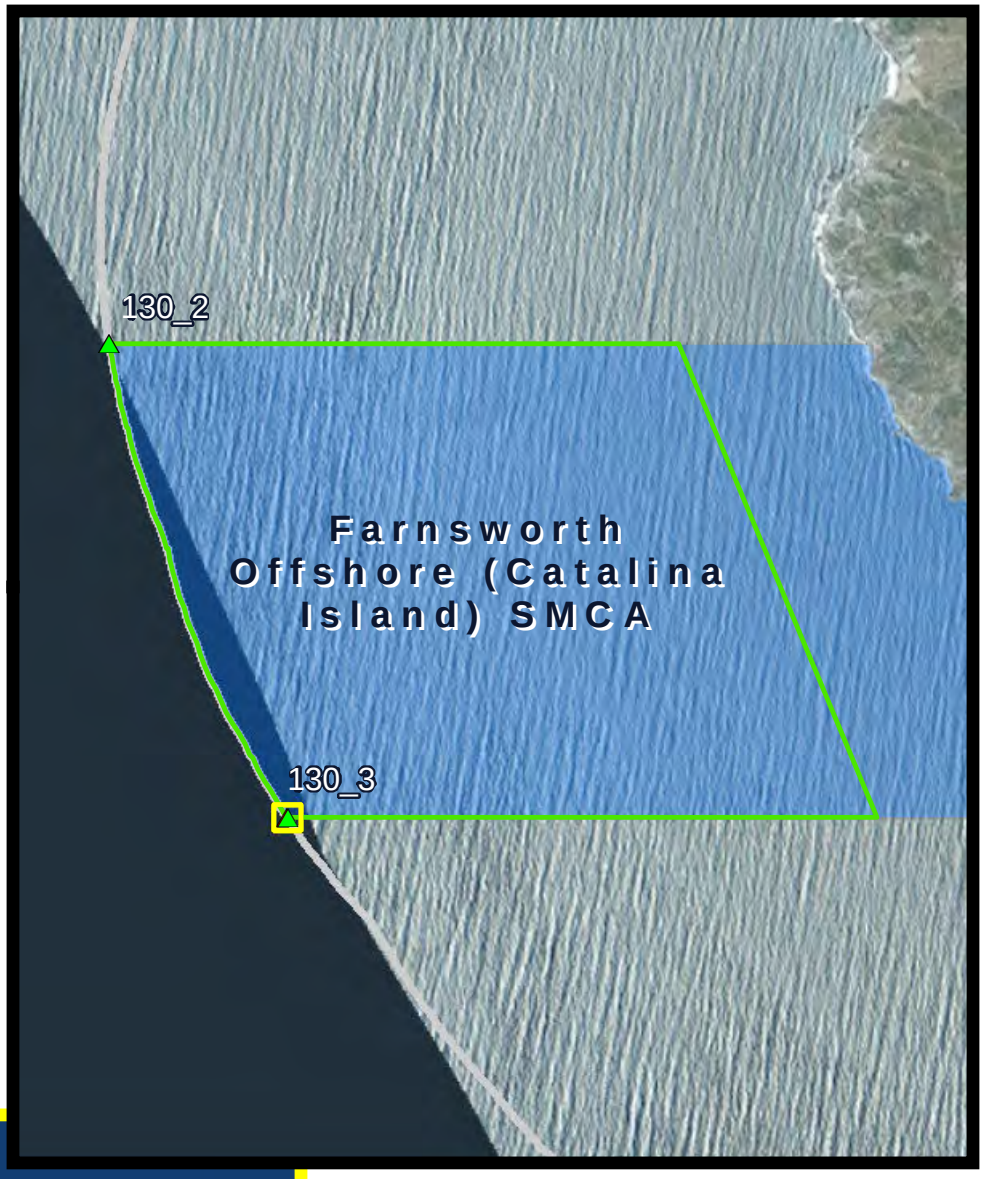
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements
- State Line

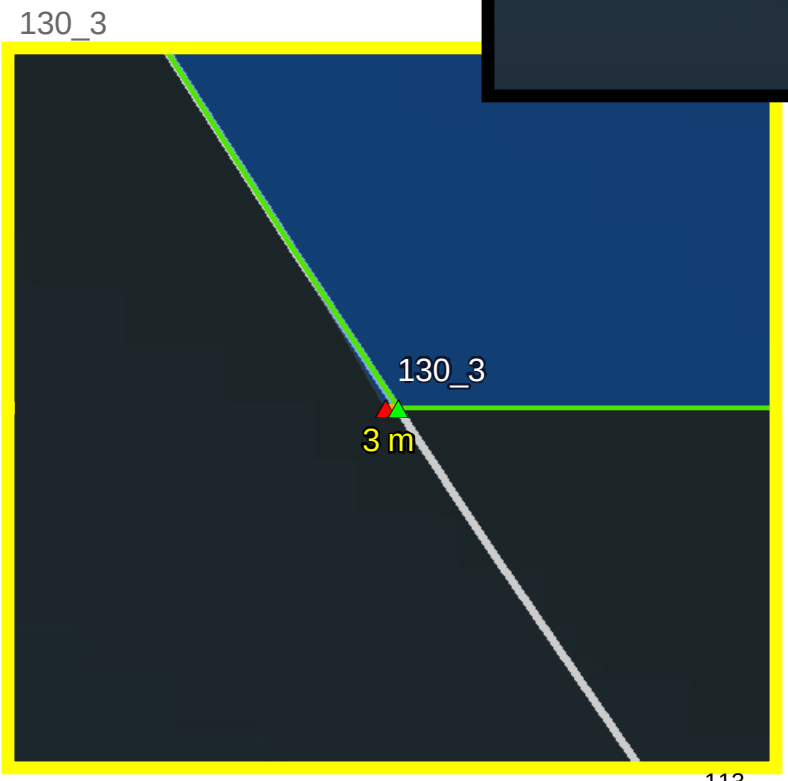
Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements







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Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Cat Harbor SMCA

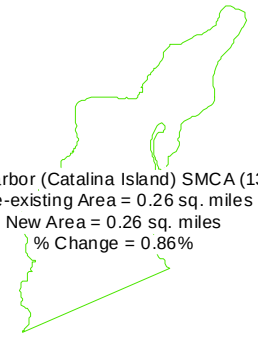
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



Cat Harbor (Catalina Island) SMCA (131)
Pre-existing Area = 0.26 sq. miles
New Area = 0.26 sq. miles
% Change = 0.86%

0 590 Meters

131_1

0 90 Meters

114

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Upper Newport Bay SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Upper Newport Bay SMCA (132)
Pre-existing Area = 1.24 sq. miles
New Area = 1.24 sq. miles
% Change = 0.04%

0 1,600 Meters

132_1 & 132_2

0 150 Meters

California Department of Fish and Wildlife
Marine Region GIS
mr_gis@wildlife.ca.gov
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Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Upper Newport Bay SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

Upper Newport Bay SMCA (132)
Pre-existing Area = 1.24 sq. miles
New Area = 1.24 sq. miles
% Change = 0.04%

0 1,600 Meters

132_3 & 132_4

0 90 Meters

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May 8, 2015

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Crystal Cove SMCA

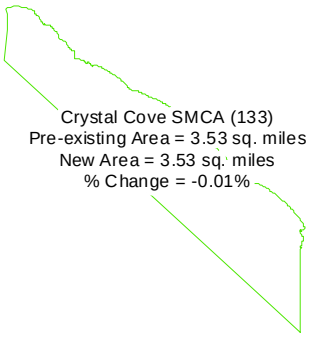
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



0 2,500 Meters

133_1

0 90 Meters

117

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Marine Region GIS
mr_gis@wildlife.ca.gov
May 8, 2015

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Crystal Cove SMCA and Laguna Beach SMR

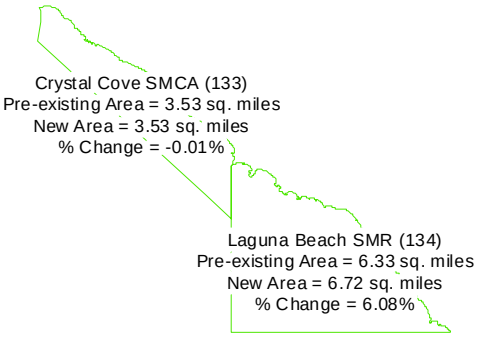
Legend

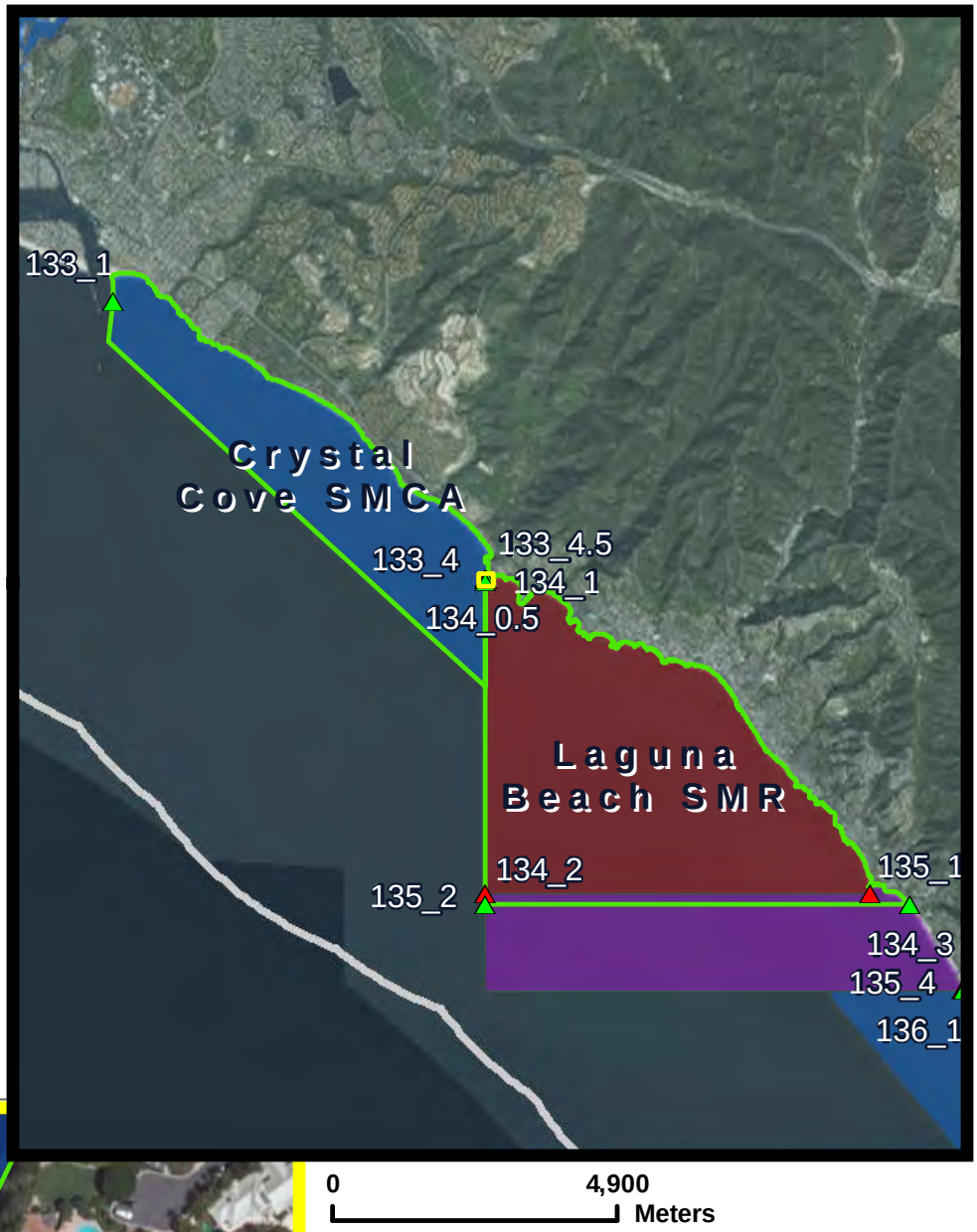
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

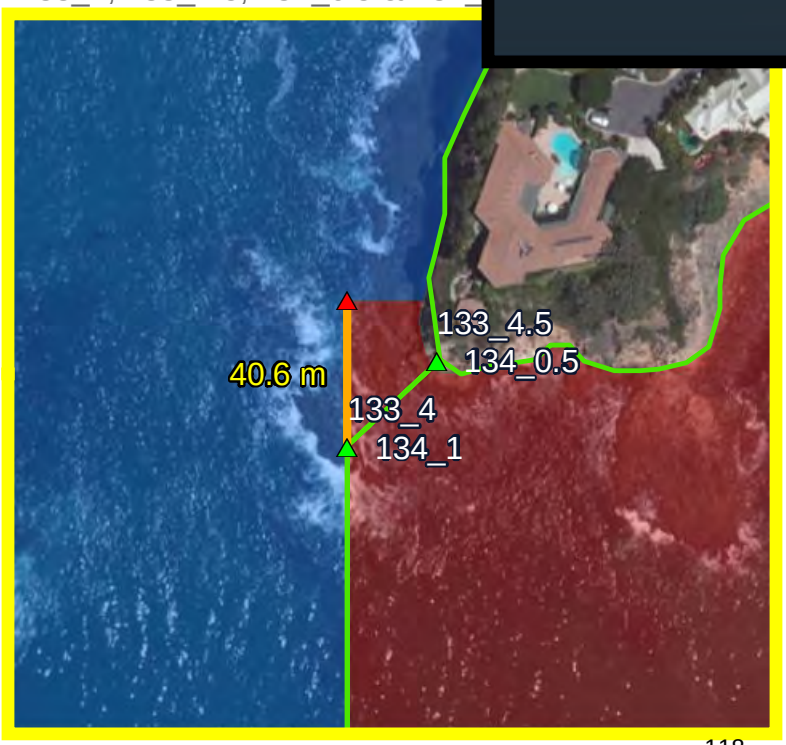
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





133_4, 133_4.5, 134_0.5 & 134_



118

California Department of Fish and Wildlife
Marine Region GIS
mr_gis@wildlife.ca.gov
May 8, 2015

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Laguna Beach SMR and SMCA

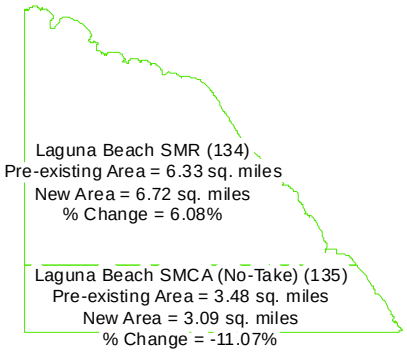
Legend

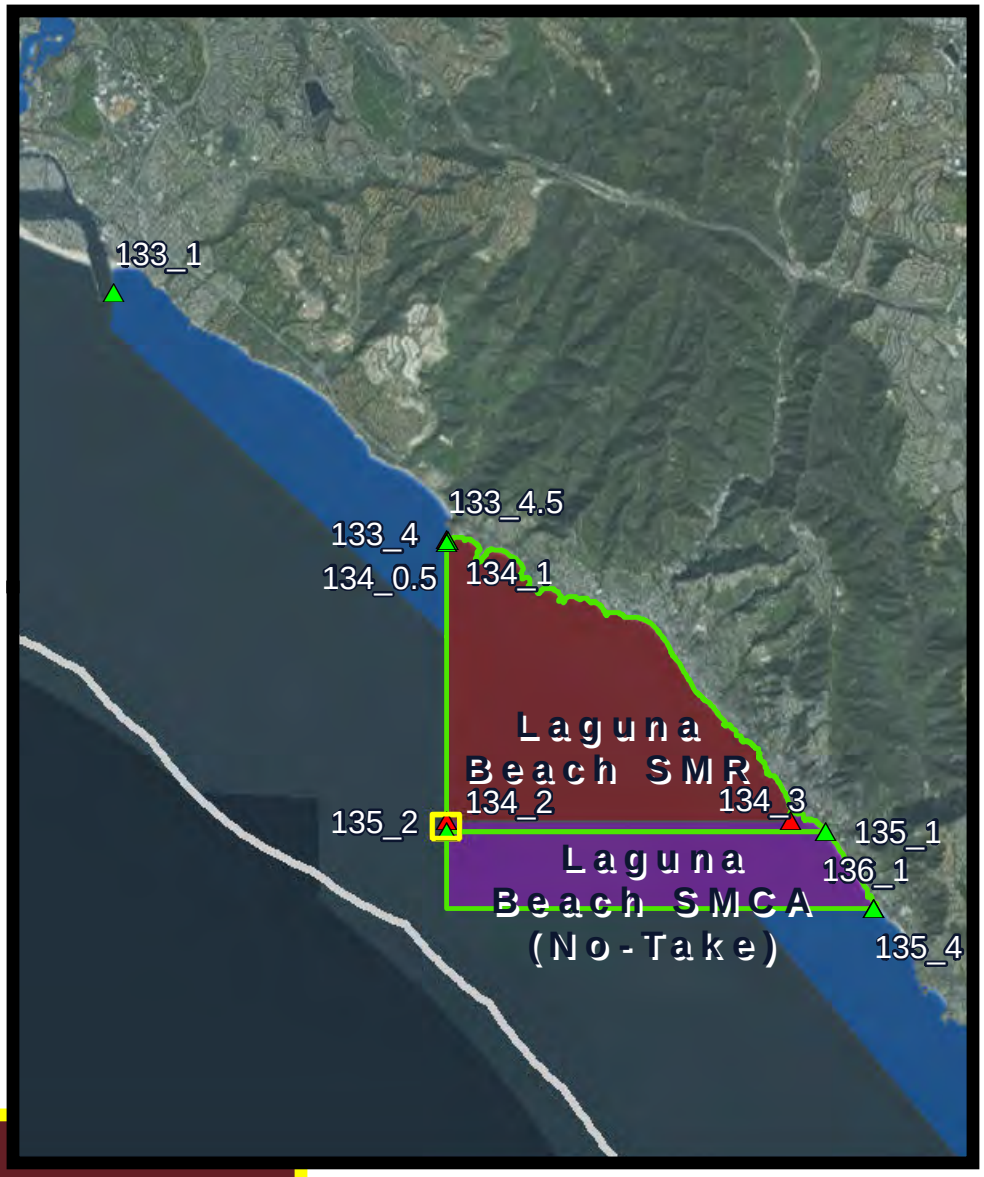
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

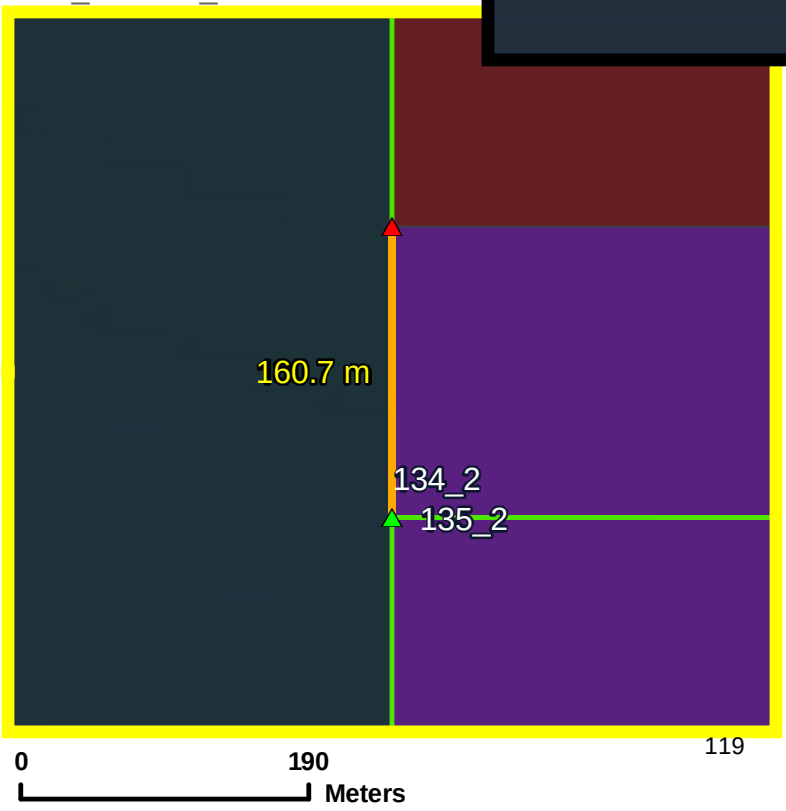
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





134_2 & 135_2



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Marine Region GIS
mr_gis@wildlife.ca.gov
May 8, 2015

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Laguna Beach SMR and SMCA

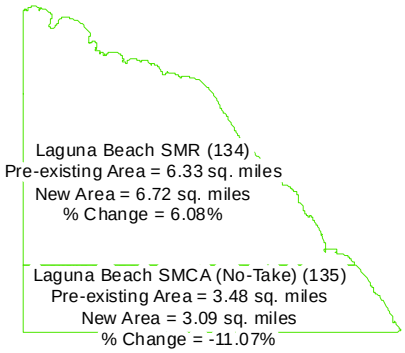
Legend

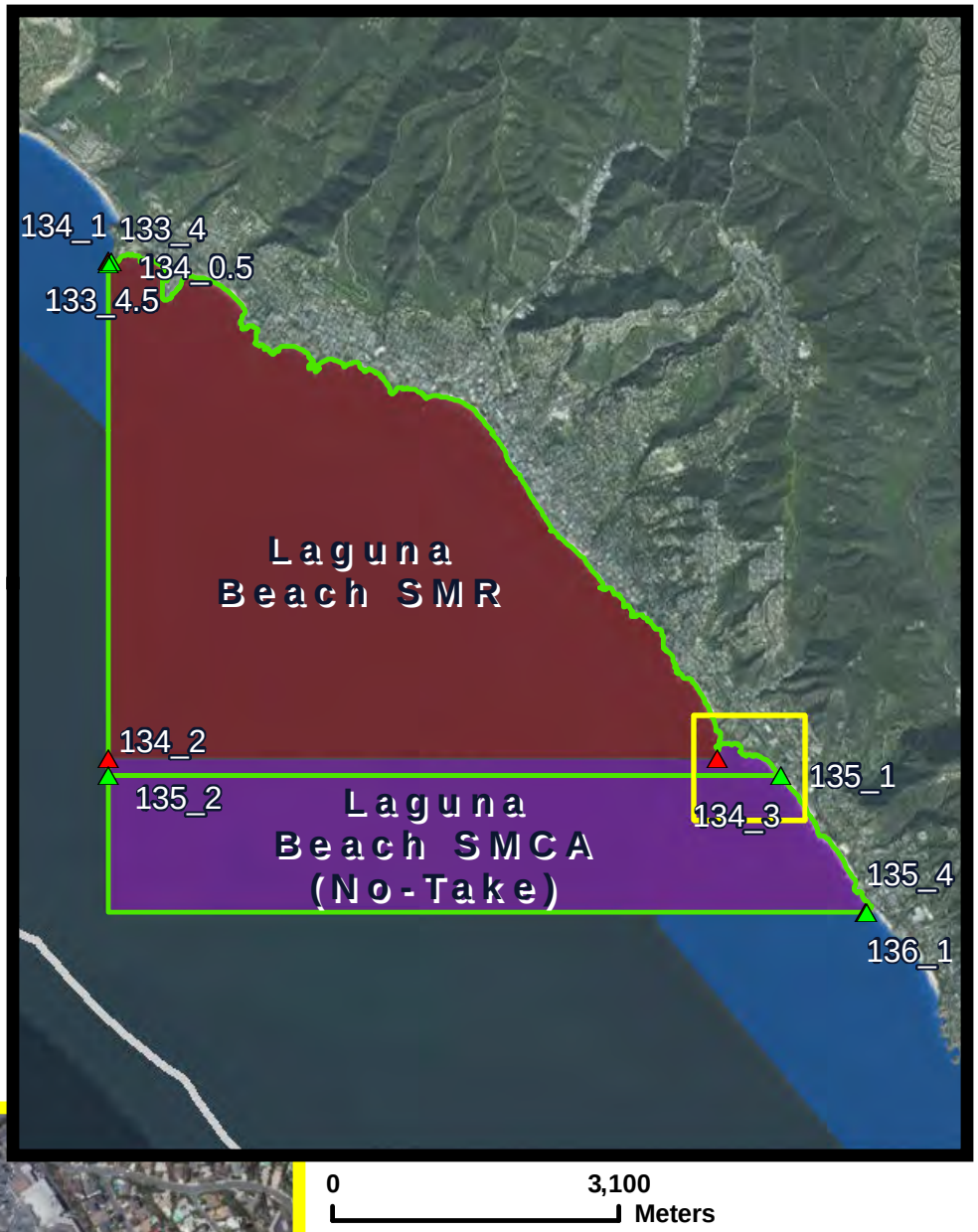
- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

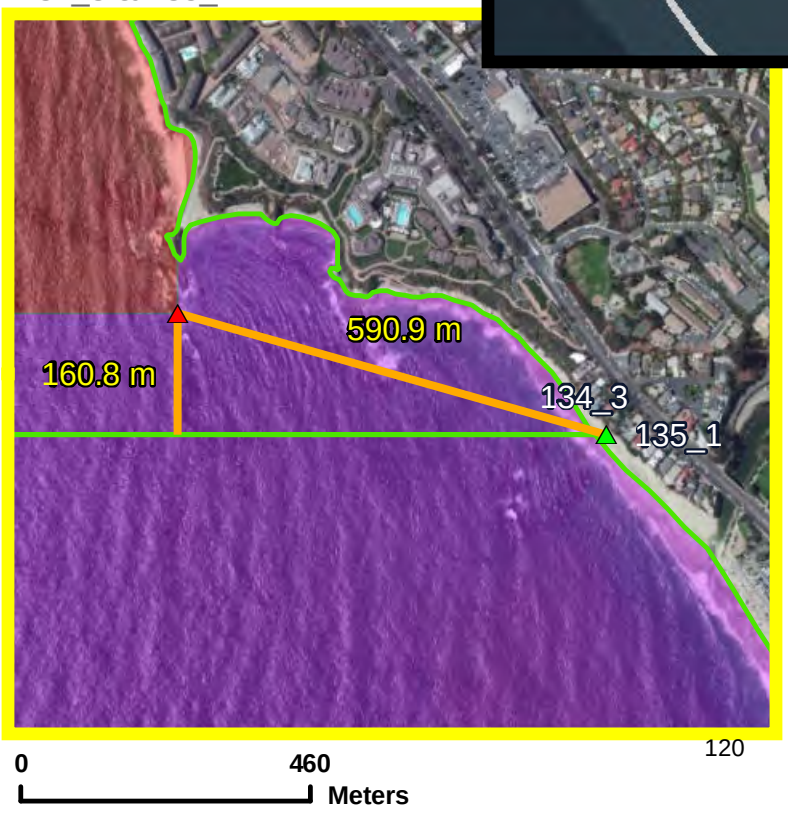
- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements





134_3 & 135_1



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mr_gis@wildlife.ca.gov
May 8, 2015

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Laguna Beach SMCA and Dana Point SMCA

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

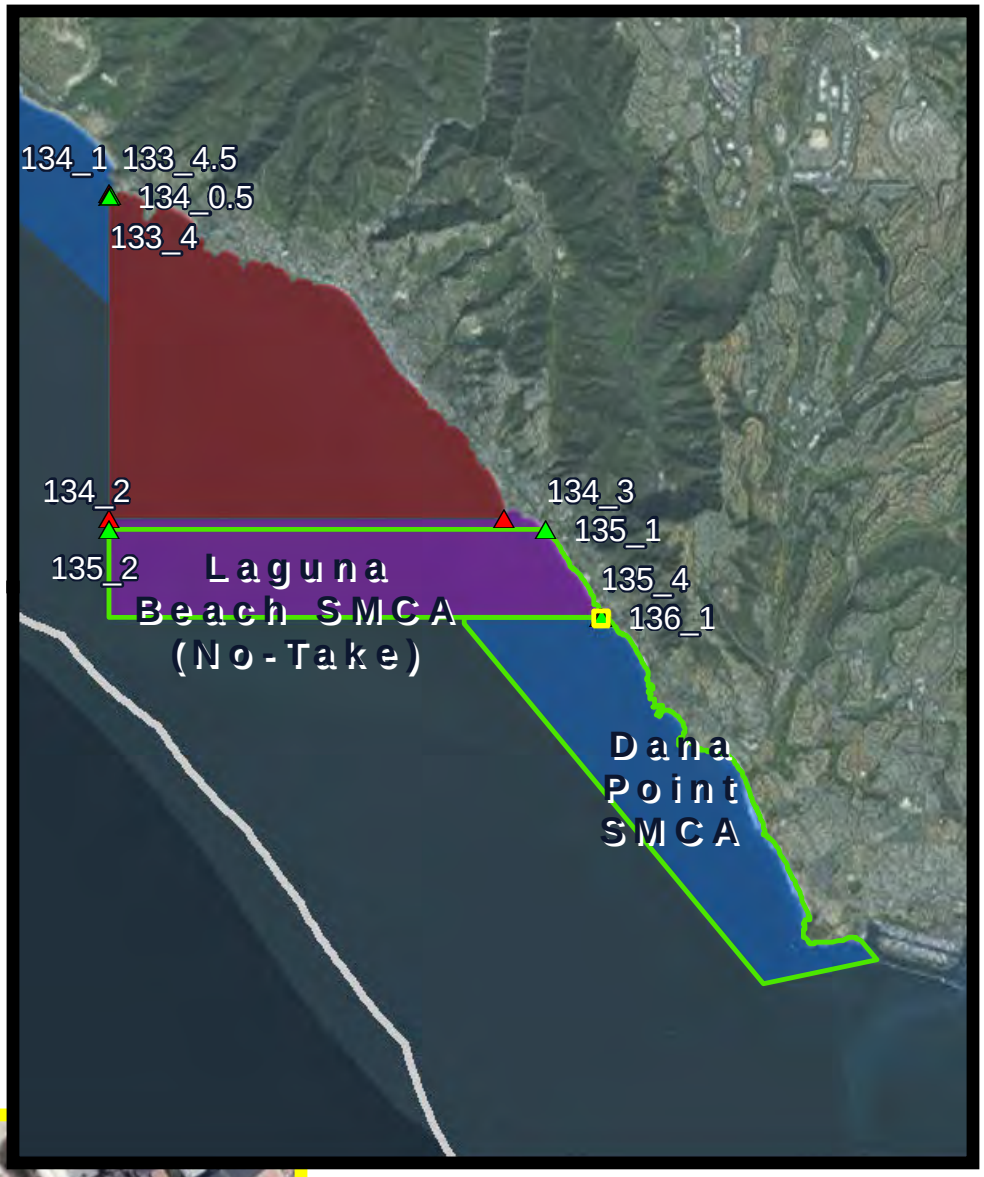
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA No-Take)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

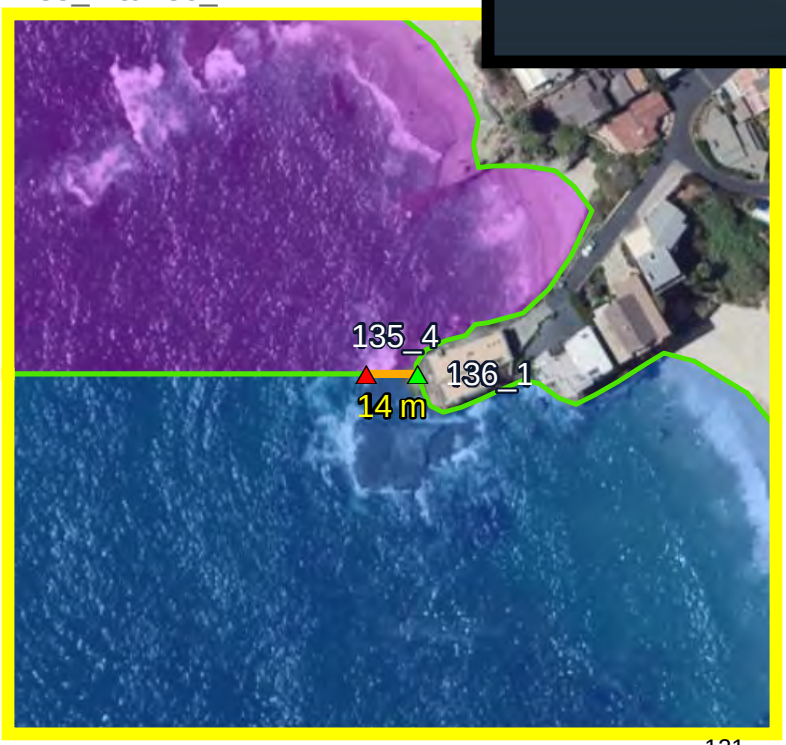
Laguna Beach SMCA (No-Take) (135)
Pre-existing Area = 3.48 sq. miles
New Area = 3.09 sq. miles
% Change = -11.07%

Dana Point SMCA (136)
Pre-existing Area = 3.47 sq. miles
New Area = 3.47 sq. miles
% Change = 0%



0 4,800 Meters

135_4 & 136_1



0 90 Meters

121

California Department of Fish and Wildlife
Marine Region GIS
mr_gis@wildlife.ca.gov
May 8, 2015

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

San Diego-Scripps Coast SMCA and Matlahuayl SMR

Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

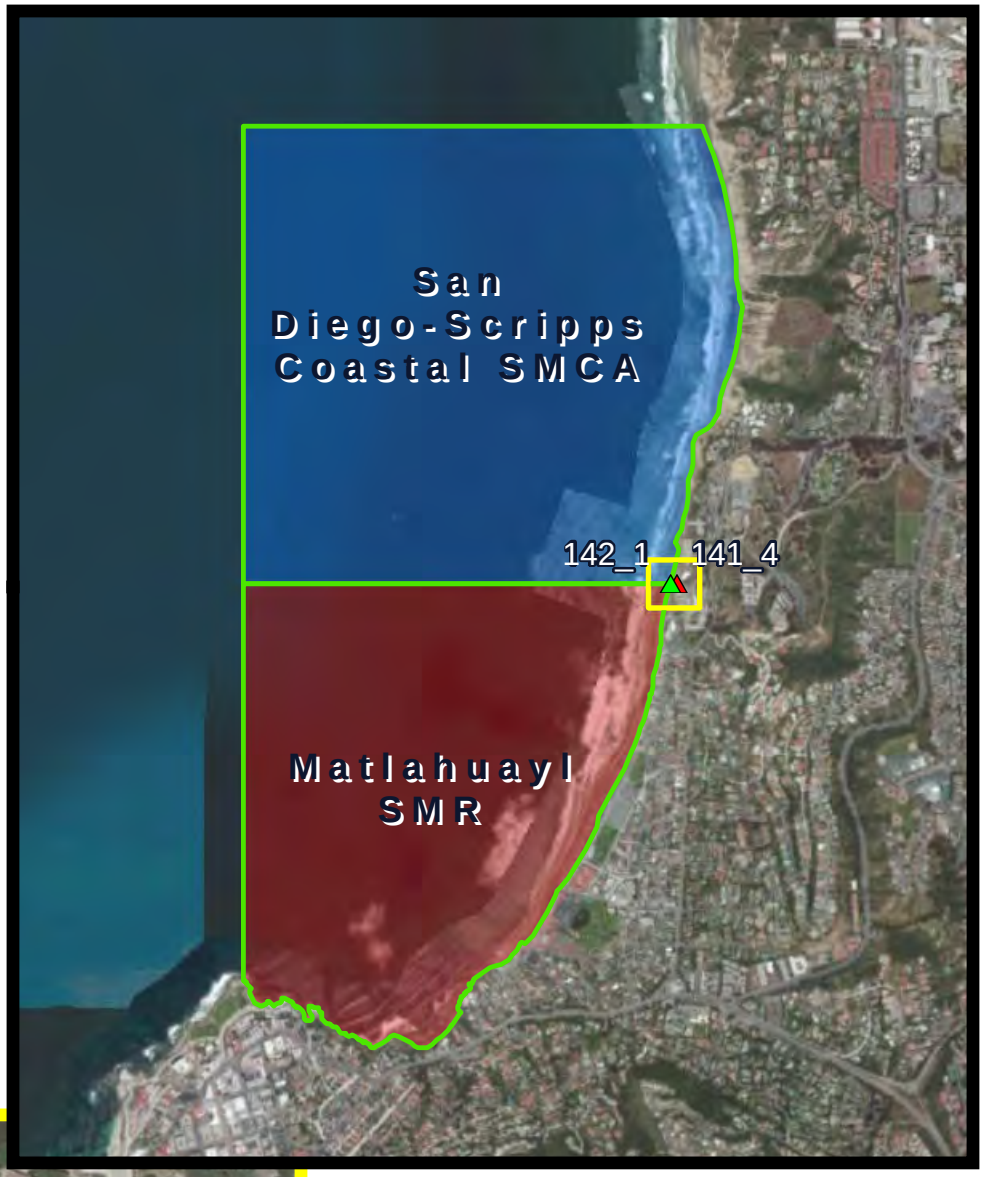
Current MPA Boundaries

- State Marine Reserve (SMR)
- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements

San Diego-Scripps Coastal SMCA (141)
Pre-existing Area = 1.46 sq. miles
New Area = 1.46 sq. miles
% Change = 0%

Matlahuayl SMR (142)
Pre-existing Area = 1.04 sq. miles
New Area = 1.04 sq. miles
% Change = 0%



0 1,400 Meters

141_4 & 142_1

0 90 Meters

122

California Department of Fish and Wildlife
Marine Region GIS
mr_gis@wildlife.ca.gov
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Tijuana River Mouth SMCA

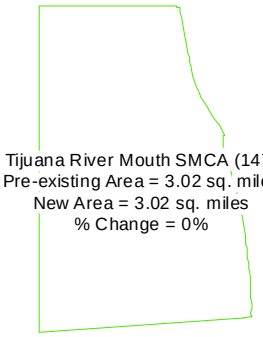
Legend

- Existing Position
- Proposed New Position
- Distance Between Positions
- Proposed Refinements

Current MPA Boundaries

- State Marine Conservation Area (SMCA)

Summary of Proposed Refinements



147_4

123

California Department of Fish and Wildlife
Marine Region GIS
mr_gis@wildlife.ca.gov
May 8, 2015

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Proposed Regulation Amendments for Marine Protected Areas Update

Photo Credit: Amanda Van Diggelen

California Fish and Game Commission

October 7, 2015 • Los Angeles, CA

Amanda Van Diggelen
California Department of Fish and Wildlife

Regulatory Timeline

- February, 2015: Contacted California Tribal Governments
- March 4, 2015: Update to Marine Resources Committee
- April 8, 2015: Presentation of Proposed Amendments
- August 4, 2015: Notice Hearing

- **October 7, 2015: Discussion Hearing**

- December, 2015: Adoption Hearing

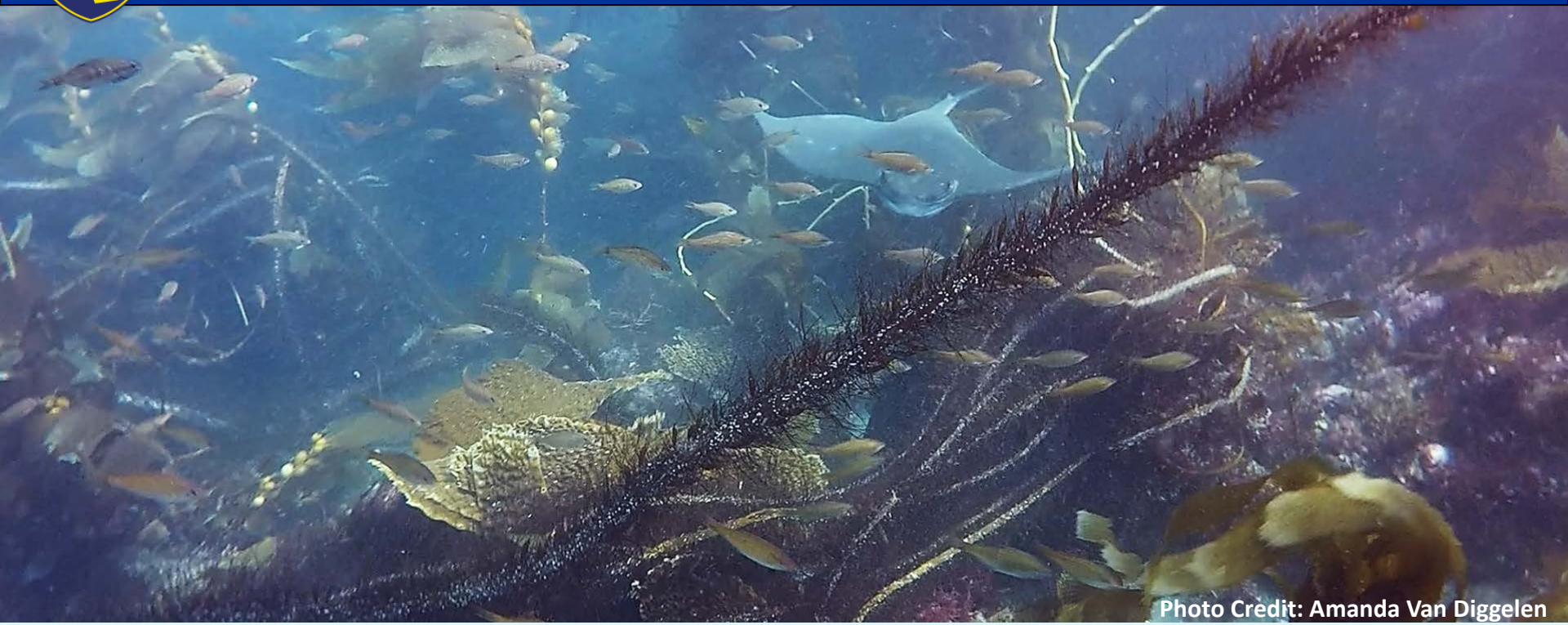
Summary of Proposed Amendments

- One overarching amendment to identify the origin of MMA allowable activities
- One general provision amendment addressing allowed activities for all MMAs
  - 45 MMAs will have their activities clarified to maintain their original intent
- Amending aquaculture regulations for Drakes Estero and Morro Bay

Summary of Proposed Amendments Continued

- Amending outdated troll gear references
- Changing the MMA designation of Año Nuevo from SMCA to SMR
- Changing the names of 21 MMAs
- Refining 106 MMA boundaries

Thank You ◈ Questions



Amanda Van Diggelen

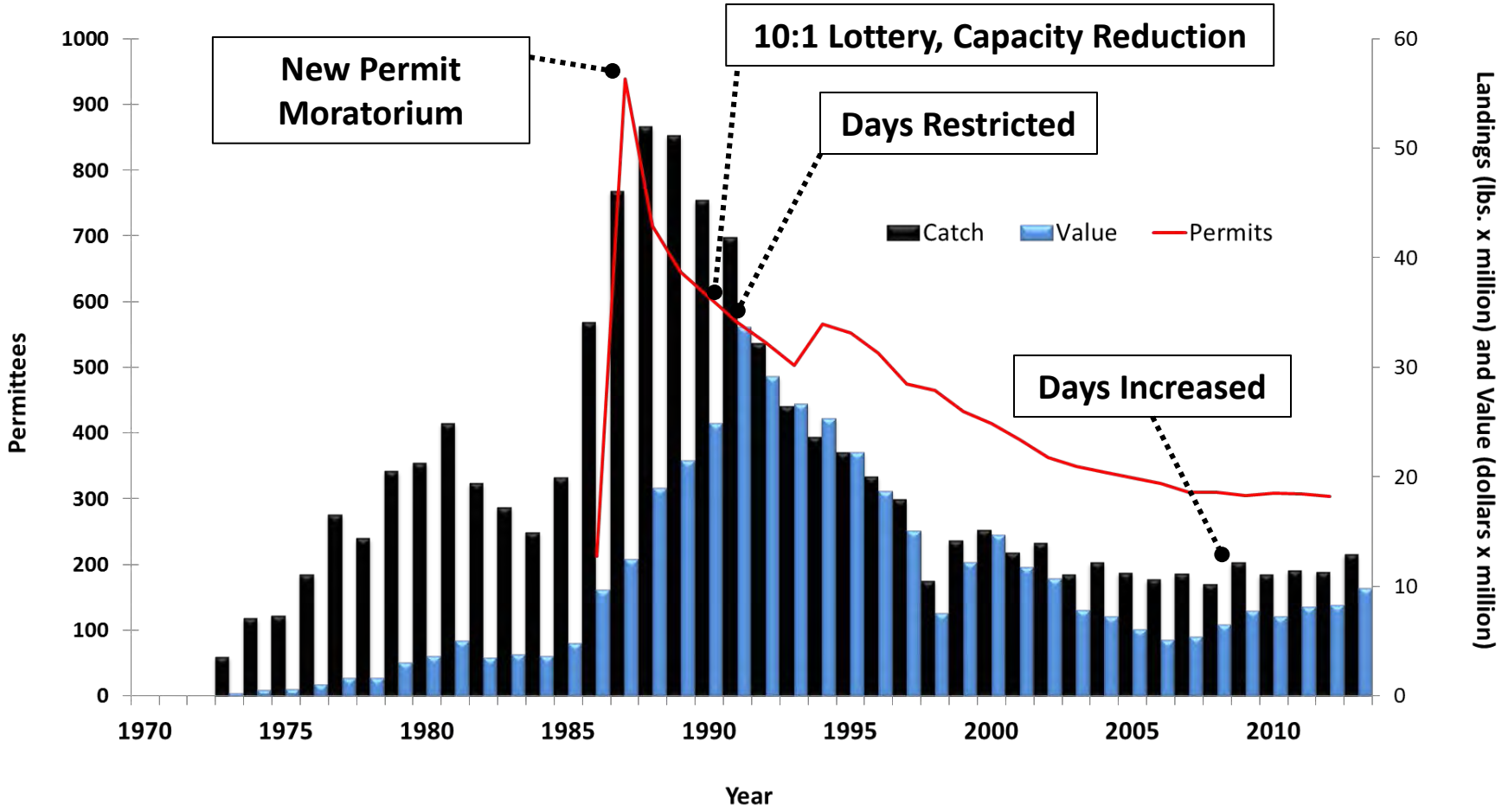
Environmental Scientist, Marine Region

(562) 342-7176

Red Sea Urchin Status Report
Marine Resources Committee
August 5th, 2014

Derek Stein
Environmental Scientist
California Department of Fish and Wildlife
Marine Region, Invertebrate Project

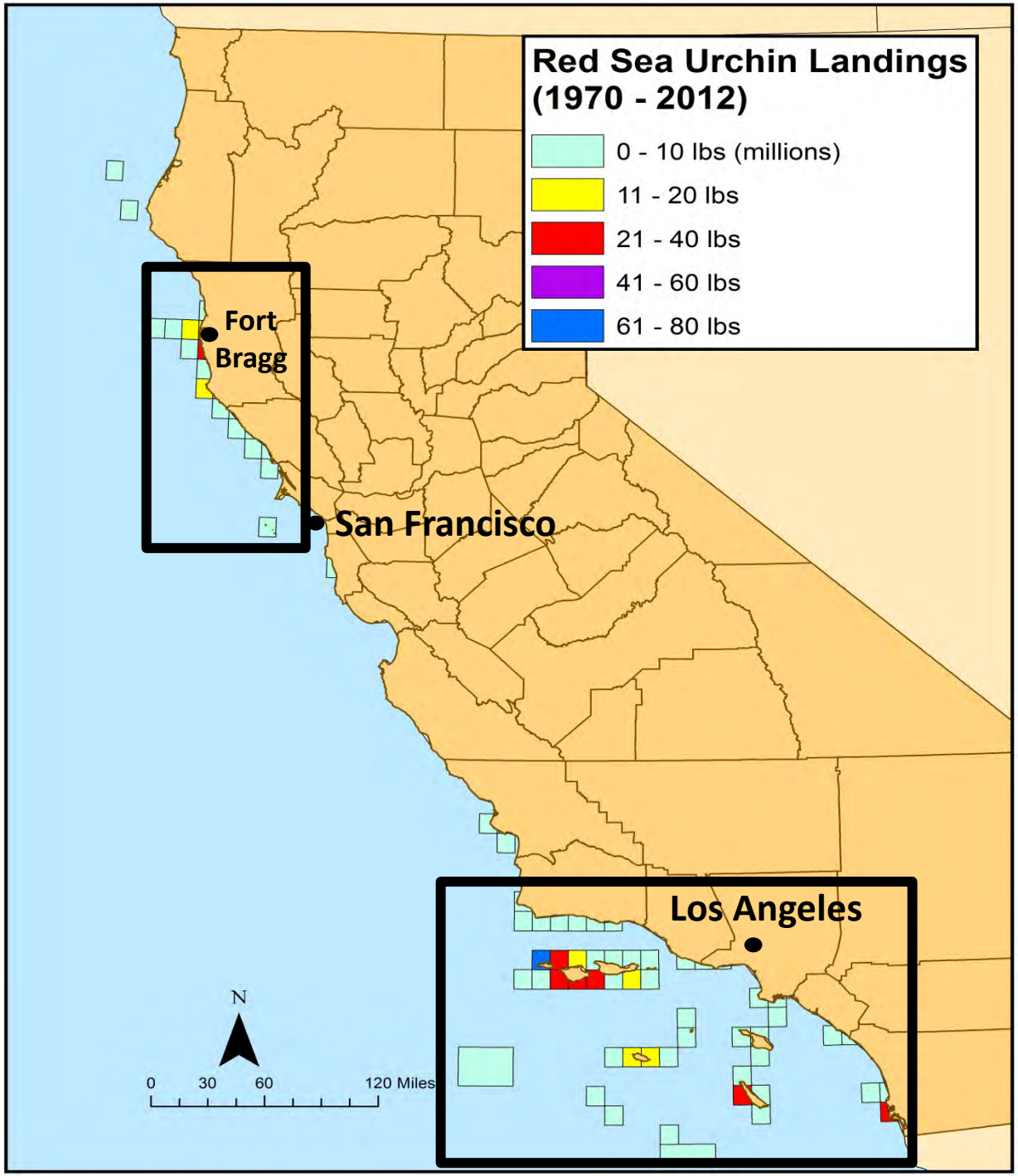
History of Red Sea Urchin Landings, Value, and Permits



- Currently catch/effort is limited by size (3 ¼ south, 3 ½ north); open fishing season (Nov-June: 7 days) (June-Oct: M, T, W, Th); and restricted access of 300 permits.
- From 1998-2013, statewide landings have been consistently between 10-15 million pounds
- Capacity goal of 300 instituted in 1990s, and since 2007 has been near 300

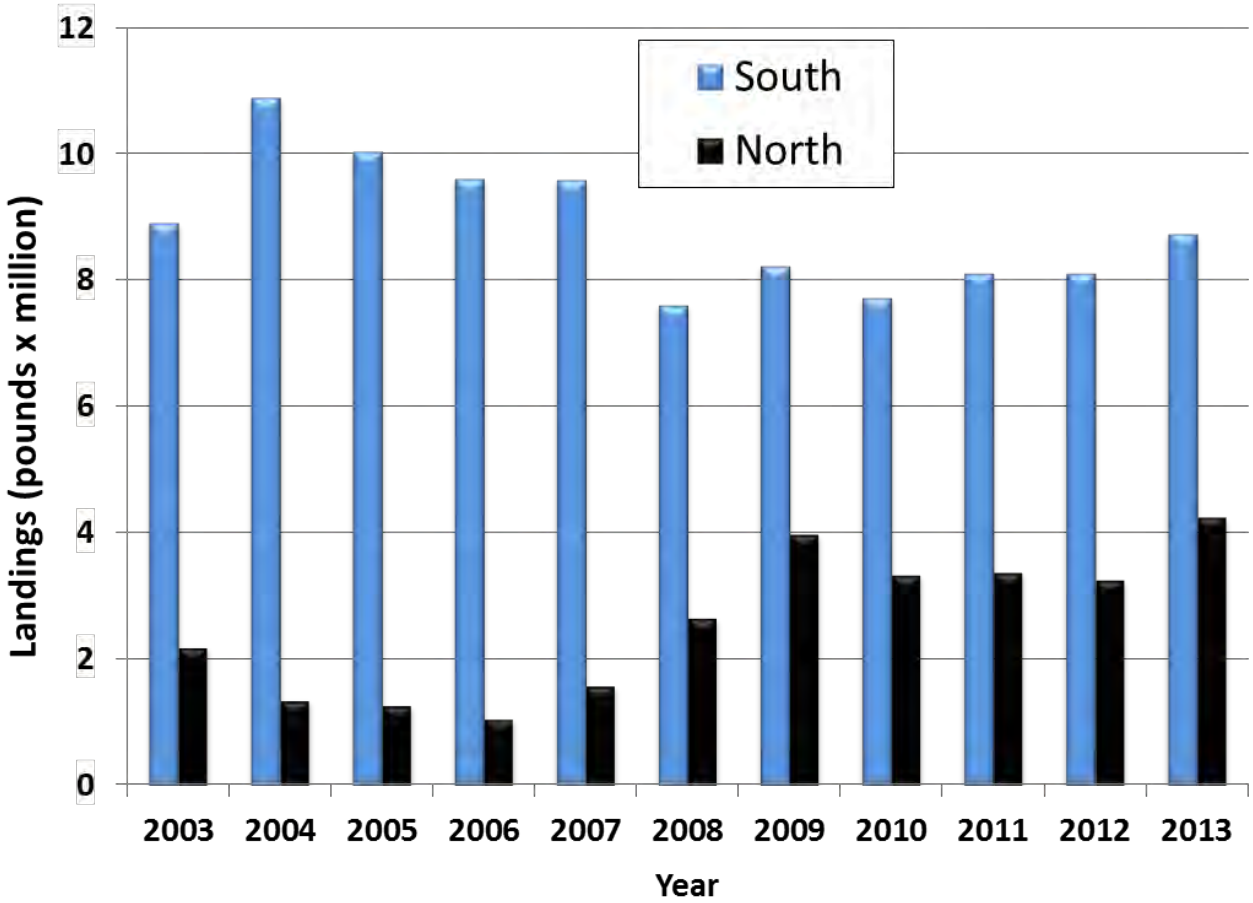
Statewide Landings 1970-2012

- Concentrated Effort Fort Bragg Vicinity and Southern California Bight
- Majority of Nor Cal Landings near Fort Bragg
- Majority of So Cal Landings at offshore islands and San Diego



North vs. South Total Landings and Percentage Statewide

Year	South	North
2003	80%	20%
2004	89%	11%
2005	89%	11%
2006	90%	10%
2007	86%	14%
2008	74%	26%
2009	67%	33%
2010	70%	30%
2011	71%	29%
2012	71%	29%
2013	67%	33%

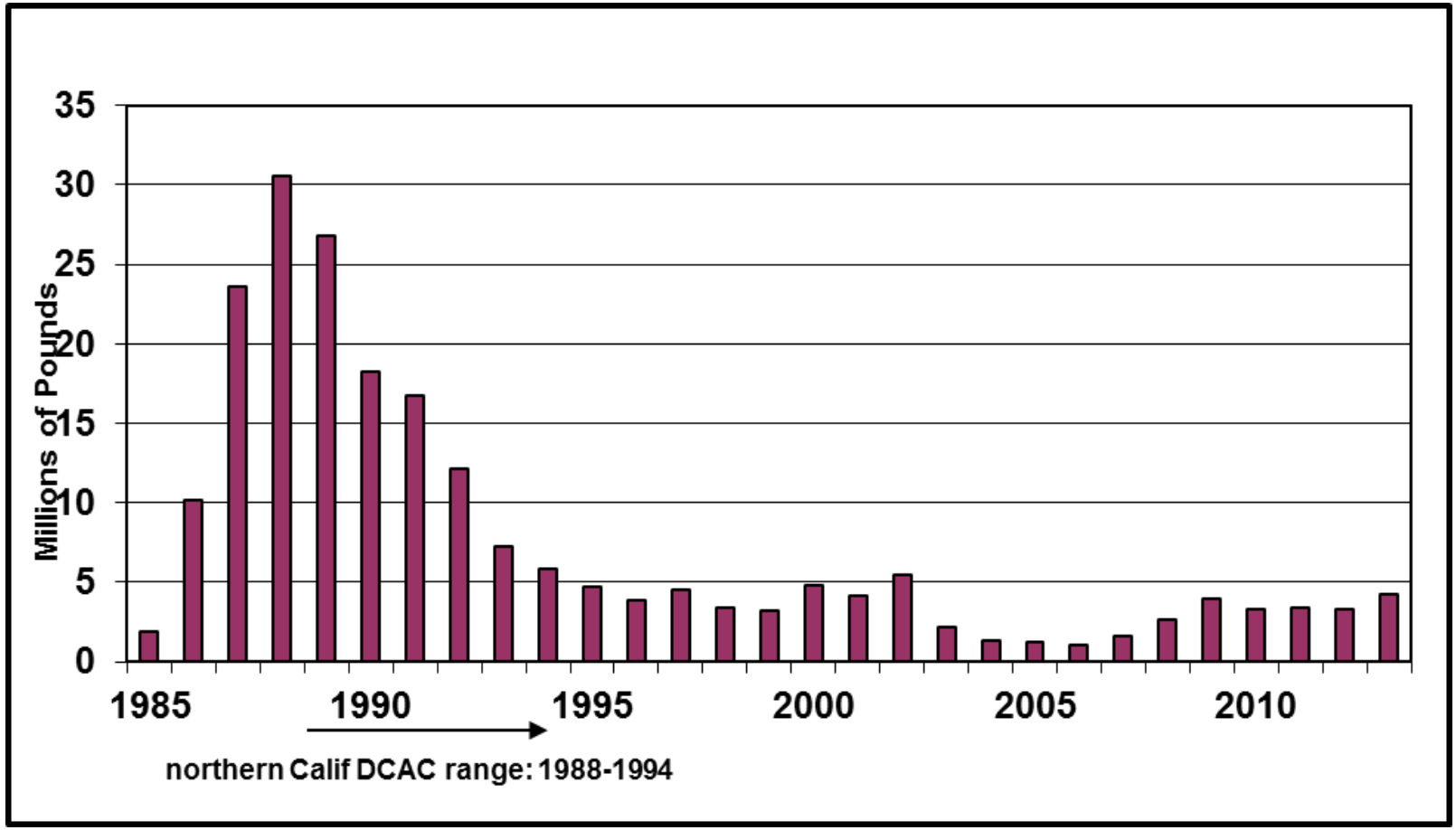


- Northern landings on steady rise from 2006 topping out at 4.2 million pounds in 2013
- As northern landings have been increasing, southern landings have been decreasing or stable
- Some decrease in southern landings can be attributed to shift in effort to warty sea cucumbers

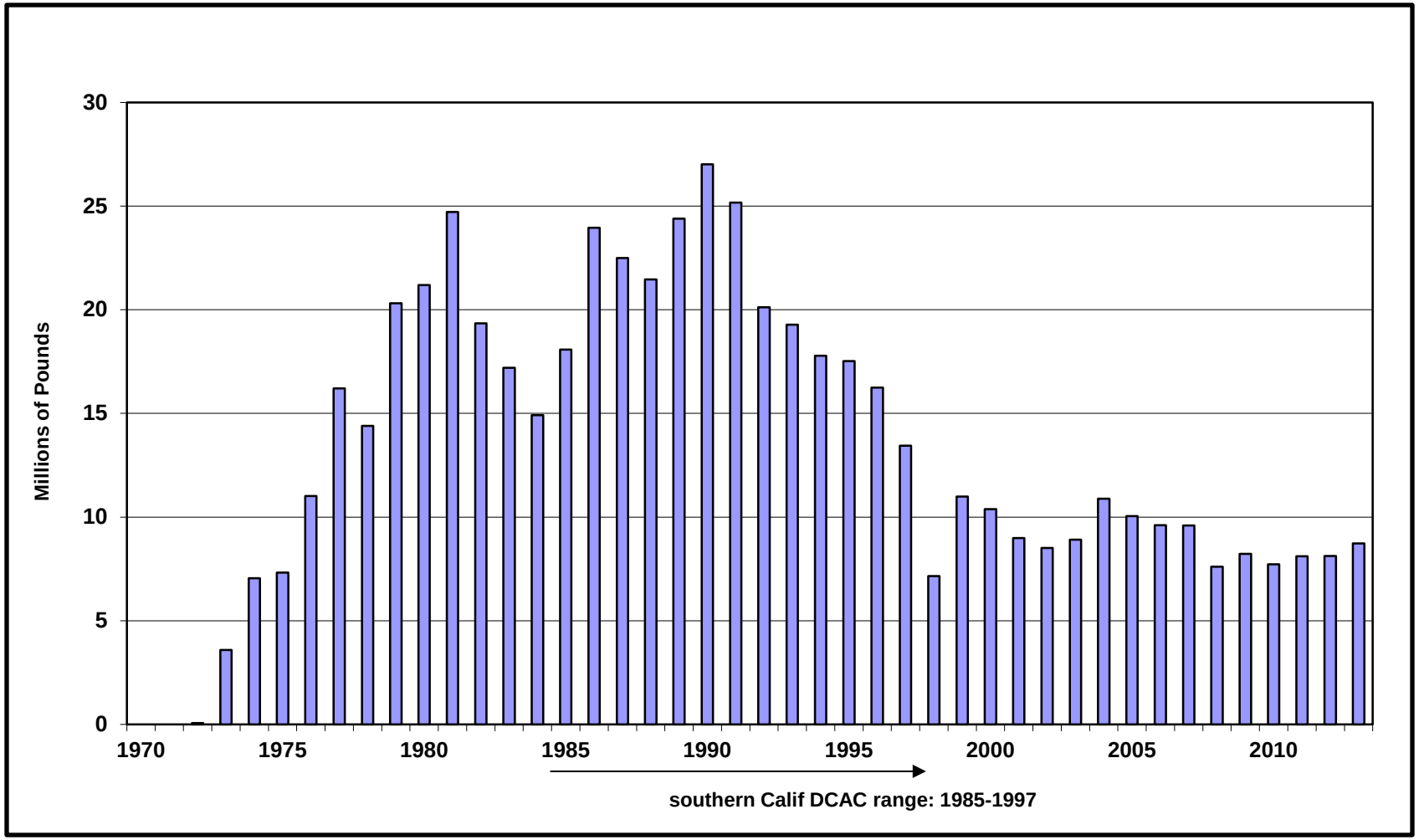
Maximum Sustainable Yield (MSY) for North and South

- **Based on Depletion-Corrected Average Catch (DCAC) model (MacCall 2009) which applies a correction to the long term average catch for the initial 'windfall' harvest of a newly exploited stock – this is especially applicable to northern California which dramatically exhibits this windfall harvest as does southern California to a lesser extent.**
  - **Southern and Northern California analyzed separately due to unique catch history and life history parameters**
    - **The data years for MSY calculations were 1988 – 1994 (northern CA)**
    - **The data years for MSY calculations were 1985-1997 (southern CA)**

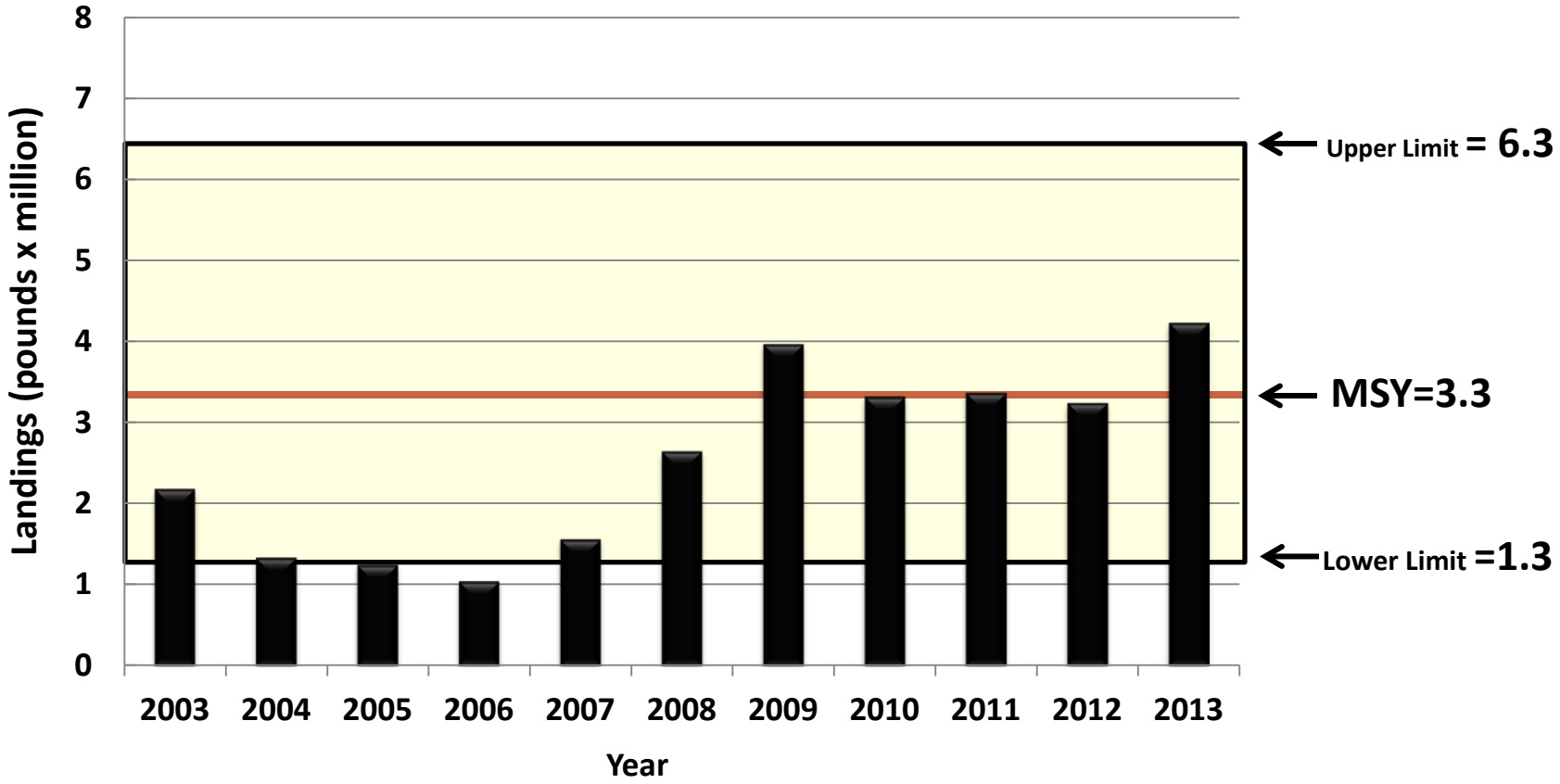
Northern California Catch History



Southern California Catch History



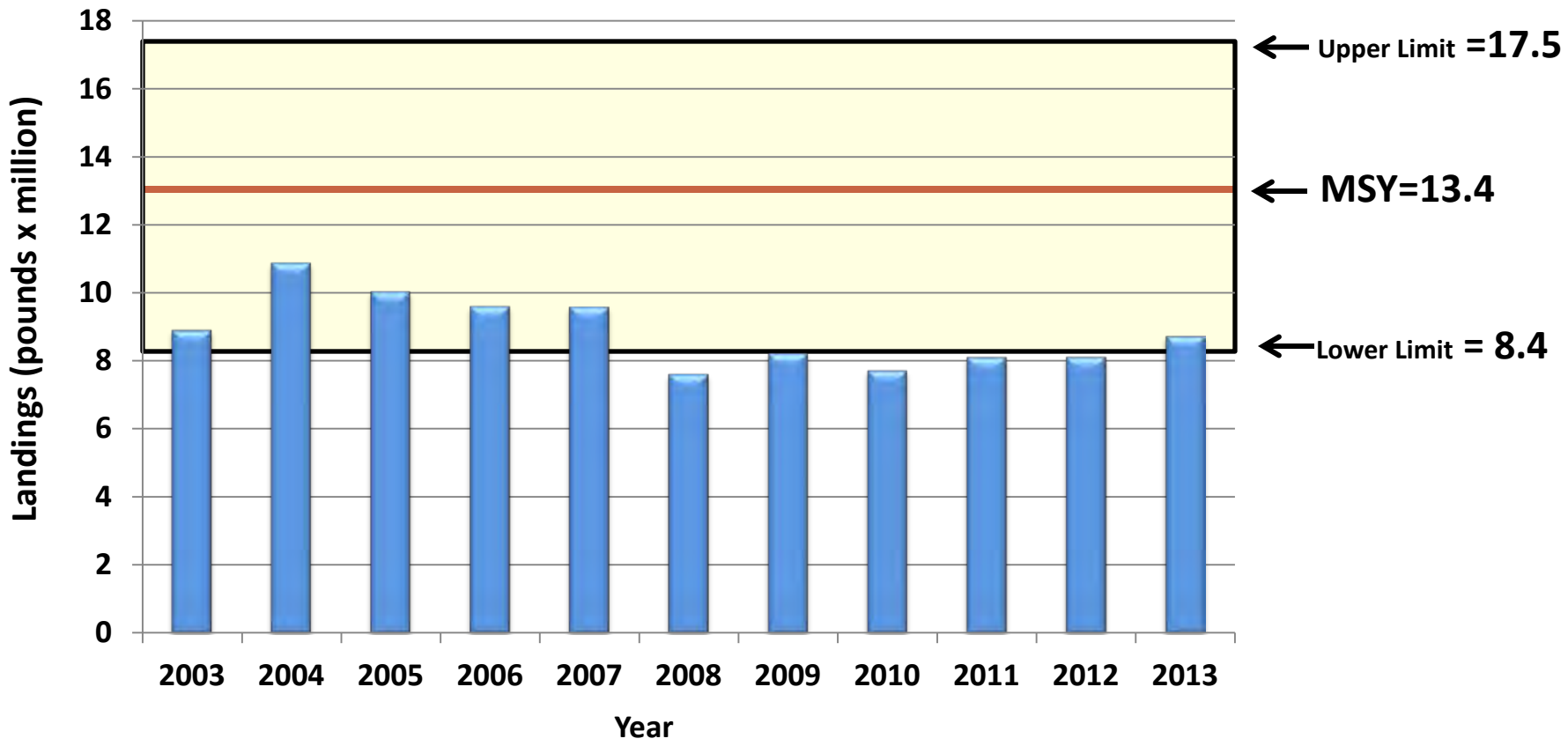
Maximum Sustainable Yield (MSY) Northern California



<u>Northern California Recent Catch History</u>

- **MSY = 3.3 million lbs**
- **95% Confidence Interval = 1.3 to 6.3 million lbs**
- **2013 catch = 4.2 million lbs**

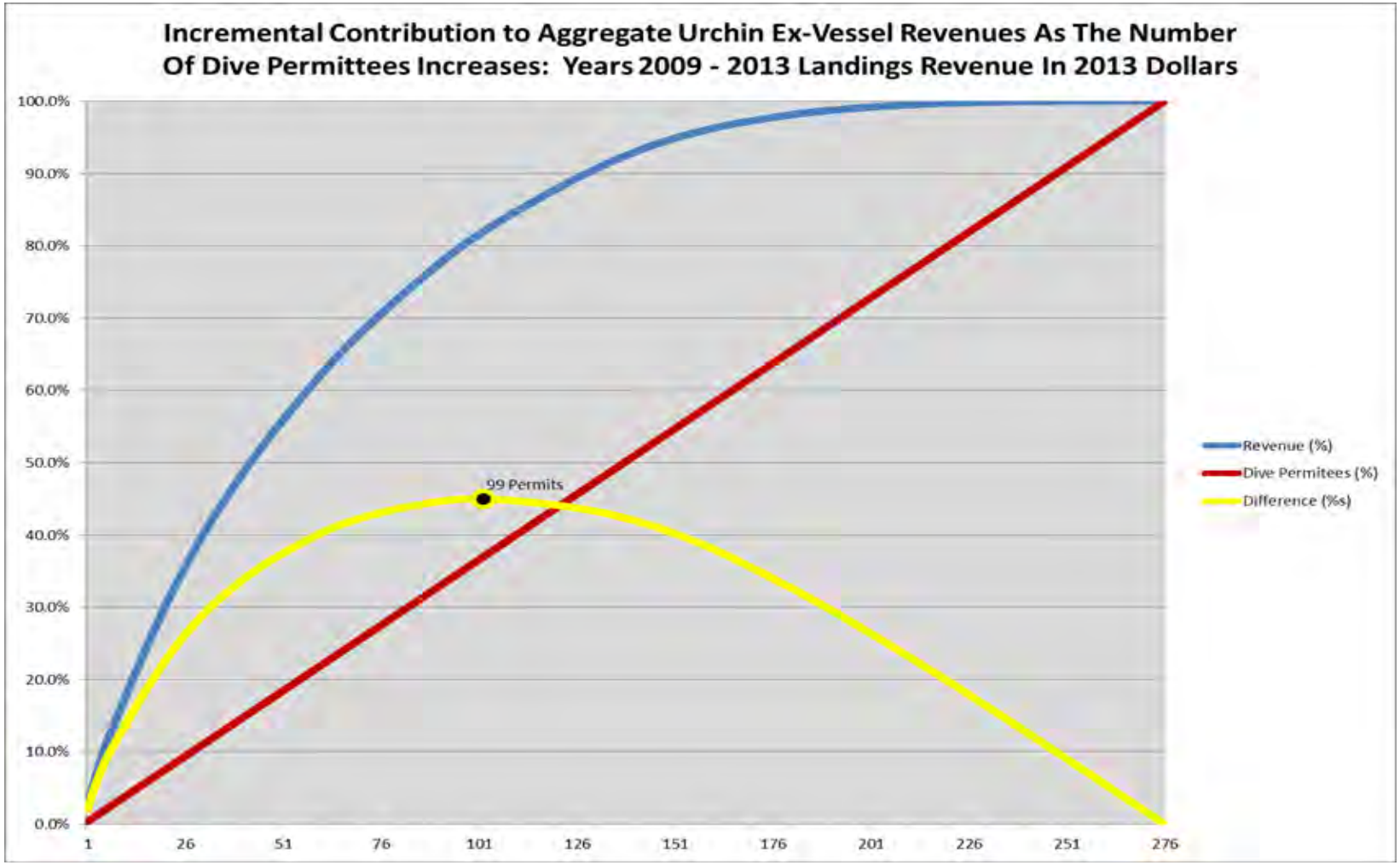
Maximum Sustainable Yield (MSY) Southern California



<u>Southern California Recent Catch History</u>

- **MSY = 13.4 million lbs**
- **95% Confidence Interval = 8.4 to 17.5 million lbs**
- **2013 catch = 8.7 million lbs**

Optimal Number of SU Divers Based on Ex-Vessel Revenues



Thank You

Derek Stein
Email: Derek.Stein@wildlife.ca.gov
Department of Fish and Wildlife
Marine Region
Invertebrate Management Project

July 31, 2015

Sonke Mastrup
Executive Director
California Fish & Game Commission
1416 Ninth Street, Suite 1320
Sacramento, CA 95814

Dear Sonke:

At the October 8, 2014 California Fish & Game Commission (CFGC) the Commissioners voted to "DIRECT STAFF TO BEGIN PREPARING AN INITIAL STATEMENT OF REASONS (ISOR) FOR ADDRESSING SEA URCHIN FISHERY CAPACITY AFTER REACHING OUT TO THE INDUSTRY TO BE SURE THERE IS A SINGLE PROPOSED ACTION BEFORE GOING TO NOTICE."

The California Sea Urchin Commission (CSUC) has been working with the Department for many years and has surveyed our members numerous times and held countless port meetings. The divers are unanimous in their desire to move forward with a capacity reduction plan. We met on November 21, 2014 with seven processor representatives who buy and sell approximately 75 percent of sea urchins harvested in California. The purpose was to develop a single action plan as directed by the CFGC. The processors said they would not be able to come to an agreement during that meeting, but would coalesce before the end of 2014. It has now been eight months since that meeting and the processors have failed to meet and failed to offer a counter proposal to the Capacity reduction goal of 150 permits. During that same period the License and Revenue Branch continued add to the capacity by issuing permits exceeding 300 when late renewals are added to the total given through the lottery system. The processor who objected to proposal at the October 8th meeting has lost support from some of his co-signors. The CSUC believes it's time to move forward.

To our knowledge the Department staff have not begun to work on the ISOR even though it's listed on the CFGC regulatory calendar to be heard at the October 7, 2015 meeting in Los Angeles.

The CSUC has hired a private consultant to write the ISOR to expedite the regulatory process. We will have a draft document completed for the Commission and staff to review prior to the October meeting. We therefore formally request that this issue be placed on the October 7, 2015 agenda so the Commissioners can consider and potentially take action to adopt the regulatory package.

Cordially,

David Goldenberg
Executive Director

Cc: Craig Shuman
Susan Ashcraft
Tom Barnes
Derek Stein
Chuck Bonham

P.O. Box 2077 | Folsom CA | 95763-2077 | tel 916.933.7054 | fax 916.933.7055 | www.calurchin.org

CAPACITY REDUCTION PROPOSAL

IMPROVED REGULATIONS FOR THE CA. SEA URCHIN FISHERY
A Framework for Sustainability and Enhanced Socio-economic Viability

Submitted by the California Sea Urchin Commission
To the California Fish & Game Commission
October 7, 2015

Sound fisheries management planning involves input from both managers and stakeholders including the California Fish and Game Commission (CF&GC). Good management must have the flexibility to react in a timely manner to changes in the resource, the effects of regulations, improved science, and evolving markets.

Understanding that good fisheries policy involves a sustainable resource, the business of fishing, and the essential fisheries information (multidisciplinary science) to help create and maintain a fishery that is sustainable in biomass, as well as social and economic integrity.

Working with The California Department of Fish and Wildlife (the Department), the California Sea Urchin Commission (CSUC) is proposing to the California Fish and Game Commission (the Commission), a number of changes to the current Sea Urchin regulations. The CSUC believes these changes will help secure the long term viability of California's valuable Sea Urchin Fishery, in meeting the goal of The Marine Life Management Act.

Recommendations:
1. Reduce permit capacity threshold to 150
2. New entry system with a 10:1 (ten to one) system
3. Close the 'lottery loop hole'
4. Add one fishing day, June-October in Southern CA

1) **Reduce the current capacity by allowing non renewed permits to leave the fishery.**

   A. **Current Practice – there are 300 permits. Ninety-Seven (97) percent of the harvest is caught by 150 permit holders. The remaining 150 permits are latent and if they become fully active could potentially cause unsustainable pressure and result in harvest restrictions.**

   B. **Proposal – to reduce capacity threshold to 150 permits over an extended period of time to gradually reduce harvest pressure. Recommendation number 2 will allow for new entrants at sustainable levels.**

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Reducing capacity assures a sustainable fishery from over harvesting. This can be accomplished through natural attrition over many years, incentives to retire permits, but it could also include a "permit buyback program" developed at a later date if desired and with available funding.

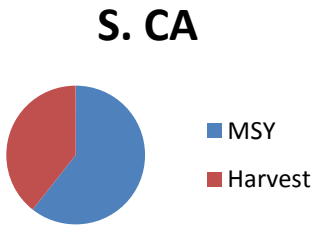
Traditionally, sea urchin harvest has been controlled by limiting effort through minimum size, the number of open harvest days, and restricting the number of divers.

Reasoning in Support:

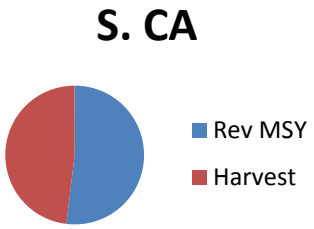
- Compaction of fishing pressure. The implementation of the Marine Life Protection Act (MLPA) has resulted in an estimated loss of 40+% of the dive fishing grounds to Marine Protected Areas (MPA's), which results in the loss of some of the most productive locations in terms of poundage and/or quality.
- Reduces latent capacity. Department data shows for the past several years 150 divers have harvested approximately 97% of the poundage landed. If all 300 divers were active it's possible the fishery might not remain economically sustainable due to the added harvest pressure.

Counter Argument: (Processor point of view)

- Several sea urchin processors have voiced concern about reducing the number of licenses. They make the point that they cannot presently fill their orders and additional active divers can provide additional capacity. They cite Peter Kalvass' Maximum Sustainable Yield (MSY) study that was completed in 1994 indicating the MSY as 13.4 million pounds and current harvest as 8.7 million pounds in Southern California. They claim the difference 4.7 million pounds are harvestable and more divers could access those additional urchins.



Estimate 4.7m harvestable



Revised MSY 700,000 harvestable

Counter Argument Fails to Consider: (Fishermen point of view)

- The processor argument fails to consider that MSY is a theoretical calculation based on previous harvests. The MSY model was developed prior to the adoption of the Marine Protected Areas (MPA's) which has reduced many prime fishing grounds. Taking a conservative 30 percent loss of fishing grounds, the 13.4 MSY in Southern California can be reduced to 9.4 million pounds (13.4 - .30%). The difference of 700,000 pounds (9.4 – 8.7) reflects a mere 8 percent of additional harvest, not 4.7 million pounds as the processors claim. Thus keeping a sustainable fishery.

- Urchins feed on kelp as their food source. The oceans have been experiencing a warm water event which negatively impacts kelp production. Divers have been reporting that locating harvestable urchins with adequate sized roe has been difficult in the last nine months. The warm water is an indication of a coming El Nino this Fall and Winter.

- Smaller urchins results in smaller recovery of roe and lower economic returns. Increasing harvest capacity (more active divers) will only exacerbate the fishery dynamics.
- A lower number of divers can maintain a viable/sustainable fishery. Additional divers over the current level will eventually deplete the resource and require aggressive regulations such as closures which will disrupt the orderly fulfillment of orders. If closures are needed, customers will find alternate sources of supplies, risking market stability.
- Counting numbers of divers or permits is not appropriate for this fishery. What is most important is the number of pounds landed by each diver as it's a better indicator of sustainability.

2) **New entrant diver lottery**:

   A. Current Practice – licenses are valid from April to March. Licenses are renewed in April. Licenses can be renewed up through March but as the year progresses the late penalties increase. In June the License and Revenue Branch accounts for un-renewed licenses and on July 1 a lottery is held on a 1:1 basis for each license which is not renewed under the 300 threshold. Late renewals during the year increase the licenses to over 300 following after the lottery.

   B. Proposal – to allow for an orderly entry of new divers by adding one new diver for each 10 which drop out.

3) **Close Lottery Loop Hole**

   A. Current Practice – the ability to renew a license after the lottery increases the capacity.

   B. Proposal – to cease the annual lottery until ten permits drop out. The number of permits dropped should be a rolling number as there could be less than ten each year. Account for non-renewals after the March 31 year-end. Therefore no new permits can be added during the fiscal year.

Change the current license system to a **strictly priority based** system, with the diver or qualified tender who has been in the lottery the longest given the first opportunity to receive a permit based on a 10:1 ratio….for every 10 divers who leave the fishery 1 new entrant is provided a permit. This will allow limited access to the fishery, while still moving towards a lower capacity goal.

The first lottery after the new regulations are approved **(2016)** would be to settle any ties between entrants by prioritizing those who have applied unsuccessfully in the past. Prioritize the applicants by the number of years attempted on a first come first served basis. After that, any new applications would be given a place based on when (day and time) their application is received by the Department's License and Revenue Branch.

In order to close the so called **Lottery Loop Hole**, an additional change to the lottery is required. Under current regulations the number of permits available in the lottery are based on the number that has been renewed by June 30 of each year. However, divers have until March 31 of the following year (the license year) to renew, resulting in a situation where by, **capacity is added** to the fishery.

April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March
Renewal	Penalty →										
				Lottery	Additional Divers Added						

It is therefore recommended that the available permits be based on a 16 month cycle (April 1 of the current calendar year to June 30th of the following year to renew a license, as well as purchase the license for the current year). Under this system no new permits would be given out the first year the new regulations are in effect, (e.g.. if the new regulations are approved for 2016, it would be 2017 before any new permits would be issued).

Reasoning:

- Guarantees those waiting for diver permits the longest will be given the first opportunity.
- 10:1 keeps open limited access to the fishery, until such time as permits may become fully transferable.
- Closes the lottery loop hole, while allowing divers the same time to renew a license.

Counter Argument: (Processor point of view)

- Processors argue that 10:1 does not allow enough new entrants to enter the fishery. They would like to see a lower threshold, such as 5:1.

Counter Argument Fails to Consider: (Fishermen point of view)

- It's recognized that it will take years for latent permits to retire. Increasing the new entrants from 10:1 to 5:1 will only delay capacity reduction making it harder to reach a sustainable fishery.
- Fishing capacity should be reviewed every few years to determine the optimum level based on harvest, economics and other social aspects of the fishery to maintain a sustainable fishery.

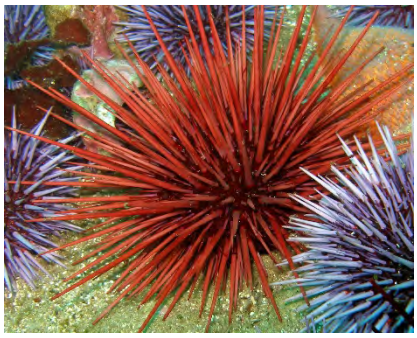
Increased Fishing Opportunity

SOUTHERN CALIFORNIA

Add One Day to the Open Days of the Week, June through October

A. **Current Practice – June through October the fishery is open Monday through Thursday. From November through May the fishery is open seven days.**

B. **Proposal – add Friday to the June through October fishing calendar.**



The current harvest schedule of Monday through Thursday, June through October results in delayed market replenishment at the start of each week. The total number "days back" will add 21 days to the summer season.

Urchins "held over" for shipments from the previous **Thursday** lose some of their freshness, and related quality issues, resulting in a marketing problem that is opening the door to competition from foreign suppliers. A reliable supply of a quality product, at a fair price is essential to maintaining and expanding California's domestic and international market share.

Reasoning:

- The domestic (U.S.) market for California Red Sea Urchins has **grown dramatically** during the last decade and is **continuing to expand**, helping to offset the **economic damage** the California Sea Urchin industry suffered with the loss of a substantial portion of its sales to the Japanese market.

- The U.S. market has its **highest product demand** during the **summer months into early fall**.

- By adding one day a week to the current harvesting schedule (June through October), the California Sea Urchin Industry will be better positioned to **maintain its historic advantage** over competition from foreign and other domestic suppliers by increased reliability of supply, and a fresher, higher quality product.

- The marketplace dynamics are rapidly changing. Many fisherman are selling live urchins or conducting direct sales to the end users at local ports. They need a Friday fishery to keep the urchins in top conditions for their Saturday markets.

- Poor weather conditions: Sea urchin harvesters will have **greater flexibility** in working around **dangerous** ocean conditions, and **military** training activities if they have greater flexibility in setting their diving schedule.

- Marine Protected Areas (MPA): One day back will not be a threat to the resource. The MPA have eliminated 40 percent of the available diving areas. These MPA provide added biomass protection to the fishery to buffer any additional harvest pressure. It's highly unlikely that the added pressure would bring the urchin population 30 percent below the original biomass levels.

Counter Argument:
Both fishermen and processors are in support of increasing fishing opportunity.

NORTHERN CALIFORNIA

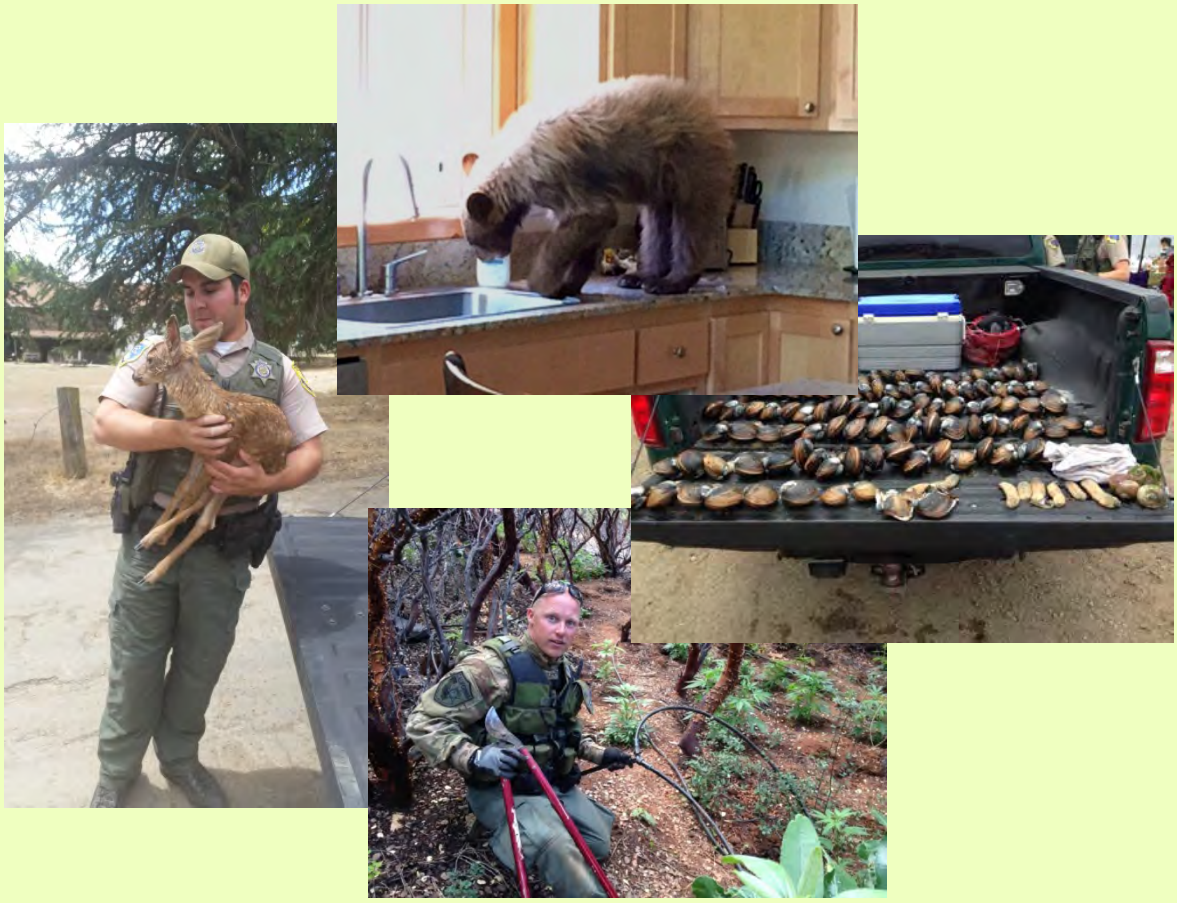
Due to harvest concerns, the CSUC is recommending no change to the Northern California season structure.

Counter Argument:
Both fishermen and processors are in support of not changing Northern California's season structure.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

LAW ENFORCEMENT DIVISION

MONTHLY REPORT
JUNE 2015



Southern Enforcement District

Lieutenant Specialist Struble's K9 partner Leo was requested to assist in an evidence search in tall grass at Quail Lake. Leo, under the direction of Lt. Struble, located a backpack which contained 29 undersize black bass and three throw nets. Once that evidence was collected, Leo was deployed a second time to search for another subject associated with the case. Leo located a male lying prone in the tall grass. A case was made by Warden Trainee Fleet.

Warden Cohen, **Warden Alisio, Warden Dostal, and Warden Peters** assisted with the security and fishery closure patrol caused by the Refugio Oil Spill. They assisted both on land and sea on the P/V Swordfish, Coho, and hammerhead. Several vessels, including the Commercial trawl vessel pictured below, were diverted from fishing in the closure.

Warden Cohen was patrolling the coast outside of the closure at Summerland Beach, when he observed a shore fisherman catch a lobster on hook and line. The fisherman then placed the lobster in a bag in the bushes. Cohen watched the fisherman for another few hours and contacted him as he was walking to his car. The fisherman denied having any lobster even though Cohen specifically asked about lobster twice. Cohen located the lobster in a plastic bag and cited him appropriately.

Warden Rosenberg observed a small grass fire along Highway 126, while patrolling in Santa Paula. He was able to use water he keeps from a container in the bed of his patrol truck to extinguish the blaze, before it grew out of control.

Warden Huber conducted a traffic stop then requested assistance from California Highway Patrol when he suspected the driver was driving under the influence. The CHP officer performed field sobriety tests and arrested the driver for DUI.

Warden Banks worked with the 5130 squad on a detail targeting the illegal use of nets to take fish, at Quail Lake. This detail resulted in multiple citations being issued and SIX throw nets seized.

Warden Pell participated in two successful details for unlawful method of take of fish at Quail Lake. Wardens Pell and Collins contacted a group using a throw net to catch undersize bass, which were then to be used as live bait for striped bass. Appropriate citations were issued.

Warden Collins worked several marijuana eradication/reclamation details this month. The most notable took place on CDFW's Hilmar Wildlife Area. The team removed 2332 plants along with 2120 pounds of trash, including three bottles of the toxic chemical Furadan. The growers were irrigating the garden by pumping water directly out of the already drought stricken San Joaquin River. Warden Collins also worked a night saturation patrol at Quail Lake with Warden Pell. The wardens contacted a group that was using a Hawaiian throw-net, fishing with too many rods and in possession of an over-limit of bass, nine of which were undersized. One of the subjects was also cited out on a $2000 warrant for failing to appear on a take and possession of lobster out of season case from 2012.

5140 P/V Swordfish

Warden Crocker was assigned to offshore security patrol of the Refugio Oil Spill. His duties included boarding officer, operating two patrol vessels and coordinating with commercial fishermen on removing fishing gear from the closed area. Warden Crocker made sure any fish in the commercial catch was immediately returned to the sea. He also assisted OSPR and our Department Scientists with fishing and diving operations to sample fish and invertebrates to be tested for contamination from the spill.

Warden Lengning spent his month on assigned patrol shifts working aboard the PV Swordfish for the Refugio Oil Spill Incident. He was responsible for contacting vessels in the closed area and educating them on the closure boundaries.

Warden Van Epps issued one citation to a fisherman who admitted to taking croaker without a fishing license to give to his boss, for bait. But his boss turns out to be a well-known commercial rock crab fisherman. The case is still under investigation to determine if there are additional commercial violations.

SED continued to assist in the Refugio Spill response, patrolling the closed fishing areas, providing security along the coast, and participating in the transport of the piece of pipeline to Ohio for testing.

SED officers **Adam Smith, Paul Ton, George Struble, David McNair, Trevor Pell, Ben Matias, Michael Louden,** and **Rodney Nemlowill** participated in multiagency operation, "Flyaway", organized by Homeland Security. The purpose of the task force was to target, identify, and examine high risk passengers who have traveled to South America or Mexico and may be smuggling illegal wildlife. The operation consisted of U.S. Customs and Border Patrol Agents, Federal Wildlife Agents, Homeland Security, and CDFW. Lts Struble, McNair and Warden Nemlowill utilized their K9 partners to search over 30,000 packages at the international mail facility in Torrance, while other wardens assisted in screening passengers. Numerous federal violations were found, however no state violations were identified.

While driving back from Refugio **Lt. Hoffman** conducted a traffic stop on a reckless driver that was racing through traffic pushing people out of their lanes and tailgating. The driver pushed two cars into the center divider before being pulled over and cited accordingly.

Warden Arkinstall conducted an undercover buy of sport caught yellowtail. With an extremely "hot bite" of yellowtail just off the coast, a sport angler decided to take advantage and try to sell some of his fish. With the assistance of an SOU officer, Arkinstall was able to secure a purchase of fresh fish via text messages with the angler at a designated spot in Long Beach. After a delay in meeting time (the angler was fishing and the bite was really good according to him), the angler brought Arkinstall fish he had just caught and filleted. The buy went as planned and **Warden Nguyen**, who was in uniform, cited the angler for Fish and Game code 7121, which states, it is illegal to sell fish under a sport fishing license. Arkinstall will be filing his case with the Long Beach city prosecutor.

The **5220 squad** responded to a report of a coyote bite in the city of Irvine. Irvine Animal Control, the USDA and CDFW were on scene following the incident and dispatched two coyotes in the area. DNA from the victims clothing is being tested at UCLA in hopes that we are able to identify the offending animal. The Natural Resource Volunteers canvassed the area educating the residents on what attracts coyotes to certain areas, and how to respond when a coyote is seen.

Warden Nelson responded to a report of a young bear harassing hikers and campers in the Angeles National Monument. The bear was reported to be approaching recreationist and begging for food like a dog. With the help of Lt. McNair and Struble, the bear was located near the West fork of the San Gabriel River. McNair treed the young bear and Nelson immobilized it with his department issued dart rifle. The bear became immobilized approximately 25 feet up in a crook of a small pine tree. Struble, who has ample search and rescue experience, jumped into action by immediately securing a ladder from a nearby forestry fire station. Struble set the ladder to the proper height and swiftly climbed up the ladder to the bear's location. Struble secured the bear in a harness and slowly lowered the bear to the awaiting hands of Nelson and McNair. The bear was examined and was determined to be in good health weighing approximately 70 pounds. The bear was ear tagged and released deeper into the Angeles National Monument in an area that is closed to the public.

Warden Matias' case involving a subject who was illegally using a goshawk trap to kill hawks concluded in Federal Court this month. The subject plead guilty for violating the Migratory Bird Treaty Act and was sentenced to serve two years on probation, fined $510, and ordered to complete 200 hours of community service. The subject's trap was destroyed and a juvenile Cooper's hawk was saved during the seizure.

Warden Molsberry has been working alongside Newport Beach Animal Control after the home owner and a privately hired contractor, removed and demolished active snowy egret and black crowned night heron nests. The crime was so egregious, that concerned members of the public were catching nestlings as they were forced from their nest by a large excavator. Most of the nestlings were buried and crushed alive in the wood piling created by the operator of the large excavator. A total of six snowy egrets and one black crowned night heron were recovered alive. The nestlings that survived were taken to the Wetlands & Wildlife Care Center, a licensed bird rehabilitation facility in Huntington Beach. Charges against the suspects will consist of state and federal law violations under the migratory bird treaty as well as animal cruelty.

Lt. McNair/ K-9 Reno attended open house for Tustin PD and Chino Hills State Parks re-grand opening, educating approximately 1,800 public members on CDFW, Keep Me Wild, K-9 Program, and quagga mussels with numerous demonstrations. K-9 Reno inspected over twenty watercrafts for quagga mussels this month. The K-9 team was called out twice from local agencies for assistance to locate/ clear for handguns. Reno searched and cleared a garage and backyard for Buena Park PD on a domestic violence case. The second callout was for Fullerton PD to search for a handgun used by a suspect in attempted murder on two police officers. The area covered over two miles of railroad tracks, industrial yards, parking lots, and numerous vehicles. The team learned that the area was not secured and a resident unknowingly drove off to work with the suspected firearm in their rear bumper. Fortunately, neither police officer was injured.

5310 Squad / Coastal San Diego

Warden Vicknair participated with members of the **5310 and 5320 squads** in a Commercial Passenger Fishing Vessel (CPFV) detail focused on the enforcement of bag limits and fillet violations. Two licensed CPFVs operating out of H & M Landing and Point Loma Sport Fishing Landing, in San Diego Bay, were contacted. Compliance was high with no significant violations discovered during the inspections. Vicknair also attended a San Elijo Ecological Reserve management meeting, acting as a Law Enforcement Division liaison. Vandalism inside the reserve has increased dramatically, causing the Department to try and create a strategic plan to address the issues.

Warden Potter continued to work with supervision and the Department's legal staff in an effort to assist CDFW with the possible suspension/revocation of a Commercial Passenger Fishing Vessel permit holder. He also continued working with a local court regarding the prosecution of a CPFV operator who was running unlicensed charters and failing to provide the Department with fishing activity records.

Warden Gladstone and Warden Vuich seized a pet raccoon from a young couple in Lakeside, upon determining the couple did not possess the required permit from the Department. The raccoon was allowed to roam free in their house, like a pet, with multiple domestic cats.

Wardens Gladstone and Vuich also investigated a man who had shown a picture of a mountain lion he killed to residents around town. After an interview with the man, a lion pelt and skull were located and seized along with a carcass that had been picked over by scavengers. A formal complaint was filed with the District Attorney's office.

Warden McCorkle spent time in the New York Mountains helping the group, "Water for Wildlife" and local volunteers build and repair big game drinkers. During this continuous drought it has been essential for volunteers to continue to create water sources for wildlife. McCorkle also assisted other Wardens deliver and secure evidence from the broken oil pipe, to a lab in Ohio as part of the ongoing Refugio Oil Spill investigation.

Warden Shanley's tenacity was finally rewarded when he was able to locate a group suspected of multiple violations including littering, burning illegal camp fires on state property, and possible illegal fishing activity. The family apologized for their actions, and explained to Shanley how they were on welfare and worked minimum wage jobs. Shanley realized this was the same group responsible for illegally selling sport caught flathead catfish on the internet. Upon issuing a citation, Shanley noted the group drove away in a brand new truck. Shanley was first on scene of a victim of domestic violence. The woman was forced to exit a vehicle on a remote I-10 off ramp and had apparent injuries from physical abuse. Blythe PD arrived and took over the case.

Warden VerBrugge assisted Mohave County Sheriff and San Bernardino County Sheriff in the search and location of a person that went missing and presumed to have drowned on Lake Havasu. The subject was found deceased and the body was recovered by Mohave County Sheriff deputies. VerBrugge checked several wildlife water sources to ensure there is water available as the temperatures soared into the 110 degree range.

Warden Nemlowill and K-9 Buddy assisted Border Patrol with the apprehension of four subjects who swam across the All American Canal with approximately 200 pounds of Marijuana. Nemlowill and K-9 Buddy also attended Operation Flyway with US Fish and Wildlife, Customs and Border protection and other agencies inspecting mail coming in from Mexico and South America. In two days, K-9 Buddy inspected 10,000 packages. US Fish and Wildlife was able to find two boxes of Queen Conch Shells being imported into CA. Nemlowill also patrolled the desert checking drinkers for activity. Nemlowill found signs of several drinkers being used heavily by deer, quail, doves and other animals.

Warden Green was issuing a citation to a subject for fishing without a license when he discovered the subject had a local warrant. Warden Green arrested the subject for the warrant and discovered two bindles of methamphetamine in the subjects pocket with a total gross weight of 8.24 grams. The subject was booked into the Imperial County Jail for the warrant and possession of methamphetamine.

<u>5340 Squad / Western Riverside and Western San Bernardino Counties</u>

Warden Bellis discovered a remote location where it appears deer poachers go to process illegally taken animals. Warden Bellis believes the animals are killed elsewhere in the forest and brought to this location to be processed. There is a large metal spike nailed into a tree approximately 9 feet off the ground. Below the spike, the ground and debris is permanently bloodstained and sticky. A total of eight different deer have been identified from this site (per DNA testing). The area seems to have been chosen both for its remoteness and for the level of difficulty in placing trail cams that would go undetected. Work will continue on this case.

Warden Holyoak and Warden Wardlow were summoned by two locals to the shoreline of Lake Elsinore. The locals thought they found some bones they believed were human. A request was

made of Riverside County Sheriff's Department who responded with assistance from the Coroner's office. The bones were determined to most likely not be human, at the scene.

Warden Garcia was patrolling Silverwood Lake when he found a subject in the act of burglarizing a vehicle. The subject fled into a remote area near the lake. With the assistance of sheriff deputies and Silverwood rangers, the subject was located and arrested.

Lieutenant Chang investigated two, large, black trash bags full of marijuana stems, leaves, and potting soil located on the French Valley Wildlife Area. The bags were found by employees of the Wildlife Area, hidden in the brush. The MET team was notified of the find and advised it was not an active grow, but a dump of marijuana waste.

Central Enforcement District

Drought Information: Warden Dishion continued to patrol the local waters around Bishop. Drought continues to cause problems in areas for fishing. The local lakes continue to drop. Water in South Lake in the Bishop Creek Drainage is so low it has not been planted for three years. The water in the lake is so far away from the boat ramp, the Department has not planted and the fishing continues to get worse. The owners at the South Lake Marina have even given up and not opened this year.

Lt. Barnhart and Warden Golden investigated a complaint of a possible 1602 violation in the Kings River near Laton. Warden Golden and Warden Paz had responded to the same area in late December in regards to a property owner complaining about illegal water diversions due to the drought. He complained that upstream property owners were illegally diverting water, which was causing him and other downstream owners to get no water. He said the drought is having a devastating effect on the riparian habitat and water flows are needed to sustain the habitat. In this latest complaint, the original complainant has now installed a concrete irrigation standpipe and underground PVC pipe within the river channel. It appears that he installed this to capture water whenever water begins flowing in the Kings River again. A LSAA was not obtained prior to the installation of the concrete standpipe and PVC pipe. Additionally, the irrigation district is claiming the property owner illegal encroached on their property to complete this work. Although the disturbance does not appear to be substantial, a LSAA Notification should have been made. This illustrates the battles the drought is causing between property owners, irrigation districts, and the riparian habitat.

Warden Smittle and **Warden Estrada** planned a joint patrol in Mono County in search of illegal night time fisherman. When Smittle arrived at Estrada's HQ, things took an interesting turn as a CHP officer pulled into the driveway and requested help with a vehicle rollover in the back country. The rollover took place in a remote canyon outside of Mammoth Lakes. Fortunately, two ATV's were sitting idle at Estrada's HQ. Warden Smittle and Estrada suited up and took off knowing they would probably be first on scene. After about a half an hour on the trail, the wardens came across a grisly scene, with an unrecognizable vehicle at

the bottom of a 300' cliff. The driver of the vehicle had been ejected approximately 1/3 of the way down. An off-duty deputy observed the rollover and called for help, but unfortunately did not have the necessary equipment to rescue the driver. Estrada and Smittle stayed on scene for a few hours until Mono County SAR team arrived and assisted in the body recovery. This is just another example of how a Game Warden's back country knowledge and equipment can be utilized in an emergency situation. After they returned the ATVs the wardens continued the night patrol, not locating any law breaking fishermen.

Warden Newell started a 1602 investigation on Los Gatos Creek near Interstate 5 in western Fresno County. Newell discovered a front-end loader actively gathering sand in the dry creek bed. The operator of the equipment stated that he worked for a transportation company out of the Fresno area and said the sand was being hauled to a local almond farm to be used for farming operations. Newell spoke with the transportation company owner and determined that the sand removal has occurred for several years. Additionally, Newell was able to determine that the property in question is owned by CalTrans, who was unaware that sand was being removed from the creek. The investigation is ongoing.

Wardens Shaw and Halverson assisted the National Park Service on operation Javelin. The operation focused on illicit marijuana gardens within the park boundaries. Halverson and Shaw spent long days running road interdiction. The target vehicles never showed up. However, Halverson and Shaw saw a Lincoln Town Car with expired Washington plates go by their location. They followed the vehicle which had three HMA and two HFA passengers. The vehicle voluntarily pulled over to the side. As soon as the Wardens stepped out they were practically knocked over by the smell of marijuana. The passenger had approximately an ounce of marijuana in his bag, and the driver had a no bail warrant. While searching the vehicle Warden Shaw found numerous condoms, some opened and some still in the package strewn all over the vehicle, as well as many adult toys. The Wardens determined that these were not their target gardeners, but were content that they had successfully ruined what seemed to be plans for an interesting evening. The driver was transported for the warrant and the passenger was issued a citation.

The 2nd day of interdiction was oddly enough strangely similar to the first. The Wardens spotted another vehicle that passed their location and then moments later went back the other direction. Suspicious of this behavior the Wardens initiated a vehicle stop, once again as soon as they stepped out of their vehicle they were overwhelmed by the smell of marijuana, and once again to their surprise they found the same HFA passengers from the previous day with two new HMA. The driver was in possession of approximately an ounce of weed. Warden Shaw asked the HFA if he was going to find anything “new or different” this time when he searched. They said no with big smiles, and Shaw found exactly what he had found the previous day. The driver was cited accordingly. After clearing the contact Warden Shaw wondered out loud, “I’m not sure why I searched that 2nd vehicle, I should have given you the chance to partake in the fun.” Halverson was perfectly content to watch the suspects while Shaw searched in and around all the unmentionables.

Lt. Stevenson worked two separate fires this month with the Madera County Sheriff’s office participating in evacuations. The first fire started on Sky Ranch Rd just above the Oakhurst area and burned up into the forest. Lt. Stevenson worked with deputies evacuating a summer camp and all the area campgrounds; Soquel, Grey’s Mtn, and Texas Flat. No structures were burned as a result of the fire.

The second fire started in the North Fork area and burned up close to area homes that were off of Corrine Lake Rd.

One garage burned down and the entire area of Rd 225 near the Mammoth Pool Mobile Home Park had to be evacuated because of a spot fire that started about a mile and a half away from the main blaze. On both fires large jets assisted in the fire-fighting efforts. This DC-10 spent 4 hours dropping retardant at the Corrine Lake fire.

During the last weekend of June Lt. Stevenson was patrolling the Bass Lake area when MSO dispatch put out a boating accident on the lake. Boat patrol deputies brought two victims into the Millers Landing area with critical injuries. One of the victims was being administered CPR by an off duty physician and an off duty firefighter. When Lt. Stevenson arrived he assisted briefly at the scene, and then drove over to the dam and opened up the forest service gate so the life flight helicopter could land and emergency vehicles could have access to the chopper. Stevenson then transported the two flight RN's to one of the victims that was being brought over to the public boat launch area. Unfortunately the male juvenile that was being administered CPR died, however the female juvenile was flown to Fresno with critical head injuries. It is unknown at the time of this report if the female survived. Through investigation it was determined that a jet skier riding a three seater-sitdown didn't see the two juveniles who were in the water. The jet skier ran over both the male and female. The parents actually witnessed the accident and watched their son die. The MSO is pursuing manslaughter charges against the jet ski operator.

Nuisance Wildlife Information: In mid-June **Warden Milazzo** began receiving reports of numerous home invasions by two small yearling bears in the Yosemite West development within Yosemite National Park. Park biologists reported that the sow had recently disappeared leaving the two yearlings alone and that they had intensely hazed them away from the residences. Yosemite West is a private inholding within the Park and consists of several dozen homes, primarily vacation rentals. Yosemite National Park does not have jurisdiction within the Yosemite West area. In one week the bears were responsible for nearly 20 entries into occupied and unoccupied homes, with multiple entries on several days. No major property damage was ever reported and the bears had not showed any overt aggressive behavior towards any person. The bear responsible for most of the incidents was described as 70-80 pounds with a dark head and legs, with the rest of it being a very distinguishable cream or blond color. The other bear was described as being slightly larger, a darker brown color, but with some light coloration on its back. The blond bear always acted alone in entering the homes. No reports of the other bear being inside a residence had been made, he usually stayed nearby as his sibling committed the breaking and entering. They would both walk away with the goods however. The bear usually entered through partially opened widows tearing down the screen and climbing through. Sometimes and as the situation required, he would stand on a deck railing and reach across to grab the screen. Once he had a grip he would horizontally scale the wall to get through the widow. He would also walk through opened doors as people were in the house. On some occasions he was seen opening unlocked doors by pushing down on the handle. During most intrusions the bear would take food that was left out on the table or kitchen counter, such as cookies, loaves of bread, condiments, and other snack foods. During at least two break-ins he opened the refrigerator and took chocolate, mustard, sweets, and other items. Typically only the window screen would be destroyed, however during some entries furniture would be moved around but not damaged. Interestingly, despite the numerous vehicles in the area with ice chests and other attractants inside, the bear's only attempted to enter two vehicles, both unsuccessfully.
T
he bears were a source of entertainment for most of the tourists. Many had photographs and videos of the bears inside and outside the rentals and would say they had some great Yosemite vacation stories to bring home. Some however were not so amused by these little bears and became frightened and concerned and left earlier than scheduled. The rental owners were also not so amused, as this was a continuing and worsening problem for them and was beginning to cost them

money in repairs and lost income. The bears were determined to be too habituated to human presence for any hazing program to be effective and relocation was not an alternative. The bear's boldness increased with each home intrusion and they showed no fear or concern of people. Their activity was increasing and the permanent residents and rental managers desired the bears be removed and a depredation permit was issued to a homeowner.

Warden Milazzo began trapping for the bears on June 15th. The first night was unsuccessful. The second night an individual intentionally closed the trap. He was caught doing so on a hidden trail cam. His identity is unknown but he is being sought for questioning. On June 17th the trap was relocated to a more secure and isolated location. The following morning the permit holder notified Warden Milazzo he had shot and killed the primary instigating bear as it was on his back porch. Later that day Warden Milazzo and Lt. Bruce arrived to recover the carcass. As they were photographing and surveying the scene they were surprised and confronted by a large bear about 30 feet away. The bear was approximately 250 pounds and was wearing a radio collar and two ear tags. It was first assumed the bear was the sow of the dead cub. The bear stood its ground and challenged Milazzo and Bruce by huffing several times. A few seconds later the bear began moving towards them at which point they shot and killed the bear.

The bear was a male and had been trapped and radio collared by Yosemite National Park biologists the previous year in the El Portal area just outside the Park as a research bear. The bear had moved into the Yosemite West area within the past 24 hours. The ear tags and GPS tracking collar were returned to Park biologists who were not so pleased one of their bears was killed.

Based on this bear being a male and breeding season, and in speaking with DFW biologists, the working theory was the sow had entered estrous early which caused her to push away the yearlings before they were mature enough to live on their own. The sow being in heat was now drawing male bears into the area. Without the sow the yearlings discovered the easiest way to find food was in houses. The sow and the cubs were seen last year and had not caused any problems. So it appeared the yearlings had taught themselves to enter homes in search of food.

With the primary offending bear removed, it was anticipated the other yearling would not be so inclined to pick up where the other had left off since he had not actively participated in the break-ins but also was an accessory after-the-fact. As such the trap was locked closed. However, the following day the opposite happened. Warden Milazzo received multiple reports of the surviving yearling committing home invasions and doing exactly what his sibling was doing a few days before. The bears motive and techniques were exactly as his sibling.

Trapping resumed on June 22nd for the second yearling. Another large bear, presumably a male, had now moved into the area. He was seen by a few people but all reports indicated he was not a problem bear. Trapping was unsuccessful and the break-ins continued through the week and were escalating. In the early morning of June 26th the bear entered two homes through partially opened windows while the residents slept. The residents, including young children, were awakened by the bear's activity and were able to scare the bear away. While investigating the morning break-ins Warden Milazzo found the bear behind one of the residence's it had entered earlier that morning. Warden Milazzo followed it until it was in a safe shooting location and shot the bear with one round from his .308 patrol rifle. The bear hunched up and fell backward rolling down a steep hillside. After searching two hours for the carcass Milazzo was unable to locate it and it is presumed dead. No further sightings or break-ins have been reported. Before being euthanized the bear was responsible for over a dozen home invasions.

Warden Rodriguez responded to a report of a man who was injured in an attack by a wild pig. The injured victim was in a Merced area hospital and had several large lacerations and puncture wounds as well as a broken leg from the attack. During the investigation, Rodriguez learned that the victim and a second man were working irrigation in a corn field along the Merced River when the wild big attacked unprovoked. The victim was only able to escape the attack by the very aggressive pig, with the assistance of another worker. During interviews with the farm owner, Rodriguez learned that the farm had been plagued by a very aggressive boar who would reportedly attack equipment working around the same field. A depredation permit was issued and the land owner made arrangements to have pigs removed from the property to protect others working on the farm.

Case Disposition: A multiple count deer poaching case involving a state correctional officer who had poached several deer near Yosemite National Park was settled this week in Mariposa County Superior Court. The case, filed by **Warden Frank Milazzo** last fall began with a CalTip from a disgruntled hunting partner who became tired of the boasting from his friend who had poached deer in the Yosemite area for years. His conscience finally convinced him to report his friends poaching exploits. The correctional officer pleaded no contest to three of seven charges. The court sentenced him to a fine of $2,730, forfeiture of all equipment seized, and issued a court order prohibiting him from all hunting for three years. His attorney stated in court that the officer had lost his job over this matter and asked for a reduced fine. The judge refused. Apparently the Department of Corrections offered the officer the option of being fired or to retire. He chose the latter.

On a very windy afternoon in northern San Joaquin County, **Warden Mello** observed a vehicle parked near a bridge where angling activity is common. As Mello approached the shoreline underneath the bridge, he observed a subject who was holding a large pole with an attached large fixed-blade knife. The subject, who was unaware of Mello's presence, was observed as he retrieved a juvenile swallow from the water. The underside of the bridge above the subject contained hundreds of swallow nests.

When the subject turned around and saw Mello, he appeared surprised and immediately dropped the pole-knife. Mello approached and asked the subject what he was doing, and the subject stated he was looking for recyclables. When asked about the juvenile swallow, the subject stated he had seen it swimming in the water and retrieved it. Mello asked the subject if he had any other birds or fish, and the subject replied he didn't. When Mello accompanied the subject to his nearby vehicle, he noticed a brown paper bag containing two partial deer legs that were wedged in a cargo rack on top of the vehicle. Mello did not immediately make his observations known to the subject, and again asked the subject if he had any birds or fish or game in his vehicle. The subject once again replied that he didn't. The subject voluntarily opened his vehicle and Mello immediately observed a live juvenile red-tailed hawk in a bucket on the front passenger floorboard. Mello asked the subject why he hadn't been truthful about the hawk despite being asked twice about birds or fish in his vehicle, and the subject could not provide an answer. When Mello brought the deer legs (which appeared to have been recently taken) to the subject's attention, the subject stated the vehicle did not belong to him (despite stating the vehicle was his several moments earlier, before the deer legs were revealed) and he did not know how the legs got on top of the vehicle. A subsequent records check of the subject revealed several outstanding warrants out of San Joaquin County. The subject was arrested and transported to San Joaquin County Jail. The live juvenile hawk was successfully transported and released to a local wildlife rehabilitation facility. Mello originally cited the subject for possession of the juvenile hawk, but after additional follow up and investigation, a report was submitted to the San Joaquin District

Attorney's Office with recommended charges of FGC 2002 for possession of the deer legs, FGC 2012 for failure to exhibit upon demand, FGC 3503 for destruction of swallow nests, and FGC 3503.5 for possession of the juvenile hawk.

Warden Lomeli investigated a leg hold trap trapping call in the city of Tracy this month. This information was brought to Warden Lomeli's attention after someone discovered their house cat was captured in a leg hold trap in their neighbor's yard. Warden Lomeli investigated the call knowing that fur bearing mammals, non-game mammals and domestic animals were present in the area. Warden Lomeli located the subject who was using the leg hold traps and interviewed him. The subject freely admitted to using the leg hold traps to catch cats. Warden Lomeli will be filing a formal complaint for a violation of Fish and Game Code section 3001.1 (c), unlawful use of leg hold traps.

Warden Lomeli received a call from OSPR this month requesting assistance on an illegal petroleum discharge coming from a large ship that was docked on the San Joaquin River. This ship is currently being investigated by the County (Special Task Force) and OSPR. Warden Lomeli coordinated boat transportation with the Sheriff's Department and assisted with boarding the vessel with OSPR and the Sheriff's Department. A petroleum discharge was in fact occurring and the discharge was stopped. This investigation is still on going.

Warden Moss was on patrol looking for anglers at Yosemite Lakes Campground when he overheard a call for a heatstroke victim at the campground. Moss arrived at the camp site and found an 85 year old female in grave condition. Moss confirmed fire and medical were in route and cared for the female until medical personal arrived. It was discovered the female had stage two Cancer, Alzheimer's, dementia, kidney failure and a DNR order in place. The victim passed away at the scene. The medical personal were called away for an ATV accident. Moss stayed and kept the scene secure until the coroner could arrive.

During the month **Warden Cahill** came across four different DUI related solo vehicle crashes resulting in four arrests by CHP for DUI. While conducting multiple boat patrols of Modesto Reservoir several stranded boaters were found needing assistance. One jet ski exploded on the water resulting in the driver of the jet ski needing rescue due to his injuries. Another jet ski sank for unknown reasons in the middle of Modesto Reservoir. Warden Cahill found the occupants of the jet ski swimming in the middle of the reservoir after their jet ski capsized. Due to the high heat and drought conditions people are flocking to the nearby reservoirs and rivers and activity has picked up.

Northern Enforcement District

Unlawful suction dredging continues to be a problem in Siskiyou County. This issue has been greatly exacerbated by the drought. In June in a normal year, rivers and tributaries would be receding from spring snowmelt, and flows would be low enough to begin dredging in early July. Due to the lack of snowpack this year, the Klamath and tributaries were at flows more typical of August during the month of June. On June 3, the 2120 squad removed two dredges from the Klamath River just above Interstate 5 and cited the owner. On June 4, the squad served a search warrant on a residence near Happy Camp to recover suction dredge evidence from a violation that was observed in April. The dredge and related equipment were seized. On June 22, the squad removed another dredge from Horse Creek, and a formal complaint will be filed against the owner. In addition, because of an injunction hearing on June 23, many miners staged pumps and other equipment on local waterways so they could begin dredging immediately if they prevailed. This generated numerous reports of dredges that had to be investigated. Despite the miner's loss in court, the squad continues to get reports of dredges, and has several additional investigations in progress.

Warden Beck investigated an unlawful streambed alteration at the Farmer's Ditch diversion on the Scott River near Callahan. A flood occurred on February 7, and the Farmer's Ditch Company rebuilt a section of washed out ditch soon thereafter under the emergency provision in FGC 1610. They were advised to submit a notification for other maintenance work that would need to be done once water levels receded, which they did. The ditch company President had been working with HabCon staff, and the agreement was being expedited. At least one member of the ditch company grew impatient, and used a backhoe to complete some work on his own. The work that he did included creating a second point of diversion, in violation of the Scott River Adjudication. Three members of the ditch company subsequently submitted emergency notifications for the work. The work clearly does not meet the definition of an emergency written in the code. A case was forwarded to the Siskiyou County District Attorney's office. In the meantime, some members of the ditch company have contacted their elected representatives in an attempt to persuade the Department to drop the case.

The 2200 Captain's squad was kept busy in the month of June with numerous wildlife incidents taking place. This included a non-fatal Otter attack of a female swimmer at Lake Madrone, a non-fatal Black bear attack of a female victim in Magalia, and the dispatching of a habituated nuisance and public safety Black bear by Wildlife Services in Oroville, all taking place in Butte County.

The unprovoked attack by the Otter resulted in the victim receiving numerous scratches and deep bites to her lower body and legs, resulting in an emergency trip to the hospital to have her wounds treated, and necessitating the Rabies vaccination series to be administered. Warden Weckman responded and located an overly aggressive and hissing Otter and dispatched it for public safety reasons.

In the Magalia incident, the female victim heard a rattling of her trash can outside of her house that sounded to be more than the normal raccoon making noise. Deciding to investigate, she opened her garage door and released her dog, which was immediately attacked by the marauding black bear. When the victim exited the garage, the bear charged over her making its escape, but not before scratching the woman and biting her on the shoulder.
The black bear that was dispatched by Wildlife Services in Oroville had been captured near Bishop and then released in Slinkard Canyon in the summer of 2014, both in Mono County. It had been causing problems in Bishop first and then proceeded to cause more problems in the town of Walker, near where it had been relocated. One can only guess to how many other issues this bear caused on its lengthy journey over the Sierras on its way to the Central Valley to Oroville, before being dispatched for public safety reasons.

The 2200 Captains squad was also involved in a two-week long detail in Plumas County at Gold Lakes, providing security, public information, and support, while fisheries attempted to remove non-native Brook trout from the lake in an effort to make the lake hospitable to restore and rehabilitate the endangered Yellow-legged frog population in the area. Several threats were made against the Department and its officers prior to the detail beginning by upset residents of the county, but the detail ended up going smoothly, with approximately 180 brook trout removed from the lake without incident.

The 2200 Captain's squad also had its share of drought related issues during the month, with an incident in Shasta County being indicative of the environmental damage to the wildlife and resources that can occur while water is at a premium. Streambed damage due to an illegal

panning and/or high banking operation where juvenile salmonids were found resulted in two suspects being cited for pollution issues, significant alteration to the bed, bank, or channel without a Streambed Alteration Agreement, and trespass. Rehabilitation of the creek is in progress with the hopes of sustaining the salmonid population.

North Coast Enforcement District

Warden Stephenson patrolled Lake County and handled several wildlife calls. Due to low water levels in surrounding streams several animals are edging closer to town. Stephenson responded to a call regarding an abandoned fawn deer that was found near the shoreline of Clearlake. Stephenson took the deer to a rehab center.

Warden Smith assisted Lake County Sheriff's Department with a couple of marijuana grows which included a 13,000 plant grow where they were pulling water from the state's water resources. Smith finished his investigation of a suspect who had been altering his abalone report card. A follow up was done in San Francisco at his residence where other violations were found including untagged abalone and an over possession limit. Smith investigated and served a search warrant with other wardens from Lake and Mendocino counties. The suspect has been trapping and hunting wildlife without a license for years on a large plot of land behind his house. Smith filed cases on two marijuana cultivation operations where there were multiple alterations and water diversions.

Warden Willson and K-9 Jasmine trained with three other new detection teams from Alberta Canada during a two week detection academy in Upper Lake. Jasmine did very well. While conducting drought patrol, Warden Willson contacted subjects trespassing on private property along a creek. One of the subjects, a juvenile, was booked into juvenile hall for possession of prescription medication taken from the step-father. The juvenile also had an upcoming court date for an assault charge. Warden Willson will be submitting a formal complaint to the DA's office, on two subjects who were found in possession of almost 600 crappie and sunfish.

Warden Little investigated a mountain lion depredation incident involving goats. He observed several Bass Tournament weigh-ins on Clear Lake. Warden Little met with the tournament directors and discussed improvements to be made for future tournaments.

Lt. Freeman investigated a water diversion from a water meter. The case was referred to the Lake County Sherriff's Office for theft of water from a municipal water district. The water district obtains water from Indian Valley Reservoir which is waters of the State. As the drought increases in severity people are taking drastic measure to steal water. The people were illegally taking water from a vacant lot and absentee land owner. The water was being diverted to a marijuana grow site

Warden Donald White assisted several other agencies with evacuations in the Covelo valley after a tractor started a fire. Several other fires started due to high winds and embers. Several residences and structures were destroyed but luckily nobody was injured. Warden White also worked several night patrols in the Mendocino National Forest. A USFS trail camera caught subjects unlawfully running dogs in a remote part of the forest. The investigation is ongoing. White also investigated several different habitat loss and water diversion violations (see photos). Formal complaints will be submitted through the DA's Office.

Warden Morton caught three anglers attempting to take 23 undersized Dungeness crab from San Francisco Bay. The anglers had hidden about 21 of them in a small hand bag and attempted to say they were not aware of the regulations.

Warden Thiem worked numerous low tide events throughout the month of June with fellow squad mates from around the Bay Area. A four day window of negative tides leading up to a June 20th saturation patrol resulted in approximately 50 citations and numerous warnings. **Wardens Garrett**, **Rehse,** and members of the Marlin crew were instrumental in the success of the overall detail. Cases of high grading were made using undercover officers. On the second day of the detail, Thiem identified a fisherman who had eluded them the previous day. He observed the subject high grading clams. Upon approach, the subject threw an over limit into a hole. The over limit was retrieved and the subject cited. Thiem also spent a few mornings in court testifying this month. The burden of proof was upheld and five smaller cases dispo'd for approximately $4,000. Thiem is noting several repeat clamming offenders.

Warden Swaney issued thirty seven citations for violations including taking over limits of gaper clams, possessing moon snails taken north of San Francisco, failure to possess fishing licenses while fishing, and littering in public. A group of six anglers were cited for possessing over limits of gaper clams and failure to show upon demand after the group was found to be in possession of one hundred and twenty seven gaper clams. Each of the anglers had hidden numerous clams with the shells removed on their person and throughout the vessel. The vessel and all clamming equipment were seized as evidence. Swaney attended several traffic court proceedings in Marin County for clamming related violations with dispositions ranging from five hundred dollar fines to over two thousand dollars. In total, the court dispositions throughout the month were over six thousand dollars.

Warden Reed went to the Russian River Sportsman's Club for an informal inspection before work begins to remove lead from areas near the Russian River. No Fish and Wildlife involvement is expected, as all work will be outside of the riparian area. Department ES staff is aware of the upcoming work and situation. Reed spent a lot of time patrolling sensitive salmon and steelhead habitat which is heavily affected by the drought and found no violations, which is a very positive sign.

Warden Wolvek issued seven citations for failure to tag and report abalone taken, one citation for take of 406 turban snails, and additional citations for taking over limits of clam, undersized abalone, take of canary rockfish, taking undersized Dungeness and rock crab, illegal methods of take, and passing on the double solid lines. Stinson also is working on a pollution case for a commercial

laundry company who spilled 200 plus gallons of wash water into a local creek, killing a couple dozen small fish.

Warden Mead worked low tides on Tomales Bay, issuing citations for gaper clam over limits. Mead and Stone cited six individuals with 198 clams. Warden Mead cited one man in Petaluma for possession of methamphetamine and probation violations. Warden Mead testified in court on several dates this month for contested clam violations. Several subjects paid fines ranging from $600.00 to $3700.00.

Warden Esquivel investigated a call of a flashboard dam in a creek in the Sonoma Valley. The dam was located and was actively blocking passage of fish in the creek. The reporting party video-taped the suspect removing rocks in the creek and building up walls with the rocks to create a deeper pool. The suspect denied moving any rocks not knowing he was on video doing otherwise. Esquivel is waiting for an environmental assessment report from the fisheries biologist that assisted. During abalone patrol along the Sonoma Coast, Esquivel saw an abalone fisherman with his juvenile son take five abalone. The fishermen then gave one to his son and put the fifth abalone back in the water when he realized his son only needed one abalone to fill his bag limit. Esquivel cited the fishermen for take of over-limit of abalone.

Warden Mike Harris received a court disposition for two individuals who were found guilty of taking crab out of season with a fine of $1,500 each. Warden Harris and Warden Glau teamed up with the crew of the PV Steelhead for a night patrol of San Mateo beaches. They issued (16) citations under-sized Dungeness crab, fishing without a license, over limits of Dungeness crab, and failure to show fish or game upon demand.

Warden Garrett spoke at a Striped Bass Association Meeting in the Delta. He has been investigating an unauthorized fill of a wetland in the Contra Costa Delta. He has attended several multi-Agency meetings. The investigation is still pending further inquiry with the Army Corp, and RWQCB. Warden Garrett investigated a caltip report of a possible Burrowing Owl nest destruction. He concluded that all the burrows where at the edge of a sidewalk and not destroyed by construction work.

Warden Rogers started FTO with trainee Laird. Laird has issued numerous citations including take of a canary rockfish, over limits of crab and undersize leopard shark. They also seized numerous native reptiles in an ongoing investigation. The shipment from SFO was bound for Malaysia.

Warden Jacobsen and Warden Kozicki attended court on the last two subjects out of the original four on a dove baiting case from last year. Previously two had been found guilty and fined $ 500.00 dollars each, unfortunately the Judge dismissed the charges on the final two defendants. He had taken the case under submission. Jacobsen and Lt. Christensen plan to have a meeting with the Judge to find out the reason. This case was an unfortunate loss since the subjects have been cited/dismissed before.

Patrol Vessel Marlin/3240 Squad: In June 2015 members of the Patrol Vessel Marlin boarded a commercial trawl vessel at the commercial receiving docks in San Francisco. The crew of the vessel showed the wardens a large plastic tote with approximately 1000 pounds of halibut in it. They also showed small containers with starry flounder, sand sole and rock sole in them. The fishermen claimed that there were no other fish than what were in the totes. Wardens inspected the deck of the large boat and started separating plastic bins that were stacked together. About five bins down, they

found six halibut that were clearly undersize. The boat captain replied “you got me, I’ll go get my paperwork” and he went to the front of the boat. At the front of the boat, he tried to dump some fish from an ice chest into the water. Wardens stopped him before he could get more than one plastic bag’s contents overboard. They found fish in the ice chest including brown rockfish, a species he was permitted to have. They spoke with the captain again and asked him if there were any more fish on board and he said there were not. They inspected the kitchen and found filets that came from undersized halibut. They went below the decks and found 10 more filets. They also found two whole small halibut that had the head and tail removed. Each filet was wrapped in a plastic grocery bag and hidden in a different spot throughout the boat. While offloading the fish, wardens found an additional undersize halibut. The entire load of fish was seized and sold to a fish receiver. The proceeds of the seizure are going to the Fish and Game preservation fund. Further investigation of VMS and GPS on the vessel showed they were fishing inside the three mile state water boundary where trawl vessels are not allowed. Charges are pending on the Captain and crew. The case has also been referred to Federal fisheries for investigation on federal violations.

Warden Meyer assisted the Monterey County Sheriff’s Office, CA Highway Patrol, and U.S. Department of Homeland Security with a drug smuggling panga boat that came ashore near Mill Creek, a remote location of the Big Sur Coast. Meyer assisted the other agencies with interviews and attempting to locate outstanding suspects who fled the boat once agencies arrived on scene. Meyer assisted a deputy locate two suspects the day after the panga boat landed near Fort Hunter Liggett. The men, who were very dehydrated and hungry, admitted to transporting the contraband from Ensenada, Mexico over 400 miles to its landing place. Nine men were arrested and an estimated $18 million worth of marijuana was seized.

Warden Schad investigated several cases including a subject who was reported to be in possession of a number of rattlesnakes. A “knock and talk” resulted in the seizure of 13 Western Rattlesnakes (a gross overlimit), as well as the seizure of two ferrets. Charges will be filed with the District Attorney. Additionally Warden Schad cited a subject for possession of an American Crow during a bicycle traffic stop

The **Patrol Boat Steelhead** finally returned to service early this month after six months in the shop. The crew conducted multiple offshore patrols resulting in three commercial crab cases where the vessels were crabbing within MPAs in San Mateo and Santa Cruz counties. They also made two commercial rockfish cases in addition to over 75 sport cases for both salmon and rockfish violations.

PV Bluefin/Warden Hanson facilitated the removal of a string of Blackcod traps that had been fishing (unchecked) for over two months. He and Warden Thomas assisted a commercial fishing boat remove the gear from the water, finding live and dead fish inside. A formal complaint will be filed against the owner of the traps. Hanson and Warden Hare travelled to Santa Barbara to assist the patrol boat squads with the Refugio oil spill fishery closure patrols. Hanson operated the Patrol Boat Bluefin on four single day patrols with Wardens Hare, Meyer and Engineer Mendes.

Captain Kelly joined fellow NCD Captains Wayne Kidwell and Steve Riske in Fort Bragg to bid retiring A/C Bob Farrell "Mahalo" at his BBQ hosted by Retired Warden Eric Bloom. His new career as a Conservation Officer on the big island of Hawaii begins this week!

Warden Kinnard and Boele, were patrolling the Usal area and received a report from one of the campers that there were approximately 20 steelhead stranded at the mouth of Usal creek. The duo investigated the report to find that the creek was no longer flowing into the ocean but barricaded by the beach and at the beach there was a shallow pool of water. With little to no flow from Usal creek into the pool, the Steelhead were stranded and not going to make it upstream (due to the lack of water in the stream) and they were not going to make it to the ocean (due to the mouth of the creek being barricaded by the beach. The wardens along with some help from a few campers were able to net 16 Steelhead and transfer them into the ocean. All steelhead successfully swam away in the ocean.

Warden Powers arrested two individuals at the Botanical Gardens for commercial take of abalone (33 total). Powers found evidence that one of the individuals had taken over 150 abalone during the month of June. The individual also admitted selling several thousand abalone over the past several years to different buyers. Powers and Lt. Hendricks had cited the individual in the past for taking over-limits of abalone. The case is ongoing and Powers is working with SOU to further investigate the illegal sales of abalone. Powers investigated a large water diversion in Comptche where a landowner was pumping water from a small stream with a well pump. The water was being diverted to several large water tanks (8- 2,500 gallon tanks) that provided water to his residence (only source of water) and over sixty large marijuana plants. Powers contacted the landowner who claimed he had been working with a biologist to get a 1600 permit. Dept. biologist Wes Stokes later told me that the landowner had been working on getting a permit several years prior but refused several conditions on the permit so it was never issued. Powers later met up with Wes Stokes at the residence and flow rates from the stream where taken. It was found that the stream was severally low and way under the threshold for water being pumped out of it. Powers and Stokes noticed several juvenile steelhead in the creek. The case will be further investigated.

Office of Spill Prevention & Response

On May 19 2015, OSPR officers responded to a suspected oil sheen report along the Santa Barbara coastline and discovered something much more significant. California's largest marine oil spill in almost 50 years, the Refugio Beach Incident has dominated the news and will be the primary focus of OSPR's responders for next few months. More than 1,400 federal, state and local emergency response personnel, and numerous environmental cleanup contractors have been deployed to the spill and have participated in assessing, booming and continuing to remove oil from affected areas. This incident has included a large scale "Fishery Closure", enforced by Wildlife Officers from the Southern Enforcement District, as well as a concerted volunteer coordination operation and cultural resource protection effort. Responders have rescued numerous oiled wildlife, while multiple animal care facilities have been activated and are being used to treat the affected wildlife. Multiple on-water response vessels, oil skimmers, site workers, and Shoreline Cleanup Assessment Techniques teams have helped in recovering thousands of gallons of oily-water mixture as crews work 24 hours a day to remove the last vestiges of oil from the Southern California coastline.

Warden Scott Murtha, and OSPR support staff, responded to an oil spill release of an "unknown amount of steam with a light mist of hydrocarbon into the air," which was impacting a riparian area near the Salinas River. The original report stated that there was no impact to the waterway; however, further investigation found oil within the wetland area. Clean up operations continued for approximately a week with the capture and treatment of several oiled animals.

Wardens Katherine Tran and Sau Garcia received and responded to a report by Los Angeles County Lifeguards of a "tarlike material on the beach from an unknown source". Both officers responded to Manhattan Beach, and to an area just south of Marina Del Rey, and found the beaches covered with tar-balls. The U.S. Coast Guard also responded and opened the Federal Oil Spill Liability Trust Fund for clean-up. A "Fishery Closure" was initiated and the protective booming of environmentally sensitive sites was ordered. This

incident had heavy media coverage with OSPR and USCG Public Information Officers handling numerous requests for information and interviews. Wardens continue to monitor the Southern California beaches, as OSPR Wardens have received over 200 reports of tar-balls from Los Angeles and Orange Counties.

Warden Mike Conely had a busy month responding to oil spills throughout the Central Valley. Although there were several significant events, the most prominent incident occurred near McKittrick Kern County. Warden Conely assisted Chevron personnel with the response to a crude oil into a dry streambed. It was estimated that approximately four barrels of produced water and three barrels of crude oil exited the oil field and reached state waters. Warden Conely coordinated his response with both OSPR and Regional staff. Chevron hired a clean-up contractor and removed the oil from the dry streambed.

Wardens Ryan Rodriguez, Scott Murtha, and Mitch Goode responded to a large sunken vessel in Contra Costa County. Upon arrival, the wardens discovered an approximately 90 foot vessel, listing heavily and in the process of sinking. This vessel had not been operated in numerous years and contained upwards of 1,200 gallons of old diesel fuel. The wardens noted a heavy sheen of fuel on the surface of the water and initiated an investigation and clean-up operation. Along with the USCG and Contra Costa County Sheriff's Office personnel, the wardens assisted with the response efforts and ensured that the spilled fuel was cleaned up and the threat to the environment was removed.

Headquarters

Professional Standards Unit

PSU has started 57 background investigations for the 2015 Warden Cadet hiring cycle (2016-Academy). As of July 1st, only 37 remain in the process. Investigators have had candidates withdraw from the process as well as withheld candidates that did not meet POST peace officer standards. We are hopeful to be sending the remaining 37 to Chief's Interviews in September with the ultimate goal of hiring approximately 25 candidates for the January 2016 Academy. The week of interviews, PAT and PSY testing is tentatively scheduled for September 16-18th. Backgrounds will be completed by mid- August with reporting review heavy the rest of July and August. RA's Hileman, Darr, Allen, Woods, Schwall (Orme), Ponting, Joe, Sforza, and Lt. Andreen have been doing a fine job of processing our background investigations.

Additional investigations have kept PSU investigators extremely busy during the past three months. PSU investigators are gaining some invaluable experience conducting investigations, attending SPB hearings, crossing new ground daily, and obtaining necessary training. On that note, I am very pleased to welcome Lt. Bob Pera to PSU as the newest edition. Bob has jumped in with both feet and already is a valuable asset to his new assignment. Additionally, with the experience of Lt. Melvin and the determination and drive of Lt. Gonzalez, PSU has a very strong group of Lieutenants conducting these necessary and sensitive investigations.

PSU has the responsibility to respond to inquiries from other law enforcement agencies as well as providing access to DFW files for other agency review. We are currently updating Warden Cadet interview questions. We are working with HRB to possibly streamline the withhold process for candidates that do not meet POST standards. We are also involved in recommended Policy changes.

All background investigators are DVSA (Digital Voice Stress Analysis) trained examiners. All background investigators have had background investigations training within the past two years or have attended update training this past year. All full time PSU staff is scheduled to attend IA PRO training in September. IA PRO is a database program for tracking internal investigations. This program is dubbed the "Leading Professional Standards Software, Worldwide". Lt. Pera is scheduled for IA training, Interview/Interrogation training, POBR and Pitchess Motion training later this year.

Telecommunications/CalTip/Prohibited Species

The 14/15 Patrol ***Truck Radio/Code 3 installations*** project is winding down. The K9 trucks builds are almost complete; PSC is waiting to receive rear back up cameras for installation. The patrol truck prototypes are now reaching the field for testing of the new equipment. PSC is starting production of the U/C trucks. This year's vehicle replacements have been ordered along with the radio/Code 3 equipment. The patrol tucks will be four door Dodge 1500/2500, the SUVs will be Chevy Tahoes. The first of the vehicles are expected to arrive at the beginning of August. The Department and CHP have entered into a contract that will have CHP doing the radio/Code 3 installs on our fleet of Dodge 1500 trucks. We are hoping that this will be a faster and cheaper production.

Testing continues on the ***Justice Mobile*** program. IPads will be issued to the test group in mid-July. This is to help with the test that is being conducted on an IPhone right now. One of the Justice Mobile testers is currently testing both the tablet and prototype truck in the field.

The firmware issue with the ***Harris Portable*** that caused the radios to malfunction has been resolved and tested. We are getting ready to resume the firmware update and channel plan programing on both the Harris and Kenwood radios. More information on the radio update will be sent through the District Radio coordinators.

Lt. Milotz provided training to Rancho Cordova NRVP's working on ***CalTIP***. This included the use of Tip411 and an initial training for one new volunteer. For July, the NRVP's will be taking CalTIP calls on 14 days, the most for any month so far. Two new volunteers will be trained in July giving us coverage for approximately 75% of the August (Monday – Friday 0900-1600).

While Lt. Milotz was on vacation 6/19-6/29, Tip411 received 63 tips and updates. Tip411 has generated 188 CalTIPs since the middle of February.

Total calls for 2014 – 4,242

Total calls for 2015 (through June 2015) – 2117 an increase of 14% over the same period in 2014 and a 25% increase in calls from 2013.

2015, most significant reported violation increases over 2014 (through May):

Unlawful take of non-game birds (not related to tree/nest destruction) 316% increase
Unlawful possession of a restricted species 70% increase
Marine Protected Area violations 37% increase
Violations relating to the take deer 29% increase
Violations relating to the take of waterfowl 28% increase
Overall there has been an 8.5% increase in violations relating to marine fisheries and a 20% increase in violations related to hunting.

2015, reported violations related to drought (Fiscal year)

% Change FY 7/1-5/31	**FY 13-14**	**FY 14-15**	**% Change**
Marijuana Cultivation	32	64	100% increase
Streambed Alterations	228	228	0%
Tree/nest destruction	74	88	18.90% increase
Inland Pollution	66	90	36.30% increase
Marine Pollution	2	14	600% increase
Dredging	30	25	16.60% decrease
Unlawful take of Water	N/A	59	N/A
Littering in State Waters	N/A	23	N/A

For 2015 CalTIP's received 316 drought related calls or 19% of all CalTIPs received for2015

FY2014-2015 Dispositions – over 1600 contacts, 183 citations, 24 physical arrests and 85 warnings.

Hunter Education Program

Lt. Gregory coordinated two Advanced Hunter Education clinics - Deer Hunting at Canada De Los Osos Ecological Reserve and Land Navigation in the El Dorado National Forest. He also coordinated LED's efforts at the annual Legislative Outdoor Sporting Caucus. Hunter Education Program staff and several additional Wildlife Officers acted as range safety officers and shooting coaches. This event has been a great opportunity for department staff to interface directly with capital staff to represent the

Department of Fish and Wildlife and expose them to shooting sports and the concept of hunting in a safe controlled environment.

Legislation/Regulations/Public Outreach

In one month LED responded to a river otter attack, bear attack, and four coyote attacks creating an intensive amount of media coverage. However, a long term, but equally intensive media relation topic of interest these days is the water theft for marijuana cultivation in the fourth year of drought. The Department's efforts are being recognized nationally and even internationally through media reports. Several bills that directly affect how wildlife officers do their jobs are currently moving through the legislative process. The two most important ones are medical marijuana bills. The legislature for years has failed to make any real progress on regulating the medical marijuana industry. This year, two bills are moving through the process to set up the regulatory framework to reign in the thousands of growers who have produced marijuana without much governmental oversight. LED is attempting to engage in the process to be sure our law enforcement and reclamation efforts are funded adequately. Media coverage has helped the Department convince the Legislature of the severity of the situation. Other bills have recently in progress, one of which to reduce many MPA violations to wobblets, a potential bill to require intensive enforcement of elephant ivory and rhino horn trade laws, and a bill to dramatically curtail use of drones for future LE and non-LE operations. No guarantees on if these bills will prevail.

In the Regulatory world, the FGC is faced with an August decision to either dramatically reduce the area of the state where bobcat trapping is authorized or eliminate it altogether. An emergency regulation was recently approved to authorize the Department to close certain waterways to fishing if certain conditions apply such as high water temp, low dissolved oxygen, or severely reduced flow. In process but still in the works are efforts to address regulation of take of nests, scientific collection permits, and improvements to restricted species regulations.

Marijuana Enforcement Team (MET)

MET assisted the USFS with two marijuana eradication and reclamation operations in the Los Padres National Forest. Both cultivation sites were affecting watersheds in the Arroyo Seco drainage area supporting critical steelhead habitat. In total 7,876 marijuana plants were eradicated, 6000 feet of poly pipe, 850 pounds of fertilizer and 3700 pounds of processed marijuana was removed from the area. Three dams were also removed restoring the waterway back to its original flow. **It is estimated that these particular cultivation sites were using over 47,000 gallons of water per day.**

MET also assisted the Santa Clara County Sheriff's Office with a marijuana eradication operation on private land. With the landowners diverting water from a local creek for their marijuana grow. MET filed charges with the DA's office for unlawful streambed diversion in addition to Health and Safety violations. MET wildlife officers also responded and was one of the first on scene for a **Panga boat landing on the Big Sur coastline. Six suspects were apprehended** during the operation, along with approximately **2,000 pounds of processed marijuana being seized.**

After several intense scout operations, MET wildlife officers put together a takedown operation for the West Hilmar Wildlife Area. **MET, DBEEP, and CED wildlife officers** eradicated and reclamated a marijuana grow on the West Hilmar Wildlife Area. The West Hilmar Wildlife Area is owned by DFW and is a type C wildlife area in Merced County that is on the San Joaquin River. **19 DFW officers participated in the operation and helped remove 2332 marijuana plants and 2120 pounds of trash**. The growers diverted water from the San Joaquin River using a series of gasoline powered pumps to water the marijuana plants. Several 55 gallon drums full of water, served as storage containers for the illegally diverted water from the San Joaquin River. The current severe drought conditions have the San Joaquin River at historic low flow levels, and it is now only a few inches deep in many areas of the waterway. Compounding the problem was the fact that this grow operation was diverting hundreds of gallons of water per day. Many of the marijuana plants showed signs of the use of the illegal pesticide Furdan. Three bottles of pink Furdan were removed from the grow site and were properly destroyed. Several dead rodents and birds were located in the grow sites near the toxic chemicals. The West Hilmar Wildlife Area is once again free from illegal marijuana cultivation and ready to be utilized safely by the public.

MET and WET wildlife Officers participated in multiple arrest and eradication missions in Shasta County, resulting in over 12,000 plants being seized or destroyed. During those operations, **18 suspects were apprehended, two of those by K9 deployment**. Several water diversions and water pollution crimes on these sites were rectified.

Special Operations and District wildlife officers helped trained 780 Law Enforcement Officers in certification for Short Haul for the 2015 season. MET has taken on the responsibility of LZ Management and Short Haul Master during this season for all CAMP teams.

Watershed Enforcement Team (WET)

WET participated in ten details last month. They included but were not limited to:
6/9/15 - Bridgeville/Alder Point Road Detail; 6,000 plants; no arrests, no weapons

6/10/15 - Benbow Assist State Park; 350 plants, no arrests, no weapons

6/16/15 - Bridgeville/Alder Point Road Detail; 4,000 Plants; no arrests, unknown if any weapons, FGC 1602, 5650 violations pending

6/19/15 - Browns Creek inspections- 10 parcels inspected, 6 Notice of Violations (NOV's) pending and 1 possible one Administrative Civil Liability Action (ACLA).

6/22-25/15- Assist Mendocino, Trinity and Humboldt Counties with the Island Mountain detail; 47 grow sites eradicated; 87,000 plants documented and destroyed; 6 arrests; 17 parcels inspected and

97 violations documented. WET staff is still crunching through the documentation to determine what parcels will potentially be subject to NOV's and ACLA's.

6/30/15- Weitchepec/Yurok Tribal Land; 500 Plants; No arrests, 1 AR-15; FGC 1602, 5650, 5652 violations pending

The most noteworthy activity last month was the Brown's Creek inspections and the Island Mountain Detail. CDFW WET staff joined with State Water Board staff to conduct ten consent inspections on Browns Creek in Trinity County. Of the ten parcels inspected, six were found in violation of FGC 1602. During the Island Mountain detail, CDFW WET team members assisted Mendocino, Trinity and Humboldt County Sheriff's Departments with eradicating **47 different grow sites during the four day operation. 87,000 marijuana plants were eradicated and five were arrested for felony cultivation**.

Ironically, almost all of the self-proclaimed "legal and environmentally conscious" growers had vacated the landscape prior to law enforcements' arrival. In total, **CDFW WET conducted 17 parcel inspections and documented 97 Fish and Game Code violations (55- FGC 1602, 3-FGC 5650 and 5- FGC 5652).** To date, these were some the worst violations that WET has documented: numerous unpermitted instream ponds, poorly constructed and failing dams and stream crossings, large scale diversions and rodenticide in the grow of a well-known grower who claims to be "sustainable and environmentally conscious.

CDFW WET members testified at a State Water Board hearing in regards to and Shasta County case that was initiated by CDFW WET Law Enforcement. A Texas/Florida resident had purchased eighty acres near Ono, and with the help of one of the largest Shasta County contractors, graded two acres of a mountain top off and constructed three illegal stream crossings. **After hearing the hearing the case, the State Board issued an Administrative Civil Liability Action on both parties totaling $297,000.**

June 25, 2015, while returning from the Island Mt. detail, **Wardens Galwey and Cardoza** made two separate vehicle stops. The first vehicle was a large UHaul box van. The driver was stopped for unsafe driving. The nervousness of the driver and passenger lead the Wardens to believe marijuana was being transported. **Upon searching the van and the occupants 55 growing marijuana plants were destroyed and $2,500 dollars was seized and turned over to Humboldt County SO for asset forfeiture.**

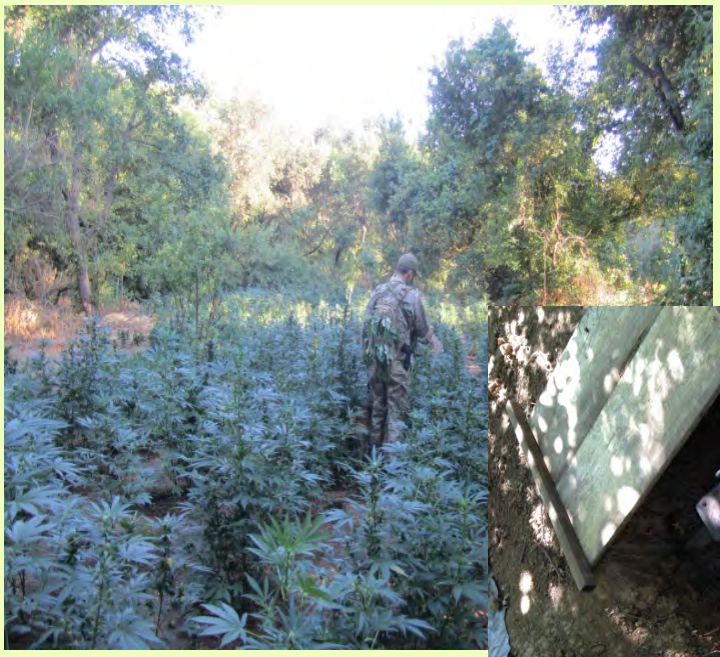
While on the stop Warden Galwey noticed a truck drive past full of boxes which he believed to be marijuana clones. Approximately 30 miles up the road Warden Galwey saw the same vehicle make an unsafe lane change. Warden Galwey initiated a vehicle stop; Warden Cardoza contacted the driver and found him to be in possession of 135 marijuana clones. The suspects from both cases were issued citations for: H&S 11359, H&S 11360 and PC 182.

Delta Bay Enhanced Enforcement Project (DBEEP)

DBEEP Officers patrolled the Feather River for salmon activity and observed a subject that appeared to be angling for salmon out of season. While making observations on the subject it appeared that he had snagged a salmon. While reeling it in his fishing rod broke near the handle. The subject was franticly trying to reel the fish in to no avail. After about a 30 minute fight they decided to contact the angler and get the fish in and release it before it expired. The subject was using a three ounce gibbs minnow with a treble hook and the fish was snagged in the back. After hand lining the fish they were able to revive and release it to live another day. The subject was cited and released.

DBEEP along with several other law enforcement agencies participated in the Sacramento Delta Blitz. Numerous patrol boats from several law enforcement agencies patrolled the Sacramento River from Garcia Bend to Sand Cove Park. The operational goal of Delta Blitz is aimed at decreasing the number of recreational boating accidents and fatalities in the Delta. Law Enforcement agencies will patrol the Delta to raise public awareness about boating laws and promote boating safety. The Delta Region is known as a haven for thousands of California boaters, and is considered one of the State's hot spots for water recreation. Coast Guard boating statistics show that despite the decrease in the overall number of boating-related deaths, boating accidents remain on the rise. The most common causes of these boating accidents include intoxication, reckless operation and excessive speed. DBEEP Officers contacted well over 200 boaters and issued a total of 11 citations for fish and game code and boating and waterways violations. One vessel operator was taken into custody for Boating under the influence. He tested a .12 in the field and was arrested and turned over to Sacramento County SO.

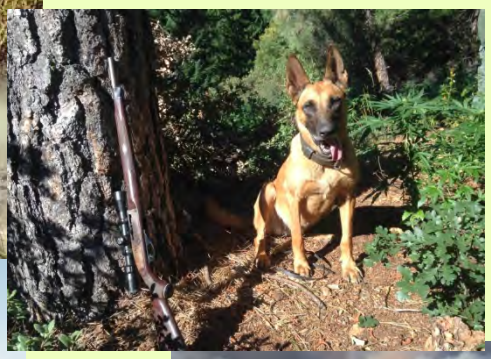
DBEEP / MET Alternate officer spent the month investigating illegal marijuana grows on the Delta in Stanislaus, San Joaquin, and Sacramento counties. Four suspects were arrested in three of the grow sites. Two of which were armed with a Ruger 10/22 and pistols during apprehension. **One suspect was also responsible for poaching several deer and a turkey**. The four grow sites were on Federal and State owned properties within the Sacramento/San Joaquin Delta. All the sites yielded thousands of plants which were eradicated and each site was completely reclamated. **All of the grow sites were found diverting water from drought effected waterways. Wildlife Officers** continue to coordinate with the Stanislaus County Drug Enforcement Agency, San Joaquin County Metro, FBI, and MAVMIT regarding Operation Green Valley. Several suspects have been identified as members of an unknown drug trafficking organization who are responsible for numerous large illegal grow sites in five different counties. The case is ongoing.



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

LAW ENFORCEMENT DIVISION

MONTHLY REPORT
July 2015



Central Enforcement District

Lt. Barnhart handled and assisted with numerous depredation/nuisance wildlife type calls, including two deer that had become trapped in the Friant Kern Canal and several bear calls. He recovered a stolen vehicle that had been stolen the previous night and he also responded to a gang shooting in Poplar and assisted TCSO with the crime scene and later searching for a suspect vehicle. **Lt. Barnhart** was the first law enforcement unit on scene of a dead body with suspicious circumstances. Lt. Barnhart secured the scene until TCSO deputies and supervisors arrived on scene.

Lt. Barnhart, Lt. Dailey and Lt. Halverson attended Public Law 280 (PL-280) training at the Tule River Indian Reservation. The POST course was one of the better and more practical courses attended by the lieutenants. A lot was learned about law enforcement jurisdiction on California Indian reservations.

Lt. Barnhart began a hunter trespass investigation. Three houndsman were caught trespassing by a rancher. No trespassing signs had been torn down, chains on the gates had been cut, and damage was done to one gate. The houndsman had dogs on the ground when contacted by the rancher. One houndsman stated he knows there's lots of bear and pig in this area. None of the houndsman has a hunting license. The investigation is continuing.

Warden Newell continued investigating a fairly large scale sand removal operation in Los Gatos Creek. A bit more follow up is required, and the case should be wrapped up and filed in the next couple of weeks. Warden Newell and Lt. Barnhart investigated the poaching of a doe in D8 near Johnsondale. A hunter scouting for the upcoming season discovered the gut pile and head by chance and called it in. The investigation is ongoing and hopefully with some luck it will go somewhere. Warden Newell began investigation the death of three red fox on the north side of Visalia. It appears as if the deaths could be the result of a secondary exposure to rodenticides. Newell is working with the Tulare County Ag Commission to see if a nearby property owner possibly applied the rodenticide improperly.

Warden Golden assisted Kings County Environmental Health and Water Board with interviews and reports regarding an ongoing investigation of a large scale dumping case in Kings County. Warden Golden has a couple small details to

finish, but should have his report wrapped up in the next week or two. Warden Golden filed a formal complaint on a subject that was fishing without a license a week after receiving a citation from Warden Golden the week prior for the same violation.

Wardens Scott Robledo, Kyle & Levi Shaw (no relation), along with Lieutenant Halverson assisted USFS in a Marijuana eradication operation in the Sequoia National Forrest. The operation was a resounding success. There were only two suspects in the grow and they were both taken into custody, one was apprehended (bit) by the local USFS LEO K9 unit. In all nearly 2800 marijuana plants were destroyed. As seen in these pictures, the illegal growing operation had dammed up a tributary of brush creek to supply water to the marijuana plants. This allowed no water to continue downstream into brush creek. The Wardens plan on returning in the early fall to complete the reclamation process. This location was an historical grow operation as there was evidence of activity for the past two to maybe three years.

Warden Kyle Shaw assisted the Kern County Sheriff Department in the search of an armed and dangerous suspect who is suspected in a kidnapping, a homicide, and of getting in a shootout with Kern County Swat that left one SWAT member wounded, and breaking into several cabins, trailers, and homes. The suspect is believed to be in a remote area that is populated by the occasional house or cabin. Shaw assisted by manning a roadblock into the area, making sure that anyone coming or going was an actual resident of the area and not the suspect. The suspect has been on the run for 8 days and has still managed to avoid being captured.

<u>Eastern Sierra Bear Issues:</u>

The bears in the Eastern Sierra have been extremely active. Due to the summer mountain rains, there was a significant growth in grasses and other vegetation. However the bears are searching for fattening foods as the winter approaches.

Fattening food supply is lacking in the rural areas bringing the bears into campgrounds and the Eastern Sierra communities. The squad has responded to approximately 20 different bear calls in July. In one campground there are at least six different bears visiting the campers. The campers have been very good locking up all food in bear proof boxes. However the bears have learned to wait until the campers remove their food to cook. That is when the bears will charge in to steal their food. Bears have been extremely active in many campgrounds and in communities where bears are rarely found; to include Rovana, Paradise, Swall Meadows, Crowley, Mammoth Lakes, Walker, and even Hot Creek Hatchery.

Warden Dishion responded to two different bear calls at two different residences in Mono County. Both calls had bears pushing in screens on the RP houses. One bear damaged a car door by trying to open the door to get to some small amounts of food that was left in the car.

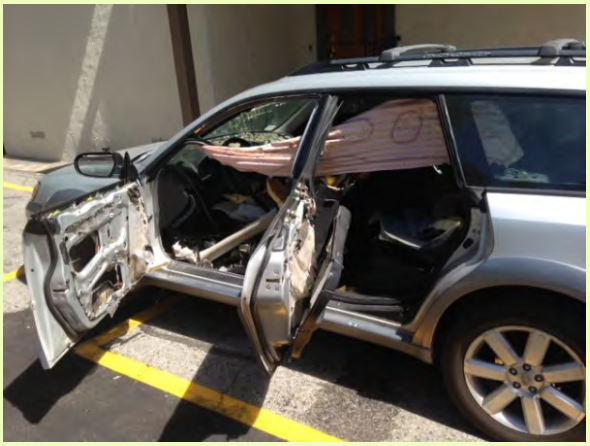
Warden Doerring responded to a nuisance bear that is visiting Hot Creek Hatchery. The bear had accessed the hatcheries fish food, broke a visitor feeder station, getting into the trash, and destroyed one of the residence bird coupes.

Lt. Dailey conducted a kayak patrol down the Upper Owens River on the 4th of July in an area that has gear and take restrictions. Anglers were surprised to be contacted from a kayak. Lt. Dailey inspected 23 anglers of which 12 were found in violation. The area is wide open, allowing anglers to see a marked patrol vehicle a couple of miles away. Anglers have ample time to hide their violations if wardens try to access the area in a marked patrol vehicle. Kayak patrol in this area is extremely effective. Violations included illegal gear, unlawful use of baits, and no fishing license.

As Lt. Dailey departed the area, he observed a vehicle driving approximately 60 mph on Benton Crossing Road directly towards Lt. Dailey's patrol vehicle. Lt. Dailey observed all three passengers were sitting on the window seal hanging outside of the vehicle. Only their legs were still inside of the vehicle. Lt. Dailey turned around and initiated a vehicle stop. The vehicle was occupied by 25-30 year olds. When asked what they were doing the occupants replied "Just being stupid." Lt. Dailey took appropriate action.

Warden Dishion received a complaint of illegal hunting activities in the Bishop area. Warden Dishion was provided an Instagram photo that showed two teenage girls posing with five dead rabbits at night on a dirt road. Warden Dishion was able to identify and interview one of the girls in the photo. When provided the Instagram photo, the female suspect identified the remaining two suspects. The three suspects admitted to using the headlights of the truck to

illuminate the rabbits. All three took turns driving and shooting the rabbits. Further investigations showed none of the hunters had hunting licenses and none of the girls had never even taken a hunter education class. The rabbits where left in the road to go to waste. The case was filled with the Inyo County D.A.'s office for review and filing of charges.



Warden Estrada also spent a lot of time dealing with nuisance bears in Rock Creek Canyon, June Lake and Mammoth Lakes. The bears in Rock Creek are terrorizing the East Fork Campground. There are approximately seven bears utilizing the campground for all their shopping needs. The bears are waiting just outside of camp and waiting on the campers to remove the food from the bear boxes before they enter the campsites. Additionally there was a bear in Mammoth that became trapped inside of a Subaru for an hour or so. The car was totaled from all the damage to the interior. It is believed the bear was attracted to the vehicle because the owner had left a Lipton tea bag inside. The bear entered the vehicle through the one door that was left unlocked. Once inside the door closed sending the bear into panic mode. After an hour the bear was able to escape when the driver's window broke out. Lt. Dailey would like to use this photo as a billboard to educate Eastern Sierra Visitors.

Warden Chad Elliott reports that drought is also causing more bear encounters in his area, but no major incidents have occurred as of yet. Elliott participated in the annual youth fishing event in Mammoth Lakes. The event was well-attended but plagued at the end by the poor judgment of some adults who decided the only way to catch the left-over fish was by snagging them. Elliott issued a citation to one of these poor role models, as many families and future anglers looked on. Elliott was able to conduct a couple of day-ride horse patrols in the back country.

Warden Rodriguez received several complaints of a suction dredger working in the Merced River near Merced Falls. Rodriguez conducted an investigation into the activity and checked the area regularly attempting to find the activity in progress. Eventually a suction dredge was discovered stored on the bank of the

river. The following day Rodriguez was able to observe and video record the suction dredger in action in the river. Contact was made with the dredger who said he was told that suction dredging was now legal. Rodriguez advised otherwise. The dredge was seized as evidence and the case was filed with the circuit prosecutor.

In early July, **Warden Schultz**, along with other members of the department Honor Guard, participated in retired Warden Bill Slawson's memorial. The Honor Guard helped escort Warden Slawson's remains from Walnut Grove to the National Cemetery in Dixon where he was buried with full military honors. Warden Schultz then attended the reception back in Walnut Grove with members of Warden Slawson's family and many members of the community, including many retired wardens. In late July, Warden Schultz along with Warden Kraft and Warden White attended the memorial for slain Hayward Sgt. Scott Lunger. The memorial was held at the Oracle Arena in Oakland with thousands in attendance including Governor Jerry Brown and a member of the U.S. House of Representatives. The memorial was a fitting send off for a warrior like Sgt. Lunger.

Warden Moss was kept busy in July with numerous wildlife incident calls. Calls mainly included mountain lions such as: a lion in the middle of Camp Mather, a lion that killed a goat and lamb, a lion that killed a puppy, a lion that killed a turkey and house cat, a lion that was in a backyard in Sonora that was possibly injured, and finally a lion hit by a CHP cruiser. Other calls included a bear on a front porch, and amazingly, only one call for an abandoned fawn in Pine Mountain Lake. Moss occupied the rest of his patrol time checking for anglers in the lakes and streams of his district. While patrolling for anglers, Moss assisted U.S.F.S. with a large fight at Rainbow Pool on the Tuolumne River. One female was arrested by U.S.F.S. for assault on a peace officer. About two hours later, Moss returned to Rainbow Pool to assist U.S.F.S. again. This time the call was for a missing three year old child. Witness reports were inconsistent and it was unknown if the child had slipped into the river or walked away. Moss began checking the shoreline for the child with a U.S.F.S. LEO and citizens began checking in the water. The child was located about ten minutes later under water and on the other side of the river from Moss. The child was unresponsive.

Moss, the U.S.F.S. LEO and a U.S.F.S. employee immediately crossed the river and began CPR. They were later joined by a Tuolumne County Deputy and additional U.S.F.S. personnel. CPR was continued for forty-five minutes until medical personnel arrived on scene. The child was then transported by ambulance to a local hospital in unknown condition.

Warden Marino attempted to stop a vehicle for following too closely and unsafe lane changes on Highway 108. The vehicle cut off another car so close that the victim swerved off the road and onto the shoulder to avoid a dangerous situation. The driver failed to yield and Marino pursued him for 8.7 miles, with full emergency lights and sirens, at relatively safe speeds of 75mph. Marino saw stopped traffic ahead and the suspect slowed and stopped in the traffic. Marino exited his vehicle, drew his handgun, and ordered the man to put his hands up. The man replied, "You got problems. I didn't do anything wrong." Marino explained why he was trying to stop him. Marino ordered him to pull over to the shoulder and to remove his keys from the ignition. The man refused and said, "Why don't you get some fish!!" The man sped around the stopped traffic and continued on highway 108. Marino returned to his vehicle and attempted to catch up. Marino was traveling 90mph and was not gaining on the suspect. Marino aborted the pursuit due to unsafe speeds and losing sight of the vehicle. Marino's radio was faster than the man could drive and CHP stopped and detained the driver 30 minutes later. Marino arrested the man and booked him into jail for evading.

Office of Spill Prevention & Response

Warden Michael Kirchner and Lt. Michael Horn were assigned to the "Refugio Incident" oil spill response in Santa Barbara County. Warden Kirchner and Lt. Horn continue duties as Tribal Liaison Officers coordinating with the Santa Ynez Band of Chumash Indians, the Coastal Band of the Chumash Nation, the Barbareno/Ventureno Band of Mission Indians, and the Barbareno Band of Chumash Indians. Tribal members were assigned to the incident as Cultural Specialists and were responsible for helping to preserve cultural resources during the clean-up effort.

Warden Mike Conely had another busy month responding to numerous oil spills in Kern County. Warden Conely also responded to a sunken boat at Bass Lake in Madera County. Warden Conely assisted the Madera County Sheriff's Department and was the Department's representative/SOSC during the recovery of the boat and related spill investigation.

Warden Katherine Tran responded to a traffic collision involving a truck with two 30-40 gallon saddle tanks that released approximately 40-50 gallons of diesel into the stormdrain. The storm drain led to an ecological reserve that belongs to the community in Huntington Beach. Ocean Blue was contracted to do the clean-up with the assistance of the City of Huntington Beach.

Warden Katherine Tran also responded to a spill of a 55 gallon drum of waste oil in the city of Ontario. The waste oil was released into the storm drain, which leads to the Santa Ana River. Warden Tran arrived on scene to assess the situation and requested immediate clean-up.

Warden Jerry Borjeson had a fairly active month with violators. He completed two pollution reports on "mystery sheens" where the source of the releases was initially unknown. Searching for responsible parties on mystery sheens is often like trying to find a needle in a haystack. Unfortunately for these two suspects it was a rather large needle.

Warden Jerry Borjeson also issued twelve citations, including one citation to a multiple repeat lobster poaching offender who was made locally famous by Warden Simmons. Simmons observed the subject poaching lobster in one of the area MPA's and when he contacted the subject he found that he was concealing the poached lobster inside his pants! On this occasion the subject was in another MPA, but was unsuccessful in his attempts at snagging lobster. His partner, nevertheless, was found in possession of four out of season lobster (three under-sized). Both subjects were appropriately cited.

Warden Sau Garcia was on call six days and received multiple calls. The most significant call was that of a sunken vessel in Marina Del Rey. Responding with USCG, the owner of the vessel was identified and recovery efforts were monitored. During patrol, Garcia checked fisherman and asked the right questions to yield two citations for undersize kelp bass. Continuing to patrol up the coast, Warden Garcia ended the night with a DUI check of a driver that turned into a citation for driving on a suspended license.

Warden Santos Cabral responded to the small community of Cuyama, in Santa Barbara County, to assist local emergency managers with series of flashfloods that damaged an oil production field. A wall of mud and water flashed down the dry bed of the Cuyama River and caused significant damage to the Russell Ranch Oil Lease infrastructure. The impact of the flashflood was so great that it uprooted pipelines and concrete pillars. Although the oil field was

damaged and oil was spilled onto the ground, there was no evidence of an oil spill into the River.

Warden Amanda Johnson attended two days of Incident Command System 400 training this month, wrote citations for F&G code and CVC code, and attended a two week Basic Maritime Officer Academy in the City of Wilmington at the Maritime Law Enforcement Training Center. The course included simunition training while making enforcement stops with the boat and water survival where Johnson had to swim in her full uniform and vest and weighted belt and demonstrate defensive tactics.

Warden Paul Zurawski made a total of nine physical pollution responses during the month. Zurawski responded to a minor pipeline leak that ended up belonging to Valero after long night of hand-digging the suspect pipeline.

Warden Paul Zurawski also responded to a two vehicle traffic collision that resulted in some gasoline entering a storm drain. All was contained in the catch basin and cleaned up promptly. He ended his month by responding to a sail boat that sunk at its slip in Marina Del Rey. The sail boat's fuel source was two red gasoline cans that floated nicely on the surface and did not empty their contents into the water. The owner's insurance company funded the raising and salvage of the vessel.

North Coast Enforcement District

Warden Foster continued with the adjudication process in several streambed alteration cases and worked with department biologists on several plans for restoring crucial steelhead habitat along several major rivers and streams in Santa Cruz County. He met with local county code compliance and other agencies to discuss ongoing issues related to drought, streambed alterations, and illegal use of water within the county.

Warden Henderson participated in the California State Parks 4th of July detail. He conducted an ATV patrol on Seabright State Beach in Santa Cruz County. A strong law enforcement presence kept the crowds of beachgoers relatively tame and the detail was an overall success. Henderson saw an increase in hunting activity in Carmel Valley as the A-Zone archery season got underway. The coast remained busy with many boat based anglers finding success fishing for rockfish.

Warden Jones responded with Warden Schad to a report from Anderson Lake of the collapse of a tree containing a nest of Bald Eagle fledglings. The wardens reported the circumstances to Department Environmental Scientists who determined the birds were best left unmolested. One of the eaglets was later observed flying.

Over the course of the month, and as a result of regular river patrols, responses to CalTIP complaints of illegal encampments, and a request from Santa Cruz County Deputies for assistance, Warden Jones and other local wardens (Schad, Juarez, and Quintal), working together on the Pajaro River, Corralitos, and Aptos Creeks (Santa Cruz County), and the Guadalupe River and Los Gatos Creek (Santa Clara County), booked or cited six subjects for trespass, four for possession of narcotic paraphernalia, three for pollution of State waters, three for violation of probation, three for possession of a controlled substance, two on possession of illegal weapons, two on parolee-at-large warrants, two on outstanding misdemeanor warrants, one for violation of a stay-away (Pajaro River) order, one on a felony warrant, one for destruction of riparian habitat, one for theft, and one for unlawful possession of a shopping cart. One of the cases on the Pajaro River involved an admitted Surreno gang member seen emerging from the Pajaro River stream channel in possession of a bow and arrows, air pistol with ammunition, sling-shot with ball bearing ammunition, and machete. Jones and Warden Juarez booked that subject.

During a patrol of the Big Sur area, **Wardens Hare and Meyer** were asked to assist the Monterey County Sheriff's Office in a search and rescue of a hiker that had been lost for 9 days in the Big Sur backcountry. The hiker was possibly seen near the Big Sur River in a very remote location. The wardens hiked several miles into the forest in order to provide water and first aid to the victim while search and rescue personnel were delayed in their response. A CHP helicopter was also used to attempt to locate the missing hiker. A man fitting the description was later found by the search crews in the CHP helicopter but he was not the reported missing person. Unfortunately, the missing hiker still has not been found.

Warden Hampton responded to a complaint of a mountain lion that had taken up residence in a backyard. The lion was drinking from the homeowner's water fountain. After asking the homeowner to drain the fountain and eliminate the water source the lion moved on. Hampton also conducted a foot patrol at the Capital Flea Market in San Jose where he located a vendor selling a variety of fish out of the back of their truck without possessing receipts. Hampton informed her that she had 24 hours to provide the proper documentation. The following day Hampton and the subject handed over a generic receipt for the purchase of salmon from that morning. Hampton seized all the unlawfully possessed salmon which totaled 700 lbs of whole salmon, 300 lbs. of salmon fillets and steaks, and 1000 pounds of salmon heads and salmon stomachs. Wardens Jarrett and Schad assisted with the transport and processing of the evidence, and Lieutenant Moore, Lieutenant Ober, and Warden Glau assisted with arranging the sale of the useable fish.

Warden Schad and members of his squad continued to enforce litter/ pollution violations on Los Gatos Creek and Guadalupe River, where he cited one subject for felon in possession of tear gas and misappropriation of lost property. Further investigation lead to the discovery that the items were stolen from a resident in Sunnyvale. Warden Schad contacted a subject at a local reservoir who had altered the Quagga inspection tag on his boat/trailer, making it removable. The subject was cited for obstructing a police investigation and the father was cited for failing to comply with Quagga regulations. Warden Schad is currently assisting North Carolina Fish and Wildlife with a boating homicide investigation.

Warden Walker contacted a subject angling on the coast off of 17 Mile drive, Monterey County. During a routine license inspection Walker asked the subject his date of birth. The subject tried to give Walker the run around, but it was ultimately determined the subject was using someone else's license and on probation out of Mendocino County for abalone related offenses. The subject was cited accordingly and due to statements Walker obtained from the subject, Walker went to Oakland and interviewed the party that provided the Fishing license. A Formal Complaint was filed with the Monterey County DA's office.

During a night flight detail **Warden Anderson** encountered a land owner and his two guests hunting pigs on his property under a depredation permit. The land owner did not have the permit in his possession, and the other two people were not on the issued permit. Further investigation determined that the crops the depredation permit was issued for were no longer being farmed or harvested. A formal complaint is in process. Anderson responded to a report of a baby sloth being offered for sale on Craigslist. The investigation was turned over to local authorities after it was determined the ad was placed by a dissatisfied customer of a local attorney, using the attorney's phone number. Anderson responded to a report of a small dam built across the San Luis Creek by a local golf course maintenance crew to divert water into a pumping area to irrigate the course. The diversion was needed to allow the course to pulling between 150,000 – 200,000 gallons a day out of the creek for the irrigation of the golf course greens. A formal complaint is in process.

Warden Chance filed a formal complaint against a Paso Robles resident who continued to feed deer after being educated and warned by Chance in June. Chance assisted environmental scientists for security purposes during a site visit of a sand mining operation within the Estrella River. The site visit went smoothly with Chance only having to divert a couple of people who wanted to talk to the scientists as they were collecting data for several potential permit violations. Warden Chance made a great trespass case with the help of SURCOM and fellow wardens from Kern and Santa Barbara County. On the opening day of the archery only deer season, a man shot a small buck deer on private property without permission and was seen by an anonymous witness who was able to get a partial vehicle plate number. The witness also gave a good description of the man and the truck he was driving. SURCOM was able to get several possible vehicle plate matches which were followed up on, but the registered owners were not involved with the illegal take of the deer which was indicated by ALDS checks and interviews conducted by neighboring wardens. About a week later, SURCOM found a couple of additional plate matches which Chance followed up on. After an ALDS check, Chance felt he had found his suspect who appeared to be an avid hunter and was hunting deer under an archery only tag, which Chance suspected from the start of this investigation. Chance went to the man's residence with Warden Strouss where they contacted the archer's parents. The contact verified Chance's suspicion where deer meat and antlers were recovered along with an incomplete deer tag. Later that day, a telephonic interview was conducted with the man giving a full confession of his crimes after he was told DNA evidence had been collected at the kill site which would be compared to the deer meat collected at his residence.

Warden Hodel investigated a CalTIP call involving a dead deer. He was able to recover a .22 caliber bullet in the abdominal cavity. With suspect information from the reporting party Hodel was able to track down two subjects who were

shooting .22 caliber rifles in the area the day before. One subject admitted his partner saw a deer and popped of a shot as the deer was running away. Hodel will be filing a formal complaint on the subject for the illegal take of a deer.

Lt. Tognazzini found a large pile trash dumped on private property in rural San Miguel while patrolling the opener of archery A-zone deer season. He was able to locate an electric bill with a name and address and drove to the address where he contacted one subject tending to his marijuana crop! Tognazzini, Warden Gil and Deputies from Monterey County Sheriff's Office searched the residence and outbuildings after obtaining a warrant. 1500 mature marijuana plants were destroyed along with a number of juvenile plants and a few pounds of processed marijuana. The subject was arrested for not being in compliance with his PC 290 requirements and the marijuana operation.

The **PB Steelhead** crew concentrated on commercial Dungeness crab violations after the closure in June. Dozens of traps were pulled in the Monterey, Santa Cruz and San Mateo counties producing several citations for taking out of season, abandonment, no destruct devices and a few other gear related violations. The crew also inspected several squid boats producing citations and warnings for various log and light violations in addition to illegal take of Dungeness crab. On the 4th of July, the crew inspected a commercial tuna boat from San Diego that had multiple Lampara nets deployed in order to catch bait fish to use as they trolled north to Oregon. Violations discovered included no license, no registration and no numbers displayed. The skipper said he had not received them in the mail yet. The crew looked him up on ALDS only to find no records.

Warden Hanson operated the Patrol Boat Bluefin down to Santa Barbara in response to the Refugio incident. Hanson, Warden Hare and Engineer Mendes met a group of Chumash tribe members and took them aboard the Bluefin to the Refugio incident. The Chumash members had an at sea memorial for several cultural artifacts recovered during the cleanup process on the Refugio Beach. The crew was honored to be a part of the event, and the tribe members were very appreciative for the experience.

The Bluefin crew took six scientific divers aboard the Bluefin to San Miguel Island for an abalone survey. The survey focused on sampling known populations in a certain area of San Miguel Island. High winds made for long nights of anchor dragging, but the trip was a success

Wardens Reed Wolvek and Swaney were the first responders on scene at a shooting in Bodega Bay. The severely injured woman was down in the street in front of a house with an unknown and armed suspect inside. The three wildlife officers were able to cover each other and an arriving Sonoma SO deputy who

provided medical care for the woman until SWAT arrived. The armed suspect was discovered in the house deceased from a self-inflicted gunshot wound several tense hours later. http://www.pressdemocrat.com/news/4281941-181/woman-wounded-man-dead-in?page=2

Warden Wolvek issued citations for clam over limits, one case included a subject who ripped off extra clam necks and hid them in her pockets. She was also cited for FGC 2012. Upon further investigation Wolvek found the subjects had an extensive history of violating Fish and Game regulations including unlawful sales and FGC 2012. Wolvek violated their probation and has requested that their fishing licenses be revoked for five years.

Warden Mead worked low tides in Tomales Bay. Multiple subjects were cited for taking over limits of gaper clams. Warden Mead appeared in Marin Traffic court three times for contested clam violations. All were found guilty and paid fines ranging from 600.00 to 3,200.00 dollars.

Warden Esquivel investigated a couple calls of deer being located with arrows in them. One deer in Santa Rosa was located with an arrow in it that had died near a golf course. The other deer was not located but eye witnesses saw two subjects loading up the deer into a pickup truck. No other information was given on that case. Later Warden Esquivel assisted Wardens Wolvek and Morton on boat patrol out of Bodega Bay and contacted a salmon angler with two fishing lines and barbed hooks with a salmon on board. The angler said he was tired of losing fish and had not had a good fishing season so far. The angler was cited for use of barbed hooks and multiple lines with salmon on board the vessel.

Warden Mike Harris filed Formal Complaints against (2) commercial Dungeness crab fishermen that left gear/traps in the ocean after season. The fishermen left strings of traps with some traps without the required destruct device, some traps without the fisherman's commercial license number on the buoy, some traps did not have Dungeness crab buoy tags, and some contained Dungeness crabs.

Wardens Wait and Glau found six fishermen with four coolers full of Rockfish fishing for groundfish in waters 90 feet past the depth restriction. Wardens Wait and Glau seized the rockfish and issued a citation to the captain of the boat.

Warden Kozicki reports the Attorney General's office, on behalf of the Department, filed a civil case in a streambed alteration and pollution, as well as a Federal ESA case that Warden Kozicki started investigating in November 2012. Criminal charges were filed in July 2013. The criminal case has a tentative plea agreement and should be finalized by October.

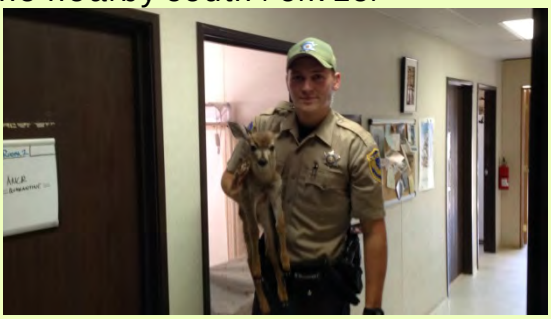
Warden Garrett worked with a Multi-Agency Task Force on a property that had multiple environmental issues. The investigation has concluded with a meeting at the DA's Office with the property owner, and attorneys. A 30 day time period was agreed by all parties for the responsible party to clean up to avoid prosecution. Warden Garrett attended Hayward P.D. Sgt Lunger's funeral in Oakland.

Warden Rehse responded to a spill in Union City of 1,000 gallons of "Food by/product waste," into Alameda Creek. The investigation is ongoing and a leak in the pipeline has been going on for some time. Approximately 18,000 gallons have been discharged into Alameda Creek over a period of six weeks. Rehse issued several citations for the possession of Coho (Silver) salmon this month and an undersized lingcod. Rehse continues to respond to numerous injured and trapped deer calls in the Oakland and Berkeley Hills.

Lt. Christensen continues to notice an increase in the amount of injured deer calls mostly in the Oakland/Berkeley area. They seem to be moving out of their normal range in search of food and water. Lt. Christensen attended the Bay Delta Region all staff meeting. She also attended Hayward Police Sgt. Lunger's funeral. She and Warden Rehse responded to a food waste discharge in Union City.

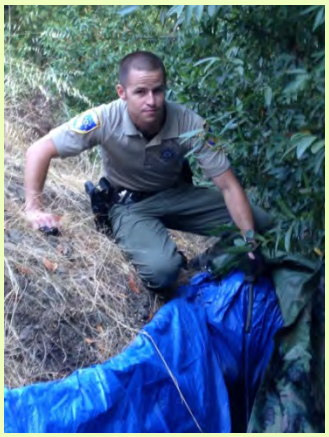
In July 2015 members of the **Patrol Vessel Marlin** boarded CPFV's fishing illegally in the Gulf of the Farallons NMS. The CPFV's were actively taking rockfish in deeper than 30 fathoms of water. The vessels were boarded and the captain and crew issued citations for the violation. The Crew retrieved several abandoned crab traps from the local shipping channels and the offshore areas of Marin and San Francisco County. The Crew worked the local MPA's checking activity in Marin, San Francisco and San Mateo counties. They responded to calls for service and contacted an illegal CPFV that was fishing in the SE Farallon MPA Closure. The captain and crew were known to DFW from previous violations and a formal complaint was sent to the DA for prosecution. The Crew contacted a long line fishing vessel off the Marin Coast with several thousand hooks in violation of the 150 hook restriction. The captain of the vessel has pending cases for similar violations and a formal complaint was forwarded to the DA for prosecution of this most recent violation.

Warden Shane Embry and Trainee Laird began Warden Laird's second cycle of field training this month. Last week, the duo received a complaint from an allied state agency regarding two trucks stuck in the nearby South Fork Eel River. Embry and Laird responded and were unable to locate the trucks so they pulled into the facility to obtain a better location. They quickly learned that the trucks had been recently towed from the river. Before leaving the facility, Laird and Embry observed a small deer fawn in the front "visitor's office." They interviewed the responsible employee and learned that she "rescued" the one-day-old fawn and bottle fed it for nearly one month. Laird and Embry took the fawn to the Humboldt County Wildlife Care Center for rehabilitation.



Warden Matt Wells worked on several deer poaching cases this month. In one case an eye witness saw a suspect shoot a deer with a handgun and called Cal-TIP. Wells responded to the area and was able to locate the suspect. The suspect eventually admitted to shooting the deer but claimed he used a .17 caliber rifle. Wells located a spike buck in his possession. The suspect had a felony warrant for his arrest and Wells arrested him on the warrant. Wells later necropsied the deer and found a .22 caliber slug in the deer. Wells learned that the suspect had a .22 caliber handgun registered to him. Later in the month Wells received a call from a homeowner who witnessed an injured deer in her yard. Wells responded and discovered a large buck that had been shot with an arrow. The buck had staggered into a barn on the homeowner's property and died. The homeowner stated that this wasn't the first time a wounded deer has showed up in her yard and she was quite upset after witnessing the deer suffering. With the help of the homeowner Wells was able to identify a suspect and conduct an interview. Wells discovered that the suspect was hunting on private property adjacent to the homeowner's during the archery season, which was open. Wells discovered that the suspect had unlawfully shot the deer just 50 yards from the homeowner's residence the night before.

Warden M. White investigated the report of a trespass onto a large ranch in Boonville. Accompanied by a State Park Ranger and the reporting party, Warden White noticed a water diversion and marijuana grow across the canyon. As the three walked toward the grow, two Hispanic males took off running down the canyon. A half mile into the foot pursuit, Warden White and State Parks apprehended the suspect, while the other suspect was caught approximately thirty minutes later by a responding CHP unit along HWY-253. The two suspects were arrested for cultivation of 59 marijuana plants, trespass, water diversion, and 148 PC.



Warden Smith assisted Lake County Sheriff's Department as well as the State CAMP Team in eradicating illegal large scale marijuana grows on county, state and federal lands. Smith is compiling supplemental reports for these marijuana cultivation sites where large scale water diversions were in place to feed these large scale growing operations. Smith also assisted in evacuation orders for the Rocky Fire which has consumed 60,000 acres in Lake, Yolo, and Colusa counties.

Warden Little patrolled the Mendocino National Forrest for A-Zone archery hunters and found little hunting activity. Warden Little investigated a possible poached buck next to a vineyard, and responded to a residence where an elderly lady was trapping raccoons on her dock and drowning them in Clear Lake. Warden Little waited a few nights for a problem bear to return to the trash cans it kept getting into. Eventually the bear returned and was introduced to some bean bag rounds in hopes to scare the bear off. The bear hasn't returned in two weeks. Warden Little spent the last several days assisting with evacuations of people and livestock from the Rocky Fire. The fire has spread to Lake, Yolo, and Colusa counties.

Warden Stephenson patrolled Lake County and checked several archery deer hunters in the A-zone area. He also attended and assisted in a Bear Aware presentation in Clearlake Oaks. Stephenson and Warden Little successfully hazed a bear that was causing issues in the Clearlake area with the use of less lethal bean bag rounds. During the month of July wildlife calls have been on the rise and are becoming more prevalent.

Photo: A rattlesnake that was removed from a women's property after being located on the lawn near her front porch.

Warden Willson and **K-9 Jasmine** along with **Lt. Shimek** and **K-9 Lance** assisted Mendocino S.O. with the search of a firearm that was possibly used in a felony. While heading out for a night patrol, Warden Willson observed a driver who had crossed over the yellow line multiple times. A traffic stop was initiated and the driver had no form of identification. Warden Willson could smell alcohol on the driver's breath. CHP was notified for an evaluation. The subject was arrested for driving under the influence of alcohol, under the influence of a controlled substance, driving on a suspended license, giving a false name to a peace officer, and violation of probation.

Another night, Warden Willson heard one gun shot and tried to locate the shooter. Warden Willson observed two vehicles backed in to an unusual location. After searching the subjects and vehicles no firearms were located. A records searched found one of the subjects had a cite and release warrant for vandalism and violation of a court order. Another night, Warden Willson initiated a traffic stop on a subject and during the course of the contact displayed signs of impairment. CHP was notified for an evaluation. The subject did not do very well during the Field Sobriety Test and then refused to perform a preliminary alcohol screening test. The subject was taken into custody for driving under the influence. The Deputy District Attorney for Lake County emailed Warden Willson to notify him of a disposition in a crappie over-limit case earlier this year. The subject was fined $775 and was placed on probation for three years with a no fishing condition.

Northern Enforcement District

The **2100 Captain's Squad** again spent most of the month dealing with suction dredges. With low river flows due to drought conditions, many locations are more easily accessed and dredged and it seems many miners can't avoid the temptation.

On July 5th, **Lt. McDonald, Warden Cervelli, Warden Edwards, and Warden Beck** removed a dredge from the Klamath River near the town of Klamath River. Warden Cervelli had observed and recorded a man dredging there a few days earlier. The dredge was located just upstream from a river access point, making removal easy. While seizing this dredge, the Wildlife Officers were contacted by a claim owner whose claim was on nearby Horse Creek. He told the officers that his partner was at the claim the previous night, and found claim jumpers dredging on the claim. The claim jumpers matched the description of a group of miners who had been found to be dredging and cited near that claim in June. After completing the investigation in Klamath River, the wardens proceeded to that claim location, but the miners had already left. Apparently the confrontation with the angry claim owner was enough to get them to pack up.

On July 14, **Lt. McDonald** and **Warden Edwards** kayaked 14 miles of the Sacramento River looking for two reported dredges there. They were unable to locate the dredges but gained lots of experience using the squad's inflatable kayaks.

On July 15, **Warden Beck** received a report of dredging and claim jumping on Deadwood Creek near the town of Fort Jones. Warden Beck and Lt. McDonald responded to the location, contacted the miner and seized the dredge. It appeared that two miners had claimed portions of the same area, so they were advised to work out the claim jumping issue through the civil process. The

suspect told the Wildlife Officers that he had read on the New 49'ers Mining Club website that dredging was legal because of the San Bernardino ruling.

On July 17, **Warden Beck, Warden Cervelli, Warden Edwards, and Warden Sutterfield** investigated two reports of dredging. The first was in the Klamath River near Horse Creek. The wardens found that the dredge was incomplete and not able to create suction. As the wardens were wrapping up the investigation, they saw another dredge being put in the water just below their location. Apparently the owners hadn't realized that the wardens were there. That dredge was complete and was seized, and the owner was cited. The wardens continued to Russian Creek, tributary to the Salmon River, to investigate the second reported dredge. It was located and seized, and the owner cited. The owner of that dredge, who was from Arkansas, also said that he had heard via the New 49'ers website that dredging was legal.

On July 25, **Warden Cervelli** located another dredge on the Klamath River, this time near Interstate 5. He recognized the operator as a man who had already been arrested twice for refusing to sign dredging-related citations. Warden Cervelli left the scene at about 1230 hours and met with other wardens at the Yreka office. When they returned to the scene at 1530 hours, the subject had packed up his mining equipment and camp and had left the area. A formal complaint will be filed.

On July 27, **Lt. McDonald** located another dredge in the Klamath River. The squad continues to investigate it to determine ownership.

Warden Gomes worked the A zone archery deer season where five buck deer were harvested. Warden Gomes observed a lot of hunters but only the most driven hunters were successful. Warden Gomes continues to work on subjects trying to snare wild pigs. Trail cameras have been placed and he continues to monitor them.

Warden Beals spent much of the month working salmon fisherman and looking for subjects attempting to take salmon or other wildlife at night. He made several salmon cases in the Feather River area around Oroville for gear violations, unlawful trespass and take of salmon in closed waters. He contacted a subject from Sacramento angling with illegal gear and proceeded to watch the subject attempt to hide his lure by breaking off the line. Warden Beals told the subject to stop his actions when the subject retrieved a lighter to burn his fishing line and hide the lure. This plan was foiled when the subject lit his hand on

fire which had the line wrapped around it from previously trying to break it off. Warden Beals located the lure and cited the subject for various violations.

Warden Beals worked with **Warden Hulse** to observe four subjects unlawfully attempting to snag salmon in the closure with illegal gear. The two snuck up behind the salmon fishermen to better observe their activities, only to hear them joke about not being checked by Game Wardens. One clever subject informed his three friends that Game Wardens watch you from far away and then contact you. At that time Warden Beals and Hulse contacted the group and cited them for the various violations.

Warden Beals issued multiple no license and trespass citations throughout the month. While working a night time detail, Beals attempted to make a vehicle stop on a suspicious vehicle only to find himself in a 13mph failure to yield with a naked young man. The young man was attempting to drive away from Warden Beals, not to escape but to put his pants on. After running over several bushes and small trees on both sides of the roadway, the subject yielded and it was found that the subject was naked and waiting for someone else to arrive but got bored. The subject then decided to steal elk antlers off of a barn and proceed to run over and steal county road signs which displayed "County Road 69" because he thought that the number "69" on a road sign was so awesome. The teen was arrested for DUI and charged with the theft.

Warden Beals contacted three subjects trespassing in a Type A wildlife area and found them to be in possession of over limits of black bass. He issued three citations, two for over limit and one for vehicle trespass.

Warden Pirtle discovered a residency case on a local Yuba County individual who had drawn a desert bighorn sheep tag and premier late season deer tag in the State of Nevada. Warden Pirtle researched local records and forwarded the information to Nevada Warden Lusetti. Warden Lusetti traveled to California and spent the day with Warden Pirtle gathering information at the Yuba County Assessor, Voter Registrar, and Records. The Wardens documented the subject's business and later conducted a lengthy interview. Warden Lusetti was able to locate the sheep, deer, and mountain lion tags in California at the subject's residence. The subject claims he does have two residences but his primary is in Stateline, Nevada. The mountain of evidence gathered does not indicate this information. Warden Lusetti advised the subject that it is a gamble for him to

use these tags as the penalty goes from a misdemeanor to a felony if the animals are harvested in violation of Nevada State Law. However, as Warden Lusetti pointed out it is difficult to prove where a subject was residing six months prior to draw application deadlines in April 2015.

Lt. Wharton responded to multiple CalTIP's relating to harassment of an osprey nest by a helicopter. The helicopter was conducting a survey of power lines in the area of the Sierra Pacific Industries HQ and mill in Anderson. Witnesses reported seeing the helicopter being operated in an unsafe manner and the operator appeared to make several passes at an osprey nest that contained two adults and two juveniles. Eye witnesses reported seeing the spectacle conclude with an impact between one of the adults and the tail rotor of the aircraft. The investigation is on-going and the follow-up will include contact w/ the FAA and the power generator regarding safe flying practices and policies regarding flight operations near raptor nests

While patrolling along the Sutter Bypass **Warden McVay** noted that the water level was extremely low due to the drought. Warden McVay then noticed that a farmer had driven his tractor down the inside of the levee so that he could get his pump low enough to pump water into his rice field. Warden McVay continued less than a mile downstream from the pump where a weir and fish way for salmon was located. Warden McVay found that the weir and fish way were **COMPLETELY DRY.** There was no flow going down stream. The farmer was pumping what little flow existed into his rice. Warden McVay documented the evidence and turned the case over to the State Water Board.

Lt. Kroll dealt with several bear related issues throughout the month, as well as continued to assist the squad documenting and investigating suction dredge related violations for prosecution. Kroll also assisted Plumas SO and Plumas USNF with several large DTO marijuana grows. One of the grows was located in a Fish and Game Refuge within X6A, with evidence of deer poaching. Kroll coordinated with inland OSPR regarding planning clean-up operations of the grows later in the year, as they are all located in very important public land high

mountain watersheds. Kroll, along with Wardens Awbrey and Ulrich attended the newly formed Plumas Environmental Crimes Task Force meeting.

Warden Awbrey responded to numerous bear calls throughout the County. Several depredation permits were issued due to property damage and loss of livestock. He also assisted Plumas Sheriff's office and Plumas USFS with several marijuana grows throughout the county. Awbrey and Kroll continued to investigate a sunken boat in Bucks Lake, and were able to convince the boat owner to have the boat removed from the lake. Awbrey also made a case on a subject who took and skinned a fawn deer.

Warden Hernandez received a call of a doe mule deer near Eagle Lake that had wandered into a garage and fell through the floor and into a cellar. Hernandez coordinated with the Lassen County Biologist, and they were able to successfully tranquilize, remove, and release the deer unharmed.

Warden Kraft qualified eight retired wardens on the range. Kraft enjoyed hearing all of the interesting stories from the combined 200 years of experience.

Warden Kraft represented the CA Wildlife Officer Honor Guard along with Wardens Schultz and D. White at the memorial for Hayward PD Sgt Scott Lunger. Sgt Lunger's memorial was spot on and he sounded like a fantastic officer. EOW 07-22-15.

Lieutenant LaFave was patrolling the Mokelumne River, off Electra Rd, in Amador County when he observed a suspicious truck parked along the bank of the river. He followed the trail down the steep bank and observed a subject at the bottom operating a gas powered suction dredge in the river. Lt. LaFave contacted the man and asked why he was working the dredge in the river. The man, at first, stated he was told that it was ok to use a suction dredge as long as it was not on floats and then, after Lt. LaFave convinced him that playing stupid was not a good defense, admitted that he knew it was illegal to dredge, but had heard that D.A.'s were not prosecuting miners because the law was written poorly. Lt. LaFave advised the subject that the law was very clear and that the

Amador County D.A. had no issues when it came to prosecuting dredger cases. The subject then stated he was not going to sign the citation as a way to protest the law. Lt. LaFave told the subject that he had no problem with arresting him and that the jail was only a few miles down the road. He also had no problem with towing the subjects' truck, incident to arrest, which would only cost the man around $700.00 to get back. The subject stated he was just joking around, and would gladly sign the citation.

Lt. LaFave and **Lt. Alan Gregory** received a Cal-Tip regarding a vineyard worker in Lotus who just shot a deer on the R/P's property and had fled back to the vineyards warehouse with the deer. Both lieutenants rushed to the scene and contacted the R/P who showed the two a fresh blood trail, on the paved road, leading to the vineyard. The R/P also stated he did not see the worker kill a deer, but knows they have shot a lot in the past. Lt. LaFave and Lt. Gregory located the farm worker and started interviewing the man. The subject denied shooting anything, but was clearly nervous. The two looked for evidence around the area and located a shotgun wad near where the blood trail was found and shotgun shells were found on an UTV parked in the driveway, but no blood or fur was found. After some lengthy questioning, the subject admitted to shooting a turkey that had been pecking at some drip lines in the vineyard. The man then showed Lt. LaFave and Lt. Gregory where he had hidden the turkey in the woods behind a barn. The bird had been cleaned and plucked and made ready for consumption. It turns out that the vineyard had been issued a depredation permit in the past, for deer only, but had violated the permit conditions numerous times. When they applied for a new permit for deer or turkeys they were denied. Lt. LaFave had no issues with the depredation of the turkey, which was causing visible damage to exposed drip lines in the vineyard; it was the failure to show and the unlawful possession once they prepared the turkey for their own consumption that was an issue. Lt. LaFave will be filing a formal complaint for unlawful possession with the El Dorado County D.A.'s

Warden Stevenson responded to a call of a dead bear in South Lake Tahoe. After a few hours of investigating the death of the bear, Stevenson confirmed it was shot with 00buckshot. Stevenson interviewed several neighbors in the neighborhood where the bear

was found and eventually located a suspect. The suspect confessed to shooting the bear. The bear was a nuisance bear and was habituated to humans. A report of the unlawful killing was filed with the El Dorado County District Attorney's Office.

Warden Stevenson also attended a hearing in Sacramento in front of an Administrative Law Judge, regarding a permanent lifetime revocation of a hunting license and hunting privileges of a subject who pled "no contest" to possession of three gall bladders and 20 bear claws in the woods of El Dorado County on April 20th, 2013. The subject and his partner killed a sow and two cubs and removed their livers, gall bladders and twenty claws from the sow, prior to meeting up with Wardens Stevenson and L. Gregory. The Administrative Law Judge will review all evidence in the case and make a final decision on the lifetime revocation, by the end of August, 2015.

Warden Kenady worked on a streambed alteration violation in Yolo County in which the landowners did not notify any agency and did not have any permits. The work done amounted to a one mile stretch of Ridge Cut Slough in which one side of the waterway was sloped back and compacted. The work cannot be undone, so the focus for DFW at this time is to work with the landowner to stabilize the site and see that proper permits are acquired for any future work.

Warden Kenady received information about marijuana grow activity near Rio Vista. He passed the information along and is continuing to assist in the investigation when requested.
Warden Kenady opened two investigations into large items dumped near waterways. One was a large boat filled with garbage, and the second was a double-axle trailer filled with debris from a remodel project. Both investigations are still in progress.

Warden Keiser issued several sport fishing related citations this month within his assigned district, one of cases which involved the taking of short black bass from Lake Herman in Benicia, and another involved the use of illegal fishing gear to take trout in Putah Creek. While patrolling area waterways, Keiser observed a high number a saltwater fish species in the areas of the Napa River and Carquinez Straits to Suisun Bay. Numerous sharks, bat rays, and jack-smelt were seen in the area, while very few sturgeon and striped bass were seen taken in this area by anglers. This is likely due to the continued drought conditions and heavier salt water intrusion into the areas.

Keiser completed an investigation regarding the destruction of a killdeer egg and nest on a bridge project in Winters. Keiser found there to be violations of the 1602 agreement and addressed these violations with the permit holder and their biological monitor who was most responsible for not following the conditions set forth in the permit. Keiser requested a notice of violation be prepared by Department ES staff.

Keiser coordinated and actively assisted Wildlife Area staff in the clean-up and removal of illegal structures on the White Slough Unit of the Napa Sonoma Marsh Wildlife Area. Utilizing an ATV to access the area, large bags of trash were hauled out of the area along with couch cushions, plastic chairs, mattresses, drip lines, and numerous plastic buckets, bags and poly tarps. Most of the trash was generated from fisherman littering the banks and constructing these make shift fishing shelters.

NRVP Rancho Cordova

Forty-eight NRVs reported 1,477 hours of volunteer service for the month in the Divisions of Enforcement, Wildlife Management, Habitat Conservation, Inland Fisheries, Marine Fisheries, Administration, NRVP, and Office of Community Education & Outreach.

Enforcement – Thirty-one NRVs reported 547 hours assisting LED staff with office duties, answering the statewide enforcement assistance line **(345 calls)**, taking Code 3 equipment from six retired patrol vehicles, transporting old patrol vehicles to R2HQ and/or auction yard in Davis assisting at the Warden's Academy Scenarios, transporting pig carcasses to R2, and answering the CalTIP phone line.

Wildlife Management – Twenty-six NRVs reported providing 282 hours opening & closing the gate & patrolling the Yolo Bypass Wildlife Area, entering DPD information into electronic database, transporting raptors from So Cal for release in the Sierra foothills, transporting various carcasses for

storage at R2, assisting with EBM hikes to maintain cameras at various sites, and assisting with fence repair at Butte Creek House Ecological Reserve.

Habitat Conservation – Ten NRVs reported 77 hours performing LSAA desk reviews of files in preparation for future site visits.

Administration – Twenty-nine NRVs reported 226 hours of assistance at the R2 HQ front desk answering the telephone **(684 calls)** and performing other duties as requested.

NRVP – Twenty-nine NRVs reported 208 hours in support of chapter operations: preparing for and implementing VMS, preparing monthly and annual reports, Shutterfly updates, attending the monthly staff meeting, taking NRVP required courses, and acting as liaisons for the various projects.

Office of Community Education & Outreach – Seventeen NRVs reported 133 hours taking training on Mobile Aquarium transport, set-up and use, and making Bear Aware outings to campgrounds in South Lake Tahoe to remind campers about bears in the area.

Headquarters

MARIJUANA ENFORCEMENT TEAM

With July being one of the busiest months of the year for the MET, the team travelled and worked extensively throughout the state on multiple arrest, eradication, and reclamation missions. Throughout July, MET completed tactical marijuana operations in Santa Clara, Fresno, Stanislaus, Glenn, Butte, San Mateo, San Benito, Monterey, San Luis, Shasta, Ventura, Los Angeles, Sacramento, and Mendocino counties. During these operations, the MET safely apprehended approximately 20 felony DTO suspects, with most of them armed or in reach of assorted rifles, pistols, and more specific assault weapons.

Of significance, the MET worked with several county marijuana teams for the first time this month including San Mateo, Glenn, and Mendocino County teams. During these allied agency operations, MET shared and highlighted their K9 and stalking suspect apprehension tactics, in addition to assisting on the eradication phase of all operations. In addition to this apprehension tactics emphasis, the MET focused on assisting those agencies having little experience in environmental reclamation. The San Mateo Narcotics Task Force team was especially receptive to reclamation operations, working their first one with the MET in early July.

The MET also provided some critical and informative drought related environmental crime outreach presentations to various DFW groups throughout the month, the most notable being to DFW's Directorate staff. Focusing on the drought impacts from outdoor trespass cultivation operations throughout California, the MET illustrated through examples of their productive 2014 and 2015 seasons, the importance of funding this area of LED enforcement activity. The negative impacts to

California's wildlife and water resources, in addition to the egregious impacts to the statewide drought, were made clear during this presentation.

During this busy month of daily operations, the MET's Designated Marksman Observer (DMO) Team conducted their first night training. Utilizing their recently issued night vision scope adapter units, the team verified their zeros and target identification and accuracy shooting in complete darkness. This training solidified the DMO team's day and night, all hour, deployment capability throughout the state.

Warden Imbrie assisted Wardens Imsdahl, Chan, Quintal, Boyd, Baquirin and Lt. Nores with an apprehension/eradication/reclamation detail in Glenn County put together by Warden Imsdahl. With the record heat reaching 113 degrees that day, the growers did not water during the day, so the team eradicated and reclamated the site before the end of the evening. Warden Imbrie then assisted Wardens Imsdahl, Quintal, Baquirin, Chan, Boyd and Lt. Nores with a scout mission in Mendocino County near Hopland, CA. After an extensive hike a small grow was located, with Mendocino County's COMMET team. Later in the month, Warden Imbrie coordinated a MJ eradication mission with the Fresno County Sheriff's Dept. and CAMP near Coalinga. Several MET members assisted, with over 1200 plants eradicated from the site. Warden Imbrie also assisted USFS with a MJ eradication-reclamation mission in the Sequoia National Forest where over 1500 plants were eradicated. Warden Imbrie also assisted Warden Quintal, other MET members and The San Mateo County Narcotics Task Force with a MJ scout/eradication/reclamation mission. During this operation, several thousand plants were eradicated and a full reclamation of the site was completed.

Warden Imsdahl helped conduct MET missions in Santa Clara, Butte, Glenn, Santa Cruz, San Mateo, Stanislaus and Mendocino counties throughout July. A notable mission in Butte County yielded the apprehension of an AK-47 assault rifle armed DTO suspect. This man fled out the back of a residence, when a high risk search and arrest warrant was served on the building at first light by the Butte County SWAT team and MET operators. Supported by Warden Chan and Warden Boyd, K9 Phebe apprehended a suspect fleeing from the house before he could engage team members with the assault rifle. The suspect was a convicted felon having felony warrants for his arrest out of San Francisco County. After the apprehension, and needing to find the ejected live round from the AK-47's firing chamber, Butte County SWAT requested K9 support to help find the critical AK cartridge. When brought back on scene, Warden Boyd and K9 Phebe found the round within 30 seconds, rounding out the felony arrest nicely. An additional 5 assault rifles and pistols were found in the 3000 plant marijuana grow on BLM property when the team cleared and eradicated it later that morning. Another high mountain grow operation in Butte County yielded almost 10,000 plants, with a single apprehension made on a DTO suspect. The

man made an escape attempt after he was walked out of the garden to the team's patrol vehicles, but did not make it far running with handcuffs on before being apprehended again and taken back to a patrol unit.

Warden Boyd and K9 Phebe had an exceptionally busy month, participating in DTO arrest, eradication, and reclamation missions in Shasta, Mendocino, Tehama, San Mateo, Santa Clara, and Glenn counties. During those operations, approximately 30,000 marijuana plants were removed and destroyed, along with 18 water diversions, dams, and other drought enhancing water crimes rectified within those grow sites. Boyd and Phebe were instrumental in 10 felony DTO suspect apprehensions throughout the month, and located and/or seized 13 various firearms used in the above mentioned operations. Also during those missions, Boyd assisted in the removal of approximately 3000 pounds of grow site trash, pollutants, and other assorted environmentally harmful chemicals. July was a diverse month of activity for K-9 Phebe, with numerous dangerous suspect apprehensions necessary for the safety of the team as well as some exceptional evidence finds including the AK-47 chamber ejected round described above. Boyd was very proud of Phebe and her continued high level of performance this late in her service career. In the spirit of succession planning, Boyd began training with and evaluating K9 "Karma," a young female like Phebe, in anticipation of developing her into a well suited K9 to join the LED ranks.

Warden Chan assisted with several marijuana grow eradications which included grows in Fresno, Sacramento, San Joaquin, Santa Cruz, Santa Clara, Butte and Mendocino counties. Chan also located a large marijuana grow complex in Merced County on US Fish and Wildlife property.

Warden Grove worked with the CAMP Region 2 team in northern California on a full time basis throughout the month. Grove and CAMP Team 2 worked primarily in Tehama, Shasta, Trinity and Sacramento counties throughout July (with assistance from USFS, DFW, and local county teams) and eradicated 126,506 marijuana plants, made 10 arrests, conducted 342 short hauls, recovered two firearms, seized 270 pounds of processed marijuana and removed 22 net loads of trash and infrastructure during those operations. Warden Grove will continue to work with CAMP Team 2 until Lt. Laughlin returns. Best of luck to a speedy recovery!

Warden Quintal conducted marijuana scouts in Mendocino and Santa Clara counties, while also assisting with marijuana eradication and reclamation

operations in Fresno, Monterey, Santa Clara, San Mateo, Mendocino, Butte, Santa Cruz, and San Luis Obispo counties. Warden Quintal was the case officer on a marijuana eradication operation in Santa Cruz County, with DFW MET leading the operation and investigation. With the assistance of the Santa Clara Sheriff's Office MET K9 team, and the CHP helicopter crew, one DTO suspect was apprehended with 5,000 budded marijuana plants eradicated. During this operation, a tactical shotgun loaded with slugs was recovered. The grower apprehended was charged with cultivation and environmental violations.

Warden Baquirin travelled all over the state working on MET specific missions in Santa Clara, San Mateo, Mendocino, Glenn, and Stanislaus counties throughout the month, completing multiple arrest, eradication, and reclamation details.

Lt. Nores completed arrest, eradication, and reclamation missions with his team mates in Santa Clara, Mendocino, Santa Cruz, and Glenn counties this month. Nores also conducted two MET presentations to DFW staffers. One presentation was given to DFW's Deputy Director and the rest of the Directorate staff, highlighting MET's drought enforcement effectiveness throughout 2014 and 2015. During this meeting, Nores conveyed the importance and effectiveness of the drought related work the MET and WET team's do on a daily basis. The presentation was very well received and support for the MET/WET efforts was clear. Nores also provided some marijuana grow safety training to Hab-Con, Wildlife Management, and Environmental Scientist staffers out of the Nimbus Region 2 Office. The training was well received and prepared them for procedures needed when encountering grow site operations during their field work operations.

WATERSHED ENFORCEMENT TEAM

In July, the Watershed Enforcement Team (WET) conducted approximately 45 parcel inspections while attempting to document environmental damage associated with marijuana cultivation. Their efforts were largely summed up in two large Humboldt County details. Operation Yurok Borders, where WET members inspected private parcels surrounding Yurok tribal land north of the town of Willow Creek, and the Willow Creek watershed inspections.

During Operation Yurok Borders, WET inspected 24 private parcels, documented (54) streambed/diversion violations, (24) pollutions violations, (12) litter violations and (3) prohibited bird violations. The four day multi-agency was highly successful. Over 30,000 marijuana plants were eradicated

which calculates to approximately 180,000 gallons of water flowing back into the Klamath River system daily.

During the Willow Creek Inspections, WET inspected 16 private parcels, documented (20) streambed/diversion violations and (5) pollutions violations. In addition, WET also assisted the Humboldt County Sheriff's Department with a search warrant on one private parcel where 1426 marijuana plants were eradicated. Ironically, the property owner had been previously convicted of felony cultivation. At the time of the warrant, only one subject was contacted. She claimed to be from New Zealand, and stated that she hoped to earn approximately $50,000 for helping a local building contractor grow his crop this summer. She also stated that she hoped to buy a sailboat with her profits. Perhaps her medicinal nexus was the relaxation gained from sailing the high seas.

In addition, Lt. Little gave presentations to: The Senate Commission on Fisheries and Aquaculture, The North Coast Resources Partnership Committee and attended the Sproul Creek Watershed meeting where concerned landowners within the watershed had a chance to voice their opinions about the inspection process and pending administrative action. Senior ES Scott Bauer testified at a Senate hearing for SB 243, and gave a presentation to the Senate Environmental Caucus in Sacramento.

SPECIAL OPERATIONS UNIT

Operation Klamath Krew Disposition

The Special Operations Unit (SOU) received information from uniformed wardens about a serial poacher in Crescent City. SOU investigated his activities and discovered the poacher and his wife used friends and family to take gross overlimits of salmon from the Klamath and Smith rivers, and Dungeness Crab from Crescent City Harbor. Throughout the course of their surveillance SOU

determined he fished in closed areas and used unlawful gear, nets, and double/triple tripped. As the poacher fished, his wife and friends served as couriers and carried multiple overlimits of salmon back to their residence to store for later sales. SOU observed multiple sales of salmon and crab locally, as well as, in Oregon.

The poacher's vast history of past convictions typically resulted in community service, of which he never performed. Upon the conclusion of the case, the poacher pled guilty to a felony charge of conspiring to illegally take salmon for profit or personal gain, along with two misdemeanor violations of the Fish and Game Code relating to illegal take of salmon in a closed area and illegal sale of sport-caught salmon. His wife pled guilty to one misdemeanor count of illegal sale of sport-caught salmon. In punishment, he was sentenced to serve 120 days in the Del Norte County Jail and a fine of $20,376.00. Due primarily to the defendant's youth at the time of the violations, the fine as well as 90 days of the jail term were suspended so long as he strictly obeyed his probation terms. Among the terms of his three-year probation are that he is forbidden from fishing or being within 30 feet of anybody fishing, in any state, and that he must sell all of his fishing gear in his possession and forfeit all gear seized by the Department of Fish and Wildlife in relation to this case. He may also be searched at any time for probation violations. His wife accepted a similar plea offer, and pled guilty to a violation of Fish and Game Code section 7121, a misdemeanor. She was sentenced to 15 days of jail and a $20,376 fine, both of which will be suspended if she obeys her terms of her three-year probation, which are the same as her husband. She must also serve 50 hours of community service, which were not suspended.

DELTA BAY ENHANCED ENFORCEMENT PROJECT

The majority of the DBEEP squad has been working on an ongoing investigation concerning marijuana cultivation.

Warden Marrone continued to work on an illegal cultivation of marijuana case in San Joaquin and Sacramento counties with several other DBEEP officers and air services. The case stemmed from an earlier marijuana raid on a wildlife area in San Joaquin County. The arrest from that raid has resulted in 5-7 other suspects and other grow locations.

Warden Holley patrolled along the Feather River in the Oroville Wildlife Area at night and contacted a vehicle next to the River. After contacting the driver and issuing him a citation for night time trespass, it was discovered that he had two felony warrants out of Butte County, with 11 separate violations total. The male subject was arrested and booked into the Butte County Jail.

Warden Holley was driving into the area of the Feather River Fish Hatchery at night when he observed a vehicle parked on the side of the road. Warden Holley pulled up to the vehicle and observed the male passenger attempting to conceal a hypodermic needle in his hand. After Oroville Police arrived on scene the passenger was detained. When the driver was asked if there was anything else in the car he advised that he had some marijuana in his backpack behind the seat and did not have a prop 215 card. After detaining the driver, a small amount of marijuana was discovered in the back pack as well as **a loaded 9mm handgun**. Two more hypodermic needles were located on the passenger side and also two containers with in unknown clear liquid residue. When the passenger was asked what the liquid was he advised that it was liquid meth. Both subjects were arrested and booked into Butte County jail. The driver was arrested for a loaded concealed firearm in a vehicle and the passenger was arrested for possession of hypodermic needles and violation of probation.

Warden Holley was working an afternoon shift when he contacted two male subjects at the Feather River Hatchery fishing in the river for trout. Both subjects were using heavy rods with multiple hooks set on a wire leader with a 1 ounce weight affixed to the bottom of the leader. The Weights were affixed within 12" of the hooks. Both subjects were cited for angling in closed waters (7.50(b)(68)(A)) and use of a weight affixed within 18" or less of a hook (CCR T14 section 2.10(b)2).

Warden Trunnell worked with **Warden Matt Manes** at the Nimbus Dam on the American River. Warden Manes was fishing undercover alongside other anglers. He observed a subject hook into a salmon. The subject reeled I the fish directly in front of Manes. Manes could see the hook imbedded in the tail of the salmon. The subject put the salmon on a stringer and continued to fish. When the subject left with the fish Trunnell made contact and cited the man. The man was adamant he hooked the salmon in the mouth but Manes' observations and the deep wounds in the tail of the fish tell a different story.

Warden Galli provided outstanding depositions on cases!

Petr Dyachishin and Nikolay Krasnodemskiy Commercial Sturgeon Case Disposition:

Arrests for this case were made in February 2010. Preliminary Hearing in 2012 Jury Trial in 2014. Motion for a new Jury Trial in 2014. Sentencing for Kransnodemskiy in 2014. Sentencing for Dyachishin in June of 2015.

Nikolay Krasnodemskiy: Convicted at Jury Trial
2 counts PC 182(a)(1)
1 count FGC 7370(a)

1 count FGC 2000
2 counts CCR T-14 2.00
2 counts CCR T-14 4.20(d)(2)
4 counts CCR T-14 5.80(b)

Sentence:
75 Days County Jail, $5,000 fine, 3 year Formal Probation, 5 years Fishing License Suspension, Stay Away Order from Sacramento River

Petr Dyachishin: Convicted at Jury Trial
2 counts PC 182(a)(1)
1 count FGC 7370(a)
2 counts CCR T-14 2.00
2 counts CCR T-14 4.20(d)(2)
2 counts CCR T-14 5.80(b)

Sentence:
40 days county jail, 160 hours of community service, 3 years Formal Probation, 2 years Fishing License Suspension, Forfeiture of all fishing equipment, processing equipment, sturgeon and caviar.

Michael Triplett Commercial Salmon and Striped Bass Case Disposition
Michael Triplett pled no contest to the following:
1 count Penal Code 182(a) Felony, with deferred sentencing and if successfully completes probation he will be able to withdrawal his plea for this count
1 count FGC 12012(a) Illegally Take/Possess/Sell fish for Commercial Purposes

Sentence:
$5,000 fine, 2 Years Summary Court Probation with the following terms: do not possess fishing gear, do not possess sport caught fish, do not be within 30 feet of any person fishing, nor be on a boat with fishing equipment, do not possess a fishing license, forfeiture of all fishing equipment and fish.

CAMPAIGN AGAINST MARIJUANA PLANTING (CAMP) TEAM – JULY STATS

DFW Team Leader: Lt. Robert Gaske
Team #1: Lt. Steve White
Team #2: Warden William Grove and Lt. John Laughlin
Team #3: Lt. Tony Spada and Warden Stephanie McNulty
Team #4: Warden Martin Willis and Eric Craig

LAW ENFORCEMENT SENSITIVE

CAMP

TOTALS FOR SEASON

ERADICATION

TEAM	# MJ Grow Sites Raided	MJ ERADICATED	FLT HRS	Short Hauls	Sling Loads Total	MEDVAC	Arrests	Wpns	Prossed M.J
I	58	88,436	41.6	248	34		2	12	1,052
II	25	79,495	37.9	148	83		10	2	270
III	13	52,524	36.7	210	39		1	2	35
IV	31	73,941	51.8	283	124		2	4	217
Total	**127**	**294,396**	**168**	**889**	**280**		**15**	**20**	**1,574**

TEAM	Nets Reclaim	LBS of Infrastructure	Acres Effected	Restricted use Poisons (OZ)	FERT (LBS)	Pesticides Common (OZ)	Water Line (YARDS)	20LB Propane Tanks	Car Battery	Dams
I			60.1		430	81		4	4	8
II	22	4,173	151.5	48	3,150	672	4,305	16	12	8
III	11	4,000	20.5	25	250	10	7,350	22	1	8
IV	4	1,250	121	178	1,765	282	1,000	12	3	1
Total	**37**	**9,423**	**353.3**	**251**	**5,595**	**1,045**	**17,755**	**54**	**20**	**25**

PROFESSIONAL STANDARDS UNIT

The HQ Professional Standards Unit has been busy finishing background investigations for the 35 remaining candidates in the current Warden Cadet hiring process. Planning and organization of the week of hiring these cadets is scheduled for September 16- 18, 2015. This will entail Chief's Interviews and conditional offer of employment on 9/16, physical testing, eye test and drug screening on 9/17, and written psychological screening on 9/18. We are hopeful that once again we will have a strong Academy class for Lt. Ceccon in 2016. Lateral candidate written testing just occurred and PSU is awaiting the hiring list from HRB. All full time PSU staff will be attending IA PRO training in September. IA PRO is a software program that will allow statewide

correspondence (access) and a tracking database for all citizen complaints and internal affairs investigations.

HUNTER EDUCATION

Lt Alan Gregory successfully coordinated a basic bow hunting advanced hunter education clinic. Interest in joining the hunter education program as an instructor remains steady with about a dozen instructor application packets sent out per district. This years' Instructor Incentive Program drawing was conducted and instructors were awarded incentives including: wild pig hunts at the Tejon Ranch, four day fully guided / outfitted management buck hunt at Arrow Five Outfitters, doe deer hunt at Catalina Island, turkey hunt for two at Western Wildlife Adventures, ¾ day fishing trip out of Newport Beach, six bird pheasant hunt and 100 clays at Mike Raahuage Shooting Enterprises, and of course ten X zone deer tags!

REGULATIONS / LEGISLATION / PIO

The legislature took their summer recess and returns to work on Aug 17, so there has been a bit of a lull in legislative action. AB 96, the bill that will make the sales and trade of ivory and rhino horn illegal is making its way through the legislative process. Exact parameters of the bill are still in the works. The legislative session ends in mid-September. The Governor will have until Oct 11 to act on all bills. By now, most have heard the bobcat trapping regulation change was heard and resulted in a statewide ban on bobcat trapping. Personnel across Department functions put a tremendous amount of time and effort into coming up with a recommended option for the Commission to vote on that would have continued to authorize bobcat trapping, but in a reduced portion of the state. The Commissioners voted 3-2 to outright ban the practice.

The LED PIO team handled media calls on a variety of subjects for the month. The team covered several marijuana cultivation related stories, all focused on drought and the negative environmental impacts of cultivation. Early in the month **Lieutenanat Stoots** and **Captain Foy** sorted through reports of a river otter attack on an adult female. The report was confirmed and the details were documented. The team released an announcement of CDFW's selection of prosecutors of the year. Stoots and Foy conducted lexipol policy reviews for media relations and social media use, as well as compiled the sections reviewed by other officers. Stoots prepared a press notice of the passing away of K-9 Ruger. The team responded to numerous media calls regarding a Tahoe bear shot in a backyard of a resident. Stoots and Foy conducted review of the upcoming waterfowl handbook. The media month concluded with response to calls regarding wildlife officers being first on scene at an active shooter type event which ended in the gunman's suicide.

TELECOMMUNICATIONS / CalTip / 671

Telecommunications:

The first three vehicles from this year's **vehicle** order have arrived. These vehicles are Ford Interceptors. The patrol trucks have not arrived yet. Parts for the Code 3 installs are also arriving at the PSC Radio Shop in Sacramento.

Testing continues on the **Justice Mobile program**. IPads have been issued to the test group. This is to help with the test that is being conducted on an IPhone right now. Early reports on the IPad/ Justice Mobile test are positive

PSC has developed a schedule for the Harris Portable/Kenwood Mobile Radio reprograming, more information on the radio update will be sent through the District Radio coordinators.

A/C Griffith & Capt. Lehman are now handling LE Division **drought stats reporting** to the DFW Drought Response Team.

CalTip:

NRVP's out of the Rancho office were able to work approximately 2/3's of the month (Mon-Fri). Approximately ¾'s of the month (Mon-Fri) will be covered in August, with two new trainees starting up. To date CalTIP has received 240.
Lt. Milotz is working with Alexia Retallack and Jennifer LaBay on an advertisement project involving signage throughout the Sacramento River Watershed. Approximately 50 signs will be placed at marinas and boat ramps for two years. The primary message will be, call CalTIP to report poaching and pollution. Lt. Milotz also is working with Mary Fricke to create ads for the OSPR Facebook page promoting the use of Tip411.

CalTIP Stats :
Total calls for 2014 – 4,242
Total calls for 2015 (through July 2015) – 2608 an increase of 15.5% over the same period in 2014 and a 29.7% increase in calls from 2013.

FY2014-2015 Dispositions
Over 1600 contacts, over 183 citations, over 24 physical arrests and over 85 warnings.

Southern Enforcement District

Lieutenant Specialist Pourroy received information of a marine aquaria dealer importing live species of fish from Mexico, possibly without the required Importer license and permits. While investigating this Importation case, in an undercover capacity, she visited several retail aquaria dealers associated with this importer. Lt. Pourroy's second retailer visit, supplied her with the name of an additional aquarium retailer, when she asked if they had any sharks for sale. The employee said he sends all customers who ask to buy sharks to this other retailer, because they always have sharks in stock. He also advised her that most of these sharks were illegal. He said he didn't know who supplied the retailer with the sharks, but she always has a good supply, including undersized leopard sharks, and smooth hound sharks. The case is ongoing.

Warden Cohen, **Warden Alisio, Warden Dostal, and Warden Peters** met up to deal with a nuisance bear in Lompoc. The bear was wandering through a residential neighborhood when the wardens were alerted. They responded and found the bear in a small stand of trees and bushes adjacent to the neighborhood and a major road. They took a hands-off approach and waited for the bear to make a move. The wardens hazed the bear away from the road and residential neighborhood, into a riverbed, and towards denser vegetation.

The 5110 Squad also got their patrol boat, the "Gordan Lynn", back from Davis Boats in Arroyo Grande. The "Gordan Lynn" is a 22' Cortez with a davit and hydraulic winch for pulling commercial traps. Davis Boats completed a full repower of the vessel including new engine, outdrive, fuel tank, and more. The capability of a small boat to pull traps will be very useful in the upcoming lobster season.

During a night patrol, **Warden Coombs** saw three subjects spotlighting and one of the subjects shot at a nearby rabbit. All three subjects were later apprehended and cited appropriately. Coombs responded to a bear in a tree

at a residence in Ojai. He monitored the bear until it left the area and returned to open space.

Warden Collins worked marijuana eradication details in Ventura County. The operations removed over 14,000 marijuana plants which resulted in thousands of gallons of water going back to into the local streams. One suspect was arrested and over 500 pounds of fertilizer were removed from the forest.

The Swordfish Crew worked two trips aboard the Patrol Vessel Swordfish. During one of the trips, **Wardens Crocker, Van Epps and Lengning** responded to an injured hiker in a remote cove on Santa Cruz Island. Crocker and Van Epps provided first aid and oxygen to the young man who was suffering from a head injury and a possible broken leg. Warden Lengning coordinated via radio with the USCG and Santa Barbara Fire Department helicopter. The Wardens stabilized the subject and cleared a landing area for the helicopter to land. The young man was then flown to an area hospital for further medical care.

Warden Arkinstall has been conducting an investigation of the illegal take of a listed California threatened species, the island fox (*Urocyon littoralis*). There was a camper in Little Harbor, on Catalina Island, who had their dog off leash, the dog attacked and killed an island fox. During the investigation Arkinstall had acquired a witness' statement, stating they watched the dog go after the island fox, attack it, then drag it into some bushes before being commanded to drop it by the owner, subsequently killing the island fox. The attack happened after the witness had warned the owner there was an island fox in the area. Arkinstall has tried on numerous occasions to contact the dog's owner for a statement, without success. Arkinstall will be filling a case against the dog's owner for the illegal take of a listed California threatened species.

During a nearshore skiff patrol off the city of Dana Point in Orange County, **Wardens Molsberry** and **Stephens** located a recreational fishing vessel anchored inside the Dana Point State Marine Conservation Area. Upon boarding the vessel, Warden Molsberry, was presented with a large yellowtail and a bag of unidentifiable fillets. The subject stated the fillets were kelp bass. Giving the subject the benefit of the doubt, Molsberry treated the fillets as kelp bass and soon identified the bag of fillets were all undersized. Additionally Molsberry could piece together 20 fillets equaling 10 kelp bass. Molsberry conducted a full inspection of the vessel which resulted in the

discovery of six additional kelp bass hidden inside a compartment. All fishing gear was seized. Warden Molsberry advised the subject he would be charged with violations for, three times the daily bag limit of kelp bass, failure to show, 16 undersized kelp bass, unlawful fillets aboard a vessel, no fishing license and unlawful possession of a yellowtail.

Warden Stephens received a Cal-TIP call of a trespasser, fishing inside the Talbert Marsh Ecological Reserve in Huntington Beach. While inspecting the area, Stephens observed three anglers actively fishing the Santa Ana River (adjacent to the marsh). While driving towards the anglers, one of the subjects began to walk away in the opposite direction. Stephens immediately contacted that subject who was in possession of an undersized CA Halibut. Stephens proceeded with a records check on the subject who was later determined to be wanted on an arrest warrant involving three violent felonies. After confirming the subject's identity, Warden Stephens placed the subject under arrest and transported him to the Orange County Jail in Santa Ana for booking.

FTO Nelson and **Warden Fleet** followed up on a reported stream bed alteration along San Antonio Creek, in the town of Mt. Baldy. The two wildlife officers observed there had been some significant work done on the stream bed with some sort of tractor. The land owner was contacted. It was determined the land owner and his son had created the dam with a backhoe. Warden Fleet documented the stream bed alteration with several photos and completed interviews with the land owner and the land owner's son. A formal complaint will be filed with the Los Angeles District Attorney's office.

Lt. McNair/ K-9 Reno were first on scene of another coyote bite on a child in Irvine. Lt. McNair assisted **Warden Stephens** with the interview of the victim. He then assisted in the planning, coordinating, and implementation of capturing the offending animal, with Irvine Animal Control, the 5220 squad, and USDA wildlife services. Lt. McNair implemented the Natural Resource Volunteers for public education and **Lt. Smirl** for Wildlife Watch.

The Thresher crew made 226 vessel boardings at sea, issuing 43 citations. 24 of those citations were issued by **Warden Holemo**. The most significant case occurred at San Clemente Island near White Rock.

On Sunday, 7/12/15, **Warden Rojas** contacted a diver on a private yacht at anchor, San Clemente Island. There were fishing rods displayed all over the vessel, so the officers approached the boat to inspect their catch. While on board, Warden Rojas found the diver on the vessel in possession of nine Spiny Lobsters, out of season. Upon further investigation, it was determined the suspect used a spear pole and SCUBA gear to take the lobsters. The suspect had removed the tails from the carapaces, making them impossible to measure.

Most of the tails appeared to have come from undersize lobsters. Warden Rojas cited the diver and seized the divers gear and the lobster tails.

While in the Thresher skiff, **Warden Holemo** observed a shore fisherman in the no take area of Lovers Cove SMCA, Catalina Island. As they approached the fisherman, the suspect pretended to not see the Wardens and began walking back towards Avalon. Warden Holemo managed to hop onto the rocky shoreline, without getting wet, and caught up to the suspect after a short jog. The man was cited and released for fishing inside the closed SMCA.

Lt. Smirl along with some **Natural Resource Volunteers (NRV)** met with the local government in the cities of Lakewood, Los Angeles, Studio City, Griffith Park, and Long Beach to educate and do public outreach regarding coyotes in Irvine. Over 80 members of the public were in attendance, as well. Lt. Smirl and the NRV's also participated in the Tustin, Huntington Beach and Ladera Ranch National Night Out.

Warden McCain had a diverse workload this month from lobster out of season, to arresting a trespasser in felony possession of a controlled substance who attempted to flee and assaulted McCain. McCain received a CalTIP reporting a subject shooting egrets with a shotgun and leaving the birds dead or dying in a field. McCain immediately responded and was able to locate 10, dead, egrets in a field. One egret was attempting to fly but had a severely broken wing. McCain questioned individuals on scene which led McCain to the shooter, who admitted shooting the egrets for pleasure and to assist the land owner who felt they were a nuisance. McCain transported the injured egret to a wildlife care center and is completing a formal complaint

Warden Shanley issued citations to four individuals for indiscriminately killing fish by spear gun and with hook and line. A total of 36 fish were illegally taken, including 10 undersized small and large mouth bass. Besides the unlawful take of fish, violations included littering and failure to show a spear gun upon demand. One of the men submerged himself under water and hid the spear gun underneath brush extending into the water. Shanley allowed the suspects to bathe in the Colorado River while he wrote the citations in 110 degree temps.

Warden Green conducted a drought overtime patrol checking the desert big game drinkers. During the patrol, Warden Green observed a young woman, teenager, and a 3yr. old stranded in the middle of the desert, off Highway 78. Warden Green checked with the young woman and asked if she needed assistance. The young woman advised her car had broken down. Warden Green radioed dispatch for a tow service for the young woman's vehicle. Warden Green then had the young woman, 3 year old, and teenager get into his air conditioned patrol vehicle while they waited for the tow truck. Temperatures reached 110 degrees or more on the asphalt with 40% humidity that day making conditions dangerous for the young child to be sitting in a hot car. Warden Green waited with the individuals for approximately 1.5 hours before the tow truck company and CHP were able to arrive on scene. The extended response time could have been detrimental to the 3yr old, if it had been left in the disabled vehicle. The tow truck driver transported the individuals and the vehicle back to Brawley.

Warden Bellis assisted Caltrans with gaining access to the Warm Springs Overflow area in San Bernardino. CalTrans wanted to clean a freeway underpass that had become a homeless encampment littered with human feces and drug paraphernalia. A full hazmat team was deployed to clean the overflow which drains to the Santa Ana River.

Warden Esconde received a CalTIP of a resident in Rancho Cucamonga keeping a Red Tailed Hawk. Upon investigating the complaint, it was found the suspect was harboring an adult Red Tailed Hawk, in a small cage in his backyard. When **Wardens Esconde** and **Garcia** met up with the suspect to seize the bird, it was found to have died while in the suspect's care. The suspect was cited appropriately. Warden Esconde was also dispatched to a call regarding an injured bear that had been hit by a Deputy Sheriff's patrol vehicle in Oak Glen. Upon arrival, she found the Deputy had clipped the bear's rear end, breaking its two back legs. The officer then tried to shoot the bear in the forehead, but was unsuccessful at euthanizing the animal. The bear then ran down a dry creek bed, approximately a half mile. The officer tracked it and attempted to dispatch it, a second time, unsuccessfully. The officer was advised

by his supervisor to contact CDFW for a Game Warden's help. The animal was successfully dispatched.

Warden Holyoak was on patrol at Canyon Lake and observed four subjects using throw nets at the lake. When Warden Holyoak contacted the anglers, he found them attempting to conceal several throw nets near a vehicle and behind a tree. Warden Holyoak found the four subjects in possession of ten throw nets and several undersized bass. Three of the subjects did not have fishing licenses. Holyoak issued citations for failing to show upon demand, unlawful possession of throw nets, undersized bass and fishing without licenses.

State of California
Department of Fish and Wildlife

Memorandum

Date: September 24, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Craig Shuman
Regional Manager, Marine Region

Subject: **October 7, 2015 Fish and Game Commission Meeting; Marine Region Update on Marine Fisheries Management Authority**

At its August 4, 2015 meeting, the Fish and Game Commission (Commission) inquired into the structure of the management authority over marine fisheries in California. Management authority varies among and within fisheries creating a complex regulatory framework. The Marine Life Management Act (MLMA) Master Plan provides a comprehensive summary of management authority in *Appendix E. Management Authority for California's Marine Fisheries (by Species)* and *Appendix F. Management Authority for California's Marine Fisheries (by Gear).*

Adopted by the Commission in 2001, the MLMA Master Plan and associated appendices do not reflect recent changes to management authority resulting from the adoption of Fishery Management Plans or other actions at the state and federal levels. However, the Department considers Appendices E and F to be useful summaries that were complete and accurate at the time of preparation, and still reflect the prevailing landscape of disjointed authority over California marine fisheries.

The Department is in the early planning stages to update the MLMA Master Plan. When a revised Master Plan is presented to the Commission in 2017 it will include an updated summary of management authority.

Attachments

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Appendix E. Management Authority for California's Marine Fisheries (by Species)

A. Species for which the Commission has complete management authority

1. Sport fisheries only (all sections refer to Title 14)

Anchovy (all species; section 27.60 c)
Barracuda, California (section 28.25)
Bass, Striped (section 27.85)
Bonito, Pacific (section 28.32)
Butterfish (Pacific pompano; section 27.60 c)
Clams (gaper, Washington, geoduck, littleneck, soft shell, chiones, quahogs, cockles, Pismo, razor; sections 29.20-29.45)
Crab (Dungeness and all other species of the *Cancer* genus; section 29.85)
Eel grass, surf grass, sea palm (section 30.10)
Flounder, starry (section 27.60 c)
Grunion (section 28.00)
Grouper (Gulf and broomtail; section 28.12)
Halibut, California (section 28.15)
Halibut, Pacific (section 28.20)
Jacksmelt (section 27.60 c)
Lobster (section 29.90)
Mackerel (jack, Pacific; section 27.60 c)
Marlin (all species; section 28.50)
Moon snail (section 29.71)
Queenfish (section 27.60 c)
Sanddabs (all species; section 27.60 c)
Sardine, Pacific (section 27.60 c)
Scallop (rock, speckled; sections 29.60, 29.65)
Sculpin (Pacific staghorn; section 27.60 c)
Shark, (blue, thresher, shortfin mako, soupfin, sixgill, sevengill, leopard (sections 27.60 b, 28.56)
Smelt (surf, night, day, whitebait; section 28.45)
Squid (all species; section 29.70)
Sturgeon (all species; section 27.90)
Surfperch (shiner; section 27.60 c)
Swordfish (section 28.40)
Topsmelt (section 27.60 c)
Tuna (albacore, bluefin, skipjack; section 27.60 c)
Whitefish, ocean (section 28.58)
Yellowtail (section 28.37)

and all other species not specifically listed in either Title 14 or Fish and Game Code (Title 14 sections 27.56, 27.60 c, 29.05, 30.00; FGC section 200)

2. Sport and Commercial fisheries (Management authority for sport and commercial fisheries does not mean that both fisheries currently exist for that particular species.)

Abalone (all species; Title 14 section 29.15, 100; FGC sections 5220-5222
Bass (kelp, barred sand, spotted, giant sea; Title 14 sections 28.30, 28.10; FGC sections 8586, 8587.1)
Blacksmith (FGC sections 8586, 8587.1)
Croaker, black (FGC sections 8586, 8587.1)
Eel, (monkeyface-prickleback, California moray, wolf; FGC sections 8586, 8587.1)
Garibaldi (Title 14 section 28.05; FGC sections 8586, 8587.1)
Goby (blackeye, bluebanded; FGC sections 8586, 8587.1))
Greenling (rock, painted; Title 14 section 28.29; FGC sections 8586, 8587.1)

Halfmoon (FGC sections 8586, 8587.1)
Herring (Pacific, round; Title 14 sections 27.60, 163-163.5; FGC section 8550
Herring eggs (Title 14 sections 28.60, 164; FGC section 8389)
Kelp and other aquatic plants (all species; Title 14 sections 30.00, 165-165.5; FGC section 6653)
Kelpfish (giant, island; FGC sections 8586, 8587.1)
Mussels (California sea, bay; Title 14 section 29.55, 115; FGC section 8344)
Opaleye (FGC sections 8586, 8587.1)
Ray, Pacific electric (FGC sections 8586, 8587.1)
Salema (FGC sections 8586, 8587.1)
Sargo (FGC sections 8586, 8587.1)
Sculpin, buffalo (FGC sections 8586, 8587.1)
Seabass, white (Title 14 sections 28.35, 155; FGC section 7071)
Sea urchins (all species; Title 14 section 120.7; FGC section 9054).
Senorita (FGC sections 8586, 8587.1)
Shark (basking, horn, swell; FGC sections 8586, 8587.1, 8599.4)
Sheephead, California (Title 14 section 28.26; FGC sections 8586, 8587.1)
Shrimp and prawns (bay shrimp, blue mud shrimp, coonstripe shrimp, ghost shrimp, Pacific ocean shrimp, red rock shrimp, golden prawn, ridgeback prawn, and spot prawn; Title 14 sections 29.86-29.88, 120, 120.3, 120.6, 180.1; FGC sections 8591, 8842)
Surfperch (black perch, dwarf perch, kelp perch, pile perch, rainbow seaperch, reef perch, rubberlip seaperch, striped seaperch; FGC sections 8586, 8587.1)
Tidal invertebrates (barnacles, chiones, cockles, sand crabs, limpets, mussels, sand dollars, octopuses, shrimp, sea hares, starfish, worms, and native oysters; Title 14 section 123; FGC section 8500).
Whitefish, ocean (FGC sections 8586, 8587.1)
Wrasse, rock (FGC sections 8586, 8587.1)

B. <u>Species for which the Legislature has complete management authority</u>
1. Commercial fisheries only

Barracuda, California (FGC sections 8382, 8384, 8386)
Bonito, Pacific (FGC section 8377)
Clams (FGC sections 8340-8343, 8346)
Croakers (spotfin croaker, yellowfin croaker, and California corbina; FGC section 8373)
Crabs (FGC sections 8275-8284)
Far offshore fishing (FGC sections 8110-8114)
Grunion (FGC section 8381)
Hagfish (FGC section 9001.6)
Halibut, California (FGC sections 8391-8392)
High seas interception of salmon (FGC sections 8120-8123)
Marlin (FGC section 8393)
Scallop (rock, speckled; FGC section 8345)
Shark, angel (FGC section 8388)
Shark, leopard (FGC section 8388.5)
Shark, white (FGC sections 5517, 8599)
Skipjack (FGC section 8378)
Striped bass and sturgeon in nets (FGC sections 8370-8371)
Surfperch (species not primarily inhabiting rocky reef or kelp habitat in nearshore waters; FGC section 8395)
Tuna (bluefin, yellowfin, albacore; FGC sections 8374-8376)
Yellowtail (FGC sections 8382, 8384, 8386-8387)

and all other species not specifically listed in either Title 14 or Fish and Game Code (FGC 8140) and not primarily inhabiting rocky reef or kelp habitat in nearshore waters.

C. Species for which the Commission has limited management authority (commercial fisheries)

Anchovy (Title 14 section 147; FGC sections 7708, 8183, 8780.1). Authority limited to reduction permit and use of bait nets only. Anchovy managed under Pacific Fishery Management Council (PFMC) Coastal Pelagic Species FMP.

Goby (chameleon, yellowfin), midshipman (plainfin), mudsucker (longjaw), sculpin (Pacific staghorn); (Title 14 section 119). Authority limited to take by trawl nets inside of Golden Gate Bridge.

Groundfish (Title 14 section 189; FGC 8403). Authority limited to adopting regulations not in conflict with federal groundfish regulations. Groundfish managed under PFMC Groundfish FMP. Species include: cabezon; cod (Pacific); finescale codling; flounder (arrowtooth, starry); greenling (kelp); grenadier (Pacific rattail); lingcod; ratfish; all rockfishes of the genus *Sebastes*; sanddab (Pacific); sablefish; scorpionfish (California); shark (leopard, soupfin, spiny dogfish); skate(big, California, longnose); soles (butter, curlfin, dover, English, flathead, petrale, rex, rock, sand); thornyhead (longspine, shortspine); whiting (Pacific (hake));

Lobster (Title 14 section 121-122; FGC sections 8254, 8259). Authority limited to issuance and revocation of permits, and establishment of permit conditions. Season and size restrictions in Fish and Game Code.

Mackerel, Pacific (Title 14 section 148; FGC 8411, 8412). Authority limited to conforming regulations to FMP. Authority limited to issuance and revocation of permits, and establishment of permit conditions. Pacific mackerel managed under PFMC Coastal Pelagic Species FMP.

Pelagic Sharks (Title 14 106; FGC sections 8561-8577). Authority limited to issuance and revocation of drift gill net permits. Several pelagic sharks and other species are being addressed in a PFMC Highly Migratory Species FMP currently being developed[a] (see below).

Salmon (Title 14 sections 27.80, 182-183; FGC sections 7652, 8210-8226). Authority limited to conforming regulations to FMP. Salmon managed under PFMC Salmon FMP.

Sardine (Title 14 section 157; FGC sections 8150.7, 8780.1). Authority limited to conforming regulations to FMP, importation of sardines for bait, and use of bait nets. Sardine managed under PFMC Coastal Pelagic Species FMP.

Sea Cucumber (FGC section 8405.3). Authority effective until 1/1/03.

Squid (Title 14 section 149; FGC section 8425). Authority effective until 1/1/04. Squid listed under PFMC Coastal Pelagic Species FMP but is a monitored species only. Pacific Fishery Management Council has deferred management of squid to the State as long as management is consistent with federal regulations.

Swordfish (Title 14 section 106,107; FGC section 8394, 8561-8577). Authority limited to issuance and revocation of drift gill net permits. Authority for management of hand-held hook and line and harpoon fishery. Swordfish are being addressed in a PFMC Highly Migratory Species FMP currently being developed.

****

[a] The following species are included in a Draft Highly Migratory Species FMP currently being developed. These finfishes would be under management authority of the PFMC: dolphin fish; escolar*; louvar*; bullet mackerel*; marlin (striped); opah*; sunfish (ocean)*; shark (basking*, blue, salmon*, shortfin mako, thresher, bigeye thresher, pelagic thresher, white); swordfish; tuna (albacore, bigeye, bluefin, skipjack, black skipjack*, yellowfin).

* denotes species that would be included in the plan if they become targeted or significant bycatch, discard, or incidental catch.

Appendix F. Management Authority for California's Marine Fisheries (by Gear)

A. Complete management authority under the Commission

Fin fish taken in traps (FGC section 8403)
Experimental gear fisheries (FGC section 8606)
Trawl net fisheries in waters inside the Golden Gate Bridge (FGC section 8832); including shrimps, oriental gobies, longjaw mudsucker, plainfin midshipman, and staghorn sculpin
Possession of trawl nets in specified waters (FGC section 8833)
Powered equipment to take crustaceans and molluscs (suction dredges on mud flats) (FGC section 9053)
Bait nets (8780.1)

B. Complete management authority under the Legislature

Nets (FGC section 8601)
Areas closed to gill and trammel nets by the Marine Resources Protection Act of 1990 (FGC sections 8610-8610.16)
Purse, seine, and roundhaul nets (FGC sections 8623-8626)
Nets in Districts (FGC sections 8660-8665)
Gill and trammel nets (FGC sections 8680, 8685)
Incidental take of swordfish and marlin (FGC section 8684)
Salmon, steelhead, and striped bass taken in gill and trammel nets (FGC sections 8685.5-8685.7)
Drift gill nets in districts 6-10 (FGC sections 8687)
Gill nets in districts 11-13 (FGC section 8688)
Rockfish and lingcod in gill nets (FGC sections 8691-8692.5)
Use of nets in districts 17, 18, 19, 20A (FGC sections 8693-8694)
Gill nets west of Pt. Reyes Headlands (FGC section 8696)
Trammel nets (FGC sections 8720-8725)
Roundhaul nets (FGC sections 8750-8757)
Beach nets (FGC sections 8800-8807)
Trawl nets (FGC sections 8830-8840, 8843)
Dip nets (FGC section 8870)
Baited hoop nets (FGC section 8890)

California Department of Fish and Wildlife
Marine Region News Service

News Release

FOR IMMEDIATE RELEASE - September 22, 2015

Aquaculture Awareness Week: 10 Facts About California Aquaculture

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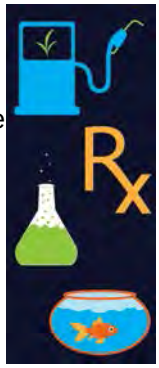

In recognition of Aquaculture Awareness Week, the California Department of Fish and Wildlife (CDFW) offers 10 interesting facts that show how aquaculture - the practice of farming aquatic organisms - affects every California resident.

1. The California aquaculture industry is diverse, providing much more than just food for dinner. It also produces aquatic pets such as goldfish and koi, algae for biofuels, zebrafish for biomedical research, spirulina for vitamin supplements and more.
2. California's 150 registered aquaculturists aren't just located on the shoreline. You'll find them throughout the state -- from the high Sierra to inland valleys, from the deserts to the coast. They operate in 50 of the state's 58 counties, accounting for some $140 million in economic benefit.
3. The California Shellfish Initiative is a collaborative effort among government and private partners to help local growers meet the increasing demand for shellfish, thus decreasing the need for imports and lowering our carbon footprint. California shellfish aquaculture contributes $25 million to the economy, providing jobs and resilient working waterfronts.
4. California's oyster growers are collaborating with scientists to find solutions to ocean acidification, which is killing off baby oysters at an alarming rate.
5. Commercial oysters and other bivalve shellfish help to filter and clean coastal waters. In turn, they rely on clean, healthy water for survival.
6. Sacramento is the caviar capital of the United States, providing approximately 85 percent of the country's supply of the delicacy.
7. California's first fish and game law, enacted in 1851, concerned oyster aquaculture and arose from an era when oyster piracy was a growing problem in San Francisco. Jack London's *Tales from The Fish Patrol* described the early days of fish and game wardens.
8. It takes a fraction of the resources (food, water and

space) to produce one pound of farm-raised fish than it does to produce one pound of beef, making aquaculture an ideal source of protein for the world's rapidly growing population.

9. Aquaponics, which uses fish waste to fertilize plants in a recirculating system, is growing in popularity in California as a new drought-friendly approach to food production.
10. Aquaculture techniques pioneered in California are a critical tool in the restoration of at-risk species including trout, salmon, abalone, sturgeon and white seabass.

For more information about California aquaculture, visit the Aquaculture Matters website.

# # #

This is the fourth year of California's drought. To learn about all the actions the state has taken to manage our water system and cope with the impacts of the drought, please visit the California Drought website.

Every Californian should take steps to conserve water. Find out how at saveourwater.com.

Join our Mailing List

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Ocean-related news and information

Visit the Marine Region Website at www.dfg.ca.gov/marine
Visit the CDFW Marine Management News blog at https://cdfwmarine.wordpress.com/

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California Department of Fish and Wildlife News Release

Aug. 11, 2015

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Responsible Angling Practices Help Conserve Sturgeon Populations

The California Department of Fish and Wildlife (CDFW) is asking anglers to use caution and extra vigilance to help conserve California's white sturgeon and green sturgeon populations, both of which are being impacted by the drought. Sturgeon are caught by anglers year-round in a popular sport fishery centered in the San Francisco Estuary, but anglers — especially those fishing in the Sacramento and San Joaquin rivers — need to be aware of special regulations in place to protect and grow the populations.

White sturgeon is a substantial management concern and green sturgeon is a threatened species under the federal Endangered Species Act. Green sturgeon may not be fished for, removed from the water if caught, or kept. White sturgeon may only be kept if between 40 and 60 inches and caught by anglers in possession of Sturgeon Fishing Report Cards (including single-use tags) while using single barbless hooks in areas that are not closed.

Strict fishing regulations are designed primarily to conserve older white sturgeon and ensure that all sturgeon survive catch-and-release. The effectiveness of catch-and-release depends in large part on angler technique. CDFW encourages anglers to use high-strength fishing line to reduce duration of the fight and in-water techniques for measuring the size of white sturgeon. Anglers should leave oversize white sturgeon in the water at all times and know how to quickly identify green sturgeon.

In 2014, California anglers reported keeping 2,286 white sturgeon while releasing 4,565 white sturgeon (most were undersized) and 183 green sturgeon. Other data on the white sturgeon fishery and population is available at www.dfg.ca.gov/delta/data/sturgeon/bibliography.asp.

A flyer on identifying green sturgeon can be found at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentId=105326.

The complete fishing regulations are available at www.wildlife.ca.gov/regulations.

###

*This is the fourth year of California's **drought**. To learn about all the actions the state has taken to manage our water system and cope with the impacts of the drought, please visit drought.ca.gov.*

*Every Californian should take steps to **conserve water.** Find out how at saveourwater.com.*

***Subscribe to CDFW News** via e-mail or RSS feed. Go to www.wildlife.ca.gov/news.*

Like CDFW on Facebook at www.facebook.com/californiadfw and Twitter @CaliforniaDFW.

California Department of Fish and Wildlife News Release

Aug. 11, 2015

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Recreational Pacific Halibut Fishery to Close August 13

The California Department of Fish and Wildlife (CDFW) announces the recreational Pacific halibut fishery will close Thursday, August 13 at 12:01 a.m. for the remainder of 2015. Based on the latest catch projections, CDFW expects the 2015 quota of 25,220 pounds will be exceeded unless the fishery is closed. Authority to close the fishery resides with the International Pacific Halibut Commission (IPHC) and the National Marine Fisheries Service (NMFS), which took action to close the fishery following consultation with CDFW.

Although poor weather limited fishing following the May 1 opener, excellent ocean conditions during the July 1-15 open period resulted in record Pacific halibut catch rates for California.

California's recreational quota and season dates for 2015 were the result of negotiations with anglers, the fishing industry, local community leaders and other state and federal partners. Beginning in 2015, CDFW committed to tracking the fishery during the season to ensure catch amounts would not exceed the California quota. The quota amount is determined annually, and is largely driven by results from the annual stock assessment conducted by the IPHC.

Pacific halibut occupy a large geographic range, from the Aleutian Islands eastward through Alaska to British Columbia and throughout ocean waters of the Pacific Northwest. Along the West Coast, they are commonly found as far south as Point Arena in Mendocino County. In recent years, catches in northern California have increased, consistent with a general shift of the stock to the south and east.

CDFW field staff sampled public launch ramps and charter boat landings to monitor catches of Pacific halibut along with other marine sportfish throughout the season. Using this information, CDFW conferred with NMFS and IPHC on a weekly basis to review projected catch amounts and determine when the quota would be attained.

For current information about the Pacific halibut fishery, science or management, please check the following resources:

- NMFS Hotline, (800) 662-9825
- CDFW Recreational Groundfish Regulations Hotline, (831) 649-2801
- CDFW website, www.dfg.ca.gov/marine/pacifichalibut.asp
- IPHC website, www.iphc.int

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California Department of Fish and Wildlife News Release

Aug. 11, 2015

Media Contacts:
Dean Marston, CDFW Central Region, (559) 243-4005, ext. 122
Andrew Hughan, CDFW Communications, (916) 201-2958

CDFW to Hold Public Meeting on Merced River Closure

The California Department of Fish and Wildlife (CDFW) will hold a public meeting on Monday, Aug. 17 to inform the public about the proposed emergency closure of the Merced River to fishing.

The meeting will be held from 6-9 p.m. in the theater at El Capitan High School, 100 West Farmland Ave., Merced (95348).

Last year the California Fish and Game Commission adopted a proposal to implement early restrictions on angling in the Merced River, closing the river from Aug. 29 to Dec. 31, 2014. Earlier this year, the Commission granted CDFW authority to close fisheries when certain criteria are met, such as low water levels and high water temperatures.

This proposed early closure affects only the Merced River from Crocker-Huffman Dam downstream to the Snelling Road Bridge, a distance of approximately 5.5 miles. Angling in the river below Snelling Road bridge is subject to normal fishing regulations and closures..

The lower Merced River is typically only closed to angling from Nov. 1 through Dec. 31. The purpose of the annual closure is to increase survival of juvenile and adult wild rainbow trout and steelhead by reducing fish mortality associated with hook-and-line fishing.

The move to close the river ahead of schedule is intended to protect drought-stressed waters and their salmonid populations during the fall spawning.

The river will re-open to anglers on Jan. 1, 2016.

# # #

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California Department of Fish and Wildlife News Release

Aug. 14, 2015

Media Contacts:
Lt. Chris Stoots, CDFW Law Enforcement, (916) 651-9982
Cpt. Patrick Foy, CDFW Law Enforcement, (916) 651-6692

CDFW Wildlife Officer Academy Graduates 30 Cadets

Thirty new law enforcement cadets graduated from the California Wildlife Officer Academy during ceremonies at the Performing Arts Center in Paradise on Aug. 14, 2015. The graduating class includes 23 sponsored warden cadets who will begin field training immediately. Another seven self-sponsored cadets paid their way through the academy and will apply to become wildlife officers.

"After 31 weeks of hard work at the academy, these cadets have earned the right to begin protecting California and ensuring the future of wildlife resources for the people of this great state," said California Department of Fish and Wildlife (CDFW) Chief of Enforcement David Bess.

The CDFW Wildlife Officer Academy is certified through the California Peace Officer Standards and Training (POST) and offers training consistent with every law enforcement agency in California.

For the 23 sponsored cadets, graduation concludes a rigorous 31 weeks of formal academy training, but marks the beginning of an additional three weeks of specialized training and certifications, followed by an additional 15 weeks of field training with seasoned field training officers (FTOs). Upon successful completion of the FTO program, these new officers will begin their incredible career patrolling California and protecting the fish and wildlife resources.

A special moment will occur during this year's graduation, when Cadet William H. Castillo will be pinned by his father, Lt. Sam Castillo. Lt. Castillo is nearing retirement after a noteworthy 30 year career as a wildlife officer and Lieutenant for CDFW. Lt. Castillo will pass the torch to his son to honor the commitment of all wildlife officers who dedicate their lives to protecting California's natural resources.

Annually, wildlife officers make contact with more than 295,000 people and issue more than 15,000 citations. Wardens mostly work alone, in remote areas, contacting subjects who nearly always have some form of weapon, and they do so knowing that backup could be hours away. Wardens cover large patrol districts, the average being more than 600 square miles. They do all this with a sense of pride and honor, for a job that is not only rewarding, but truly enjoyable.

In 2007, CDFW teamed with Butte College to provide peace officer academy training for prospective wardens. That partnership provided CDFW a state of the art academy facility and a POST-certified training program for wildlife officer cadets on the Butte College Oroville campus.

Butte College has a 40-year history of police recruit training. The 928-acre community college campus, the largest in California, is also a designated wildlife refuge.

CDFW anticipates the next round of warden cadet selection to begin in September or October of 2015, for the January 2017 academy. For more information about becoming a warden and to monitor when applications will be accepted, please visit www.dfg.ca.gov/enforcement/career/.

# # #

California Department of Fish and Wildlife News Release

Aug. 18, 2015

Media Contact:
Andrew Hughan, CDFW Communications, (916) 322-8944

Emergency Merced River Angling Closure in Effect as of Aug. 18

High water temperatures in the lower Merced River have prompted the California Department of Fish and Wildlife (CDFW) to close a portion of the river to angling earlier than usual. This early closure begins today, Aug. 18, and affects only the Merced River from Crocker-Huffman Dam downstream to the Snelling Road Bridge, a distance of approximately 5.5 miles.

The lower Merced River is typically closed to angling from Nov. 1 through Dec. 31. The river is still scheduled to be closed during that period, and will re-open to anglers on Jan. 1, 2016.

In June 2015, the California Fish and Game Commission granted CDFW the authority to close fisheries when certain criteria are met, such as low water levels and high water temperatures. This year's move to close the river ahead of schedule was deemed necessary in order to protect drought-stressed salmonid populations during the fall spawning.

Additional information on emergency angling closures, including a map, can be found at wildlife.ca.gov/fishing/inland/closures or by calling the emergency closure hotline at (916) 445-7600.
and winter rains, if received in sufficient amounts, will cool water temperatures enough to allow hatcheries to come back online and resume operations.

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California Department of Fish and Wildlife News Release

August 20, 2015

Media Contact:
Jordan Traverso, CDFW Communications, (916) 654-9937
Matt Baun, USFWS Communications, (530) 841-3119

Photo Shows Wolf Pups in Northern California

The California Department of Fish and Wildlife (CDFW) has photographic evidence of five gray wolf pups and two adults in Northern California.

After trail cameras recorded a lone canid in May and July, CDFW deployed additional cameras, one of which took multiple photos showing five pups, which appear to be a few months old and others showing individual adults. Because of the proximity to the original camera locations, it is likely the adult previously photographed in May and July is associated with the group of pups.

"This news is exciting for California," said Charlton H. Bonham, CDFW Director. "We knew wolves would eventually return home to the state and it appears now is the time."

CDFW has designated this group (comprised of two adults and five pups) the Shasta Pack.

Wild wolves historically inhabited California, but were extirpated. Aside from these wolves and the famous wolf OR7 who entered California in December 2011, the last confirmed wolf in the state was here in 1924. OR7 has not been in California for more than a year and is currently the breeding male of the Rogue Pack in southern Oregon.

In June 2014, the California Fish and Game Commission voted to list gray wolves as endangered under the California Endangered Species Act. The gray wolf is also listed as endangered in California, under the Federal Endangered Species Act of 1973. Gray wolves that enter California are therefore protected by the ESA making it illegal to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect wolves, or to attempt to engage in any such conduct in California.

CDFW is completing a Draft Wolf Management Plan and will release it soon. Throughout the plan's development, CDFW has held numerous meetings with stakeholders. Currently, CDFW is incorporating comments from a stakeholder advisory group, and considering revisions due to implications of this news, before releasing the draft plan to the general public. Public meetings will be scheduled to receive public comment on the draft plan.

In addition to the trail cameras, CDFW relies on help from the public to glean information about wolves in California. The public can report wolf sightings on CDFW gray wolf website at www.wildlife.ca.gov/Conservation/Mammals/Gray-Wolf/Sighting-Report.

Though wolves rarely pose a direct threat to human safety, CDFW recommends that people never approach, feed or otherwise disturb a wolf. For more information about staying safe in wolf-occupied areas, including what people should do if they encounter a wolf, please visit www.wildlife.ca.gov/Conservation/Mammals/Gray-Wolf/FAQ.

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California Department of Fish and Wildlife News Release

Aug. 25, 2015

Media Contacts:
Lt. Chris Stoots, CDFW Law Enforcement, (916) 651-9982
Cpt. Patrick Foy, CDFW Law Enforcement, (916) 651-6692

CDFW Now Recruiting New Wildlife Officers

The California Department of Fish and Wildlife (CDFW) is recruiting those interested in a career as a wildlife officer. CDFW will accept applications for wildlife officer cadet through the final filing deadline of Oct. 16, 2015. CDFW is particularly interested in recruiting applicants with a passion for conservation of California's fish and wildlife resources.

For information on minimum qualifications and other requirements for wildlife officer cadets, please visit www.dfg.ca.gov/enforcement/career/.

The CDFW Law Enforcement Division expects an overwhelming number of inquiries and asks prospective candidates to extensively review materials on the website before contacting CDFW with questions.

California wildlife officers are charged with ensuring public safety, enforcing fish and wildlife laws, investigating illegal sales of wildlife, protecting the state from pollution, enforcing habitat protection laws, fighting illegal drug trafficking, keeping the homeland secure and responding during natural disasters. As peace officers, they have the authority to enforce all California laws, such as the Vehicle Code and Penal Code, and are federally deputized to enforce federal fish and wildlife laws.

A typical day for a California wildlife officer is diverse as the state's fish and wildlife. Wildlife officers patrol ocean, desert, mountain and valley environments, as well as urban areas. They frequently work independently and conduct full-scale law enforcement investigations. Wildlife officers employ everything from all-terrain vehicles to jet skis and snowmobiles while on patrol and spend much of their typical day making contact with Californians in the great outdoors. CDFW has a dive team and utilizes K-9 partners as well. Environmental crimes and pollution incidents also fall under the purview of wildlife officers. Annually, wildlife officers make contact with more than 295,000 people and issue more than 15,000 citations for violations of the law.

Successful applicants will enter a 31-week academy training program, followed by 19 weeks of field training, where they will work with a seasoned field training officer. CDFW's academy at Butte College is California Peace Officer Standards and Training certified. Cadets are trained as police officers with specific emphasis on wildlife, pollution and habitat protection.

In California, with 159,000 square miles of habitat and wildlife diversity unequaled by any other state, the average wildlife officer has a patrol district of more than 600 square miles. The state has more than 1,100 miles of coastline, 30,000 miles of rivers and streams, 4,800 lakes and reservoirs, three desert habitat areas and scores of high mountain peaks.

For more information and to apply, please visit the following links:

- Job posting: https://jobs.ca.gov/jobsgen/5FG11.pdf
- State application: https://jobs.ca.gov/pdf/std678.pdf

Applications must be postmarked no later than Oct. 16.

# # #

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California Department of Fish and Wildlife News Release

Aug. 26, 2015

Media Contact:
Lt. Mike Milotz, CDFW Law Enforcement and CalTip Program, (916) 654-1485
Lt. Chris Stoots, CDFW Law Enforcement, (916) 651-9982
Andrew Hughan, CDFW Communications, (916) 322-8944

Reporting Resources Violations Faster, Easier Using Technology

Several hunting seasons are approaching and the California Department of Fish and Wildlife (CDFW) is asking the public to use technology -- rather than social media -- to report wildlife and pollution crimes across the state.

"We often get reports of violations and other very good tips sent to CDFW through social media, but our Twitter and Facebook sites are not directly monitored by wildlife officers," said Lt. Mike Milotz, CDFW CalTip Program Coordinator. "There are several ways for the public to report issues directly to us in real time, including a CalTIP phone number, a smart phone app, direct text message capability and our website."

All reports can be completely anonymous, as the technology removes all identifying information before wildlife officers see the tips.

The public can report violations or concerns in the following ways:

- Phone Number: (888) 334-2258 / (888) 334-CALTIP
- App: CalTIP app (free via the Google Play Store and iTunes App Store)
- Text Message: Text to 847-411 and a wildlife officer can respond directly. (Please begin your message with "Caltip," followed by the details)
- CDFW's website: www.dfg.ca.gov/enforcement/caltip.aspx
- Call 911

CDFW law enforcement reminds people to never put their safety in jeopardy or try to stop a suspected crime. Report it as soon as possible, including a description of the people, equipment and vehicles involved. The more detail provided, the better.

CalTIP is a confidential secret witness program that encourages the public to provide factual information leading to the arrest of poachers and polluters. The program is funded by penalty assessments generated by fines from wildlife violators and polluters. The existing CalTIP confidential secret witness phone number, 1-888-334-2258, continues to operate 24 hours a day, seven days a week.

Wildlife officers encourage anyone who witnesses a poaching or polluting violation, or who has information about a violation, to report it as soon as possible.

# # #

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California Department of Fish and Wildlife News Release

Sept. 4, 2015

Media Contacts:
Andrew Hughan, CDFW Communications, (916) 201-2958
David Hines, NOAA Fisheries, (707) 575-6098
Gary Helfrich, Camp Meeker RPD, (707) 326-4051

Camp Meeker Water District Releasing Water to Save Salmon

A western Sonoma County water district is releasing water from its facility to help save fish in an important Sonoma County watershed during the critical drought period.

The Camp Meeker Recreation and Parks District (CMRPD) has begun releasing untreated water from its water treatment facility into Upper Dutch Bill Creek, a tributary to Russian River, for the benefit of summer-rearing coho salmon and steelhead. This is the first voluntary flow augmentation project to be implemented in Dutch Bill Creek and the third to be implemented within the four tributaries subject to the Emergency Regulations for the Protection of Specific Fisheries.

The Voluntary Drought Initiative (VDI) program was initiated jointly by the California Department of Fish and Wildlife (CDFW) and the National Marine Fisheries Service (NMFS) to address stream flow concerns associated with the California drought. In March of this year, CDFW began asking rural land owners again to sign agreements to voluntarily reduce water demand in four critical watersheds that include Dutch Bill, Green Valley, Mark West and Mill creeks. So far 40 land owners have partnered with CDFW.

In response to increased awareness of the drought crisis, and the imminent threat to coho salmon from low stream flow conditions, several groups have stepped forward to actually contribute water back into streams from their stored sources. The CMRPD effort is unique in that it is diverting water from its supply pipeline in an amount that is immediately benefiting coho salmon.

Since the releases began last month, Dutch Bill Creek is flowing better than it has for the last two months and dissolved oxygen and temperature conditions are expected to keep juvenile coho salmon alive until the winter rains arrive.

CDFW, NMFS and the Goldridge RCD will continue to monitor conditions in the creek to keep enough water following until eventual rains.

# # #

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California Department of Fish and Wildlife News Release

Sept. 9, 2015

Media Contact:
Andrew Hughan, CDFW Communications, (916) 201-2958

American River Hatchery Suffers Fish Die-off

The California Department of Fish and Wildlife (CDFW) is working to keep hundreds of thousands of trout alive at the American River Hatchery after warm water temperatures killed approximately 155,000 trout Tuesday.

A chiller that cools water at the hatchery about 18 miles east of Sacramento unexpectedly failed Tuesday, and warm temperatures killed most of the Eagle Lake species of trout being raised at the hatchery. Failure of the hatchery equipment may be related to work by the U.S. Bureau of Reclamation, which owns the hatchery, but the exact cause is not clear and is under investigation. Hatchery staff is working to get a least one chiller working again, which could drop the water temperature – now approximately 70 degrees Fahrenheit – by five degrees, enough to help sustain the remaining trout in the hatchery.

Additional losses are expected because of stress to the fish and continuing elevated water temperatures.

Loss estimates as of Sept. 9, by species:

- 155,000 of the 199,313 (78%) of Eagle Lake trout
- 300 of the 61,839 (0.5%) of Shasta trout
- Five of the 230,000 Lahontan cutthroat trout

Though this fish kill means that CDFW likely will not be able to stock streams and lakes at an ideal level in the Sacramento region next year, all trout at the American River Hatchery were not lost. CDFW will seek ways to supplement the trout produced at its hatcheries to increase angling opportunities next year.

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*When you prepare your California income tax return, please consider making a **voluntary contribution** to the California Sea Otter Fund (line 410) and/or the Rare and Endangered Species Fund (line 403). Thank you! www.wildlife.ca.gov/tax-donation.*

California Department of Fish and Wildlife News Release

Sep. 15, 2015

Media Contacts:
Kristine Lesyna, CDFW Marine Region, (650) 631-6742
Ethan Mora, NOAA Fisheries, (831) 420-3663
Carrie Wilson, CDFW Communications, (831) 649-7191
Jim Milbury, NOAA Fisheries, (562) 980-4006

Reward Offered for Return of Satellite Tags from Federally Protected Green Sturgeon

State and federal fisheries officials are asking for public assistance and offering a $20 reward for the return of each satellite tag from green sturgeon. The satellite tags, which are programmed to release from the fish after a predetermined time, are most likely to be found along the open ocean coastal portions of San Francisco and San Mateo counties, and the shores and waters of San Francisco Bay, San Pablo Bay, Suisun Bay and the Delta.

Biologists use the tags to gather information on the Southern Distinct Population Segment of green sturgeon, a species listed as threatened under the Endangered Species Act.

The tag rewards are being offered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the California Department of Fish and Wildlife (CDFW), in collaboration with the West Coast Groundfish Observer Program, UC Davis and central California commercial halibut trawl fishermen.

If you see a live fish with a tag attached, do not remove the tag from the fish. Instead, note the tag number and call or email the point of contact printed on the tag. If you find a detached tag, please pick it up for return and contact Kristine Lesyna , CDFW Marine Region, (650) 631-6742, or Ethan Mora, NOAA Fisheries, (831) 420-3663.

More information about the tagging study can be found on the NOAA Fisheries Green Sturgeon Bycatch Project webpage.

# # #

California Department of Fish and Wildlife News Release

Sept. 23, 2015

Media Contact:
Kyle Orr, CDFW Communications, (916) 322-8958

CDFW Recognizes National Hunting and Fishing Day, Celebrates Contributions of California's Hunters and Anglers

National Hunting and Fishing Day will be celebrated on Saturday, Sept. 26. In conjunction with this annual observance, the California Department of Fish and Wildlife (CDFW) reminds Californians of the plentiful opportunities to enjoy hunting and fishing in the state and commends them for their commitment to conservation.

"California's anglers and hunters play a crucial role in the conservation of California's natural resources," said CDFW Director Charlton H. Bonham. "On behalf of CDFW, I thank them for their invaluable contribution."

President Richard Nixon signed the first proclamation of National Hunting and Fishing Day in 1972. It is annually held on the fourth Saturday in September to promote outdoor sports and conservation.

California is the third-largest state in the nation and approximately half of its land is publicly owned. That translates into millions of acres of huntable public property on which CDFW offers varied hunting opportunities.

In 2014, 284,761 licensed hunters contributed approximately $25,181,595 toward wildlife management and conservation activities in the state. Wildlife management and conservation activities have resulted in numerous success stories over the years in California. For example:

Tule Elk
1874: Thirty were remaining in California in one herd in the southern San Joaquin Valley.
2015: 4,200 animals distributed in 22 herds across California.

Wild Turkeys
1959: There were virtually no wild turkeys other than game farm birds, which were essentially raised to be shot and killed.
2015: There are an estimated 250,000 wild turkeys in the state.

Desert Bighorn Sheep (Nelson)
1915: They were nearly extirpated in the state.
2014: There are approximately 2,000 in California.

Aleutian Canada Goose
1970: There were approximately 200 to 300 in California.
2015: There are approximately 120,000 in the state.

Fishing opportunities also abound in the more than 30,000 miles of rivers and streams, 4,172 lakes and reservoirs and 80 major rivers in California. The state features more than 1,100 miles of coastline that is home to hundreds of fish and shellfish species.

CDFW offers two “free fishing” days each year in the state, and this year prospective anglers received those opportunities on July 4 and Sept. 5. Fish production is also an important activity of CDFW, which in 2014 produced 2.5 million pounds of trout for recreational angling.

Last year, CDFW issued 1.78 million fishing licenses and those licenses (including report cards and validations) generated $63 million in funding for fisheries management and protection. California also received $17.3 million in federal Sport Fish Restoration Grants in 2015 — the grant amount is based on a formula that incorporates the geographical size of a state and the total number of licensed individuals in the state.

Fisheries management and conservation activities have also resulted in numerous success stories over the years in California. For example:

Wild Trout Fisheries
1970: No designated wild trout sport fisheries.
2015: 51 designated wild trout waters, encompassing 1,400 miles of streams and 14 lakes.

Landlocked Salmon
1993: No landlocked salmon sport fisheries.
2015: Twenty-one reservoirs support sport fishing for Kokanee salmon and 12 reservoirs support sport fishing for landlocked Chinook salmon.

Largemouth Bass
1874: Introduced into California.
2015: Twenty of 25 largest largemouth bass caught worldwide have been in California.

Alabama Spotted Bass
1974: Introduced into California.
2015: The current world record for the species was caught in a California reservoir. The state record for the species was broken twice in a one-month span, including a pending new world record.

For more information on hunting and fishing opportunities in the Golden State, please visit www.wildlife.ca.gov. For information on how to purchase a hunting or fishing license, please visit www.wildlife.ca.gov/licensing/online-sales. For more information on National Hunting and Fishing Day, please visit http://www.nhfday.org/.

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Sonke Mastrup, Executive Director
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Sacramento, CA 95814
(916) 653-4899

www.fgc.ca.gov

MEETING OUTCOMES FOR AUGUST 4-5, 2015

These meeting outcomes were prepared by staff.
The official meeting minutes – video and audio recordings – may be obtained from www.cal-span.org.

DAY 1 – AUGUST 4, 2015

Pursuant to the call of the president, the California Fish and Game Commission (Commission) met at the River Lodge Conference Center, 1800 Riverwalk Drive, Fortuna, California on August 4, 2015.

The meeting was called to order at 8:32 a.m. by President Baylis, who welcomed elected officials and Executive Director Sonke Mastrup, Executive Director Mastrup introduced the meeting format, Commission staff, and Daniel Harris of the California Attorney General's Office. President Baylis introduced the director of the California Department of Fish and Wildlife (Department), who introduced Department staff. Vice President Kellogg and Commissioners introduced themselves.

FISH AND GAME COMMISSION ATTENDANCE

Jack Baylis	**President**	**Present**
Jim Kellogg	**Vice President**	**Present**
Jacque Hostler-Carmesin	**Member**	**Present**
Eric Sklar	**Member**	**Present**
Anthony C. Williams	**Member**	**Present**

1. Public Forum

   No action taken. [See attached tables for a summary of all regulatory petitions and non-regulatory requests received at or for the meeting.]

2. Committee Assignments

   (A) Marine Resources Committee
   (B) Wildlife Resources Committee
   (C) Tribal Committee

The Commission assigned E. Sklar and A. Williams as the Marine Resources Committee co-chairs and made no changes to the Wildlife Resources Committee co-chairs or the Tribal Committee chair.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

3. Tribal Committee

   (A) Work plan development
      I. Update on current work plan and timeline
      II. Discuss and approve new topics

The Commission approved the proposed agenda topic of tribal take exemptions in marine protected areas for the October 6 committee meeting in Los Angeles.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

4. Marine Resources Committee

   (A) Work plan development
      I. Update on current work plan and timeline
      II. Discuss and approve new topics

No action taken.

5. Request for authorization to publish notice of intent to amend Dungeness crab and crab trap sport fishing regulations

The Commission authorized staff to begin the official rulemaking process.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

6. Request for authorization to publish notice of intent to amend commercial hagfish regulations

The Commission authorized staff to begin the official rulemaking process.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

7. Request for authorization to publish notice of intent to amend commercial herring regulations

The Commission authorized staff to begin the official rulemaking process.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

8. Update on implementing and managing California's marine protected areas, including impacts of AB 298 (Chap. 31, Stats 2015)

No action taken.

9. Request for authorization to publish notice of intent to amend marine protected area, marine managed area, and special closure regulations

The Commission authorized staff to begin the official rulemaking process.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

10. Determine whether Santa Barbara Mariculture's application for a new state water bottom lease adjacent to existing lease M-653-02 would be in the public interest

The Commission found that the lease would be in the public interest and directed staff to initiate the environmental review and public notice processes.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

CONSENT ITEMS	
11.	Receive Charles Friend Oyster Company request to renew state water bottom lease M-430-04 for aquaculture
12.	Receive Point Reyes Oyster Company, Inc. request to renew state water bottom lease M-430-13 & M-430-17 for aquaculture
13.	Receive and approve California Department of Fish and Wildlife (Department) request to amend gear authorized to take hagfish under experimental permit No. X-1868 issued to Mr. Craig Thomsson

The Commission adopted the consent calendar.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

14. Announce results from Executive Session

The Commission unanimously adopted the Office of Administrative Hearings' proposed decision for Andrey Bukaty. The Commission continued the matter for Mr. Fred Todd to allow legal counsel to conduct research and report back to the Commission in October.

15. Items of interest from previous meetings

(A) Action on petitions for regulatory change received at the June 2015 meeting **[See attached table for actions taken on petitions for regulatory change.]**
(B) Action on non-regulatory requests received at the June 2015 meeting **[See attached table for actions taken on requests for non-regulatory action.]**
(C) Other

The Commission adopted the staff recommendations for the petitions for regulation change and requests for non-regulatory action.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

16. Department informational items

(A) Director's report
(B) Wildlife and Fisheries Division, and Ecosystem Conservation Division
(C) Law Enforcement Division
(D) Marine Region
(E) Other

No action taken.

17. Other items

(A) Staff report

(B) Legislative update and possible action

(C) Federal agencies report

No action taken.

18. Discussion and action on future meeting items

(A) Next meeting – October 7-8 in Los Angeles

The Commission approved the October agenda topics.

(B) Perpetual timetable for regulatory action updates

The Commission approved changes to anticipated regulatory actions as identified in the perpetual timetable.

(C) Meeting schedule and locations for 2016

The Commission directed staff to secure meeting facilities for the identified dates and locations.

(D) New business

The Commission meeting recessed at 4:46 p.m. to reconvene on August 5, 2015 at 8:00 a.m.

DAY 2 – AUGUST 5, 2015

Pursuant to the call of the president, the Commission reconvened at the River Lodge Conference Center, 1800 Riverwalk Drive, Fortuna, California on August 5, 2015. The meeting was called to order at 8:06 a.m. by President Baylis.

FISH AND GAME COMMISSION ATTENDANCE

Jack Baylis	**President**	**Present**
Jim Kellogg	**Vice President**	**Present**
Jacque Hostler-Carmesin	**Member**	**Present**
Eric Sklar	**Member**	**Present**
Anthony C. Williams	**Member**	**Present**

The Commission took agenda items 28- 30, 32-37, 24 and 25 out of order, respectively, but they are shown in numerical order in this summary.

19. Public Forum

No action taken. [See attached tables for a summary of all regulatory petitions and non-regulatory requests received at or for the meeting.]

20. Adoption of proposed changes to bobcat trapping regulations

The Commission adopted a statewide ban on bobcat trapping.

Ayes: J. Baylis, E. Sklar, A. Williams

Noes: J. Hostler-Carmesin, J. Kellogg

21. Receive, discuss and act on (1) request from the Center for Biological Diversity to reconsider the decision on whether listing tricolored blackbird (*Agelaius tricolor*) as a threatened or endangered species may be warranted, and (2) other information received by the Commission

The Commission deferred a decision on the reconsideration to its October 2015 meeting.

Ayes: J. Baylis, J. Hostler-Carmesin, E. Sklar, A. Williams

Noes: J. Kellogg

22. Decision on whether to list fisher (*Pekania pennanti*) (formerly Pacific fisher (*Martes pennanti*)), as a threatened or endangered species
Note: Findings will be adopted at a future meeting.

The Commission determined that listing the fisher as threatened in the Southern Sierra Nevada Ecologically Significant Unit was warranted and authorized staff to begin the official rulemaking process.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

23. Wildlife Resources Committee

(A) Work plan development
  I. Update on current work plan and timeline
  II. Discuss and approve new topics
(B) Discussion of predator workgroup structure, and work plan
(C) Department presentation on snagging

The Commission approved the agenda topics for the September committee meeting and approved the format and function of the predator policy workgroup (with an amended drafting group membership of 10-16, and members selected by co-chairs Baylis and Kellogg).

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

24. Request for authorization to publish notice of intent to amend sport fishing regulations

The Commission authorized staff to begin the official rulemaking process.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

25. Request for authorization to publish notice of intent to amend the definition of transgenic animal regulations

The Commission authorized staff to begin the official rulemaking process.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

26. Update on proposed changes to Department Lands Pass regulations

This item was deferred to the next Commission meeting.

27. Update on potential changes to regulations for setting mammal hunting tag quotas

This item was deferred to the next Commission meeting.

28. Adoption of proposed changes to upland game bird regulations

The Commission adopted the sage grouse quota and later end time for turkey hunting.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

29. Adoption of proposed changes to waterfowl regulations

The Commission adopted the proposed bag limits and seasons for waterfowl hunting.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

30. Request to amend approved Duck Stamp funding for Fiscal Year 2015-2016

The Commission expenditure of an additional $1 million from the Duck Stamp fund for 2015-16.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

31. Presentation of Waterfowler's Hall of Fame certificates

The Commission recognized Congressman George Miller, Doug Frederighi, Victor Gonella, Brian Hunter and Henry Trione as members of the California Waterfowler's Hall of Fame certificates.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

32. Receive and act on the Pine Ranch Private Lands Wildlife Habitat and Enhancement Management Area annual report and 2015-2016 plan

The Commission elected not to renew the PLM license for Pine Ranch in Yolo and Colusa counties.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

CONSENT ITEMS

33. Receive petition from the Environmental Protection Information Center and Center for Biological Diversity to list Humboldt marten (*Martes caurina humboldtensis*) as an endangered species under the California Endangered Species Act

34. Receive Environmental Protection Information Center's independent status report on the petition to list northern spotted owl (*Strix occidentalis caurina)* as a threatened or endangered species under the California Endangered Species Act

35. Receive and approve, or amend, initial Private Lands Wildlife Habitat Enhancement and Management Area (PLM) plans and 2015-2020 licenses for six properties

36. Receive and approve, or amend, annual reports and 2015-2016 PLM plans for twenty-one properties

37. Receive and approve 5-year PLM plans and 2015-2020 licenses for four properties
(A)

The Commission approved items 33-37 as presented.

Ayes: J. Baylis, J. Hostler-Carmesin, J. Kellogg, E. Sklar, A. Williams

38. Department report on the status of Coho salmon

This item was deferred to the next Commission meeting.

Executive Director Mastrup verified Commission member requests to (1) move consent items to just after public forum each day, (2) move the March 2016 Marine Resources Committee meeting to March 21, and (3) provide in each meeting binder a one to three line summary of each agenda item from the previous meeting.

There being no further business, the Commission meeting adjourned at 6:08 p.m.

EXECUTIVE SESSION

(Not Open to Public)

Pursuant to the authority of Government Code Section 11126(a)(1) and (e)(1), and Section 309 of the Fish and Game Code, the Commission will meet in closed Executive Session. The purpose of this Executive Session is to consider:

(A) Pending litigation to which the Commission is a Party

I. Big Creek Lumber Company and Central Coast Forest Assoc. v. California Fish and Game Commission (Coho listing, south of San Francisco)

II. James Bunn and John Gibbs v. California Fish and Game Commission (squid permits)

III. Center for Biological Diversity and Earth Island Institute v. California Fish and Game Commission (black-backed woodpecker)

IV. Dennis Sturgell v. California Fish and Game Commission, California Department of Fish and Wildlife, and Office of Administrative Hearings (revocation of Dungeness crab vessel permit No. CT0544-T1)

V. Kele Younger v. California Fish and Game Commission, et al. (restricted species inspection fee waiver and Administrative Procedure Act)

(B) Possible litigation involving the Commission

I. Tricolored blackbird

(C) Staff performance and compensation

(D) Receive and act on hearing officer recommendations for license and permit items

I. Mr. Andrey Bukaty – Request to reinstate sport fishing privileges

II. Mr. Fred Todd – Request to hold one Nearshore Fishery Permit (NFP) in the North Central Coast Fishery Management Zone and an additional NFP in the North Coast Fishery Management Zone

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FISH AND GAME COMMISSION
2015 MEETING SCHEDULE
www.fgc.ca.gov

MEETING DATE	COMMISSION MEETING	COMMITTEE MEETING
September 9		**Wildlife Resources** Department of Industrial Relations 2550 Mariposa Mall, Room 1036 Fresno, CA 93721
October 6		**Tribal Committee** Embassy Suites – LAX North 9801 Airport Boulevard Los Angeles, CA 90045
October 7-8	Embassy Suites – LAX North 9801 Airport Boulevard Los Angeles, CA 90045	
November 4		**Marine Resources** Four Points by Sheraton Ventura Harbor Resort 1050 Schooner Drive Ventura, CA 93001
December 9-10	Town and Country Resort & Convention Center 500 Hotel Circle North San Diego, CA 92108	

OTHER MEETINGS OF INTEREST

Wildlife Conservation Board

- September 3, Sacramento, CA
- November 19, Sacramento, CA

Pacific Fishery Management Council

- September 11-16, Sacramento, CA
- November 14-19, Garden Grove, CA

CALIFORNIA FISH AND GAME COMMISSION
RECEIPT LIST FOR REGULATORY PETITIONS: RECEIVED FOR OR AT THE AUGUST 4-5, 2015 COMMISSION MEETING
Revised 8-19-2015

FGC - California Fish and Game Commission **DFW** - California Department of Fish and Wildlife **WRC** - Wildlife Resources Committee **MRC** - Marine Resources Committee

Grant (previously Accept): FGC is *willing to consider* the petition through a process **Deny (previously Reject):** FGC is *not willing to consider* the petition
Refer: FGC *needs more information* before deciding whether to grant or deny the petition

Green cells: Referrals to DFW for more information **Blue cells:** Referrals to FGC staff or committee for more information
Lavender cells: Accepted and moved to a rulemaking **Yellow cells:** Current action items

Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number		FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
6/5/2015 7/8/2015	Michel & Associates, on behalf of the National Rifle Association of America and the California Rifle and Pistol Association	Correspondence		Requests regulation to require all (1) FGC and (2) DFW staff conduct correspondence concerning official business via government issued email addresses.	**Action scheduled 10/7-8/2015**		
6/24/2015 6/24/2015 7/1/2015 7/6/2015 7/13/2015 7/28/2015	Joan Jones Holtz Dave Master Georganne Walker Elisabeth Lamar Erica Stanojevic Kimberlee Goebel	Crab fishing nets and traps in coastal waters		Requests ban on all crab fishing nets and crab traps in coastal waters due to whale entanglement risk.	**Action scheduled 10/7-8/2015**		
7/27/2015 8/4/2015	Center for Biological Diversity, et al. Oceana	Whale enganglement in commercial fishing gear		Request for actions to ensure CA fisheries are no longer responsible for whale entanglements.	**Action scheduled 10/7-8/2015**		
6/24/2015	Chip Warren	Commerical fishing and crabbing		Requests ban on commerical fishing and crabbing equipment that threatens marine life.	**Action scheduled 10/7-8/2015**		
6/24/2015	Robin Wallace	Crab lines		Requests limitation on where crab lines may be placed during whale migrations.	**Action scheduled 10/7-8/2015**		
6/29/2015	Mia O'Dell	Sugar gliders		Legalize possession of sugar gliders.	**Action scheduled 10/7-8/2015**		
6/30/2015, 8/5/2015	Eric Mills	Commission by-laws, public forum		Requests FGC adopt formal by-laws to (1) require a unanimous vote when only three commissioners are present; and (2) to add public forum to the beginning and end of each meeting day.	**Action scheduled 10/7-8/2015**		

Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number		FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
7/15/2015	Dennis Fox	Salmon restoration, take of predators in San Joaquin River		(1) Requests a review of the salmon restoration program; and (2) liberalized take of salmon predators in the San Joaquin River.	**Action scheduled 10/7-8/2015**		
7/12/2015	Terr Jelcick	Shark feeding		Requests ban on shark feeding and baiting for research, education, etc., within the Monterey Bay National Marine Sanctuary and West Coast of the U.S.	**Action scheduled 10/7-8/2015**		
7/13/2015	Trent Donohue, Wild Fish, et al.	Emergency fishing regulations		Requests implementation of emergency fishing closures when rivers exceed 18ºC.	**Action scheduled 10/7-8/2015**		
7/14/2015	Fred Darlington	Preference points		Requests to amend the hunting preference point system to permit opportunity.	**Action scheduled 10/7-8/2015**		
7/4/2015	Jason Robinson	Rock crab permit transfer process		Requests discussion of the rock crab permit transfer process at next FGC meeting.	**Action scheduled 10/7-8/2015**		
7/23/2015	Jose Figueroa	Trapping		Request to ban all trapping in California because it is cruel and inhumane.	**Action scheduled 10/7-8/2015**		
7/25/2015	Megan Clenney	Hedgehogs		Legalize possession of hedgehogs.	**Action scheduled 10/7-8/2015**		
8/4/2015 8/24/2015	April Wakeman, The Sport Fishing Conservancy	Fishing and hunting license possession	Sec. 700, Title 14	Request to amend regulations to specifically include a digital license viewable on a cell phone or tablet as being 'in possession' if and when such digital licenses are authorized.	**Action scheduled 10/7-8/2015**		
8/4/2015	Dan Yoakum	Herring experimental gear		Request changes to regulation to permit expermimental gear and conformance with NOAA regulations to exclude seals in fishery.	**Action scheduled 10/7-8/2015**		
8/4/2015	Greg Helms, Ocean Conservancy, et al.	Forage Fishery		Consider initializing regulations to conform state regulations with PFMC guidelines and other federal regulations.	**Action scheduled 10/7-8/2015**		
8/4/2015	Paul Weakland	Abalone		Request to re-open for abalone harvest the counties south of San Francisco.	**Action scheduled 10/7-8/2015**		
8/4/2015	Lynn Cullens	Mountain lions		Requests changes to depredation regulations to require non-lethal methods prior to issuance of a lethal permit for take.	**Action scheduled 10/7-8/2015**		
8/5/2015	Lynn Boulton	Trapping		Requests regulations to require hunters and trappers to provide all the same information required for bobcats to apply to all furbearers and nongame predators.	**Action scheduled 10/7-8/2015**		

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Date Received	Name of Petitioner	Subject of Request	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
7/21/2015	Dan Yoakum	HEOK Experimental Permit	Requests re-consideration of his experimental gear proposal.	**Action scheduled 10/7-8/2015**		
7/21/2015	Amie Akridge	LA-DWP Impacts on Native and Migratory Birds	Requests oversight of Los Angeles Department of Water and Power's management impacts on native and migratory bird habitat in and around the Chatsworth Nature Preserve.	**Action scheduled 10/7-8/2015**		
7/31/2015	Calif. Sea Urchin Commission	Sea Urchin Fishery	Requests sea urchin be placed on October meeting agenda for authorization to publish notice.	**Action scheduled 10/7-8/2015**		
7/28/2015	Peggy Palmer	Banning Ranch Conservancy	Request to help stop development activity by City of Newport Beach due to negative impacts on Banning Ranch Conservancy.	**Action scheduled 10/7-8/2015**		
8/5/2015	Tom Raftican, The Sport Fishing Conservancy	WRC Meetings	Request to move the January 2016 WRC meeting from Sacramento to Los Alamitos in order to accommodate participation from non-consumptive users dealing with wildlife issues in their neighborhoods.	**Action scheduled 10/7-8/2015**		
8/5/2015	Eric Mills	Public Forum and Live Animal Food Markets	Requests the Commission (1) add public forum to the end of the agenda, as well as to the beginning. There should be multiple opportunities for people to comment. And, (2) reagendize live animal food markets for consideration.	**Action scheduled 10/7-8/2015**		
8/5/2015	Tom Wheeler, Environmental Protection Information Center	Northern Spotted Owl CESA	Request FGC take a firmer stance and demand DFW bring it's status review of the NSO petition sooner as opposed to later. The status review has been delayed twice thus far.	**Action scheduled 10/7-8/2015**		

Date Received	Name of Petitioner	Subject of Request	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
6/19/2015	Lisa Belenky, Center for Biological Diversity	Tricolored Blackbird	Request to reconsider the decision on whether listing the tricilored blackbird as threatened or endangered species may be warranted.	**Action scheduled 10/7-8/2015**		
9/24/2015	Sean Brady, Michel & Associates, representing National Rifle Association	Committee Procedures	Requests rules and procedures be establsihed for the WRC through normal regulatory approval process before WRC takes any further action.	**Action scheduled 10/7-8/2015**		
8/6/2015	Ilson New representing Dan Yoakum	HEOK Experimental Permit	Requests clarification on the definition of HEOK fishing.	**Action scheduled 10/7-8/2015**		
9/10/2015	Michael Flores, Al Taucher Conservation Coalition	Predator Policy Workgroup	Requests clarification of actions the at FGC Aug meeting in Fortuna whereby individuals were publicly appointed to the Predator Policy working group in conflicht with the process previously establsihed by the Commission.	**Action scheduled 10/7-8/2015**		
8/11/2015	Diane Pleschner-Steele, CA Wetfish Producers Association	WRC Meeting	Request to provide update on squid research at MRC and FGC meetings.	**Action scheduled 10/7-8/2015**		
9/11/2015 9/13/2015	Hazel Kimberly Leonard Frances LiBrandi	Urban Coyotes	Request to help control urban coyote problems.	**Action scheduled 10/7-8/2015**		
6/18/2015	William Lemos	North Coast Human Waste	Requests something be done to address the human waste problem occuring along the north coast during abalone season.	**Action scheduled 10/7-8/2015**		

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Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
4/29/2015 6/11/2015	Lynn Boulton	Trapping		Request to ban any and all trapping in the Mono Basin National Forest Scenic Area.	Deny 8/4/2015; FGC does not have sufficient staff.		
4/20/2015	James Keeling	Klamath River - Blue Creek Closure		Request Commission reconsider the Blue Creek decision, and hold a hearing on the matter in the region.	Refer to DFW 8/4/2015; per commitments made at June 2015 meeting in Mammoth.		
5/28/2015	Kenny Priest	Klamath River - Blue Creek Closure		Petition signed by 497 supporters requesting the Commission reconsider the conservation closure on Blue Creek.	Deny 8/4/2015; will not reconsider for this season.		
4/26/2015	Dave Brabec	Clear Lake Hitch		Requests regulations to (1) stop weed spraying along banks, and (2) establish a Hitch hatchery in the state park.	(1) Deny 8/4/2015; FGC has no authority (2) Deny 8/4/2015; FGC has no authority, refer to State Parks		
4/28/015	Robert Rutkowski	Dcrab regulation--Whale entaglement		Requests measures to address whale entaglement from Dcrab pot or trap lines and reducing the number of lines in the water to protect whales.	Deny 8/4/2015; FGC has no authority.		
4/24/2015	Stash Elkin	Hedgehogs		Legalize possession of hedgehogs	Deny 8/4/2015; no new data to support request		
4/24/2015	Emma Hanna	Hedgehogs		Leglaize possession of hedgehogs	Deny 8/4/2015; no new data to support request		
4/28/2015	Deanna C.	Badger		Leglaize possession of badgers	Deny 8/4/2015; FGC does not support possession of wildlife as domesticated pets.		
5/15/2015	Jorden Custard	Ferrets		Leglaize possession of ferrets	Deny 8/4/2015; no new data to support request.		

Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
6/11/2015	Rebecca Dymytrk	Pest Control Reporting Requirements		Requests regulation to require pest control operators to annually report the number, type, location, and method used to kill animals.	Refer on 8/4/2015 to FGC staff for evaluation and recommendation.		
6/11/2015	Ed Woorley (NRA), Tom Pederson (CRPA)	Correspondence		Requests regulation to require all (1) FGC and (2) DFW staff conduct correspondence concerning official business via government issued email addresses.	(1) Refer on 8/4/2015 to FGC staff for evaluation and recommendation. (2) Deny 8/4/2015; FGC has no authority over the administration of DFW.		
6/11/2015	Deborah Lurie	Trapping in Mono Basin Scenic Area		Requests regualtion to ban trapping in all of the Mono Basin Scenic Area.	Deny 8/4/2015; FGC does not have sufficient staff.		
6/10/2015	Gretchen Stuhr, Del Norte County Counsel	Blue Creek Closure impact on Del Norte County		Requests reconsideration of the Lower Klamath/Blue Creek closure to fulfil its obligation to coordinate with the Del Norte County Board of Supervisors and other initerested and affected partries.	Deny 8/4/2015; Del Norte County notified along with all other interested and affected parties.		
6/10/2015	Paul Weakland	Abalone		Request to re-open for abalone harvest the counties south of San Francisco.	Deny 8/4/2015; to be considered during abalone fishery management plan development process.		

CALIFORNIA FISH AND GAME COMMISSION
ACTIONS TAKEN AUGUST 4, 2015 ON REQUESTS FOR NON-REGULATORY ACTION
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Date Received	Name of Petitioner	Subject of Request	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
5/4/2015	Roy Thomas	Fishing access	Requests information on how federal tax dollars to provide fishing and boating access is spent.	Deny 8/4/2015; FGC has no authority over use of federal tax dollars, refer to Wildlife Conservation Board.		
5/26/2015	Scott McMorrow	SWAP	Requests amended language to reflect the 2013 intent of reducing only *illegal* hunting, fishing and harvesting.	Deny 8/4/2015; FGC has no authority regarding the SWAP, refer to DFW.		
6/11/2015	Gaye Muller Mono County Fisheries Commission	Fish stocking	Request to increase fish stocking activity in Mono County	Deny 8/4/2015; FGC has no authority over fish stocking activity, refer to DFW.		

California Fish and Game Commission

Staff Report on Staff Time Allocation

September 25, 2015

Staff time is a tangible and invaluable asset. This report identifies where Commission staff allocated working time to general categories during the months of July and August 2015 (see table); note that the total percentage of staff time is greater than 100% as a result of overtime. This report also highlights some of the specific activities for August, September and October.

General Allocation

Category*	July Staff Time Expended	Aug Staff Time Expended
Regulatory Program	15%	15%
Commission Meetings	15%	20%
Legal Matters	3%	3%
External Affairs	7%	8%
Special Projects	2%	2%
Administration	17%	16%
Leave Time	21%	18%
Unfilled Positions	22%	22%
Total Staff Time	103%	104%

Note: Total staff time is greater than 100% due to overtime

Activity Highlights

Highlights for activities conducted in August:

- Prepared for and conducted the August Commission meeting
- Participated in the Tomales Bay aquaculture public meeting
- Participated in 2015 Native American Day planning meeting
- Participated in quarterly regulatory coordination meeting with the California Department of Fish and Wildlife
- Participated in mandatory Maintaining a Respectful Workplace training
- Prepared and conducted new Marine Resources Committee co-chair orientations
- Participated in the marine protected areas Statewide Leadership Team work plan development and meetings
- Participated in California Department of Fish and Wildlife dive surveys
- Prepared for the September Wildlife Resource Committee meeting
- Began preparations for the October Commission meeting

Highlights of activities conducted or expected for September:

- Prepared for and conducted the September Wildlife Resource Committee meeting
- Participated in Red Abalone Fishery Management Plan development meeting
- Participated in the marine protected areas Statewide Leadership Team work plan development and meetings
- Participated in Marine Protected Areas Master Plan Team meeting
- Participated in the Marine Life Protection Act milestones meeting
- Participated in Native American Day at the State Capitol
- Participated in the *Changing Ocean Conditions: Understanding El Niño's Impacts on California's Living Marine Resources Through Ocean Observations* workshop, co-hosted by the California Ocean Protection Council and Scripps Institution of Oceanography
- Prepare materials for the October Commission meeting
- Begin preparations for the November marine Resources Committee

Highlights of activities expected for October:

- Prepare for and conduct the October Tribal Committee and Commission meetings
- Participate in the fishing from piers and jetties stakeholder meeting
- Participate in the OPC's climate change and fisheries management meeting
- Attend natural resource economics training
- Participate in the Aquaculture Development Committee meeting
- Participate in the initial planning meeting for the Marine Life Management Act Master Plan
- Prepare for the November Marine Resources Committee meeting

*** General Allocation Categories with Sample Tasks**

Regulatory Program

- Coordination meetings with DFW to develop timetables and notices
- Prepare and file notices, re-notices, ISORS and FSORs
- Review and process CESA petitions
- Track and respond to public comments
- Consult, research and respond to inquiries from OAL
- Prepare administrative records

Commission/Committee Meetings and Support

- Research and review practices and procedures for adaptive management
- Research and compile subject-specific information
- Review and develop policies
- Develop and distribute meeting agendas and materials
- Agenda and debrief meetings
- Prepare meeting summaries and audio files
- Maintain voting records
- Develop and distribute after-meeting memos/letters
- Make travel arrangements for staff and commissioners

- Conduct onsite meeting management
- Process submitted meeting materials
- Provide commissioner support (expense claims, office hours, etc.)
- Process and analyze regulatory petitions and non-regulatory requests

Legal Matters

- Respond to Public Records Act requests
- Process appeals and accusations
- Process requests for permit transfers
- Process kelp and state water bottom leases
- Litigation

External Affairs

- Engage and educate legislators, monitor legislation
- Maintain state, federal and tribal government relations
- DFW partnership, including joint development of management plans and concepts

Special Projects

- Predator Policy Workgroup
- Fishing from piers and jetties
- Fisheries Bycatch Workgroup
- Streamlining routine regulatory actions

Administration

- Correspondence
- Purchases and payments
- Contract management
- Personnel management
- Strategic planning and staff coordination
- Budget development and tracking
- Health and safety oversight
- Internal processes, procedures and forms
- Staff training and professional development

Leave Time

- Holidays
- Sick leave
- Vacation
- Absence without leave

Unfilled

- Staff attorney (begins November 2)
- Wildlife Advisor
- Executive secretary

FISH AND GAME COMMISSION LEGISLATIVE TRACKING LOG 2015

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-12	Minor	Cooley (A)	**State government: administrative regulations: review --** Would, until January 1, 2019, require each state agency to, on or before January 1, 2018, review that agency's regulations, identify any regulations that are duplicative, overlapping, inconsistent, or out of date, to revise those identified regulations, as provided, and report to the Legislature and Governor, as specified.	Tto add and repeal Chapter 3.6 (commencing with Section 11366) of Part 1 of Division 3 of Title 2, Government Code	8/24/15 In committee: Ref to APPR.. 8/19/15 2nd read, amend, re-ref to APPR. 7/14/15 **Pass GO (13-0)** Re-ref to APPR. 6/11/15 Ref to GO 6/01/15 In Senate. 1st read. 6/01/15 3rd read. **PASS ASM.** To Sen. 5/28/15 2nd read. 5/28/15 **PASS APPR (17-0.)** 5/13/15 Referred to APPR. suspense file. 4/29/15 **PASS AAR (9-0)** 4/22/15 Amend, 2nd read 1/16/15 Ref to AAR	4/29/2015		
AB-14	None	Waldren (A)	**Unmanned aircraft systems: task force --** Would create the Unmanned Aircraft Systems Task Force, responsible for formulating to research, develop, and formulate a comprehensive plan policy for state regulation of unmanned aircraft systems.		4/6/2015- Re-ref to TRANS. 3/26/2015- Amend; 2nd read 2/13/2015- Re-ref to TRANS. 1/16/2015- Ref to TRANS and BPCP	4/13/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-56	None	Quirk (A)	**Unmanned aircraft systems.--** The bill would authorize a law enforcement agency to use an unmanned aircraft system if agency complies with specified requirements. The bill would prohibit a law enforcement agency from using an unmanned aircraft system to surveil private property unless, among other justifications, the law enforcement agency obtains a search warrant.	Add to Title 14 (commencing with Section 14350) to Part 4 of the Penal Code	9/08/15 To inactive file, per Sen. Hertzberg. 9/08/15 2nd read. 9/04/15 3rd read; amended. 9/01/15 2nd read, amended. 8/31/15 **Pass as amended. (5-2**) 7/16/15 2nd read. Re-ref to APPR. 7/15/15 Amend, **PASS JUD (5-2)** 7/7/15 **PASS PUBS (4-2)**. Re-refer JUD. 6/04/15 Ref to PUBS and JUD 5/26/15 In Senate. 1st read 5/26/15 **3rd read. Passed. To Senate** 5/14/15 2nd read. 5/13/15 **PASS APPR (17-0)** 4/30/15 **PASS PCP (9-1)**. To APPR 4/15/15 Re-ref PCP 4/14/15 **PASS PUBS (6-0)** 1/22/15 Ref to PUBS and PCP	4/14/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-92	None	Committee on Budget (A)	Would require DFW to provide written notice to the owner that the diversion is deleterious to salmon and steelhead, to submit to the owner its proposals as to measures necessary to protect the salmon and steelhead, impose an civil penalties of up to $8,000 for a violation of this provision, and other provisions related to water.	Amend Section 6100 of, and to add Sections 12025.1 and 12025.2 to, the Fish and Game Code, add Section 8687.9 to the Government Code, amend Section 4629.6 of the Public Resources Code, and to amend Section 81046 of, to amend, repeal, and add Section 13442 of, and to add Sections 189 and 81023 to, the Water Code.	4/02/15- Enrolled measure corrected 3/26/15- Present to Gov . 3/26/15- **PASS (50-27).** 3/25/15- **3rd read PASS (25-14)** 3/25/15- **PASS BFR (11-4)** 3/24/15- Amend, 2nd read 3/23/15- Ref BFR 3/23/15- In Senate. 1st read 3/23/15- 3rd read. **PASS BUD (51-27)** 1/26/15- Referred BUD			3/27/15 **Approved by Governor**

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-96	None	Atkins (A) Lara (S)	**Animal parts and products: importation or sale of ivory and rhinoceros horn** -- This bill would delete the criminal exemption for products imported before 1977. And, prohibit a person from purchasing, selling, offering for sale, possessing with intent to sell, or importing with intent to sell ivory or rhinoceros horn, except as specified, and would make this prohibition enforceable by the Department of Fish and Wildlife.	Add Section 2022 to the Fish and Game Code, and to repeal Section 5 of Chapter 692 of the Statutes of 1976, relating to animal parts and products.	9/16/15 Enrolled, presented to Gov 9/04/15 Senate amendments concurred 9/02/15 In Assembly. Concurrence. 9/02/15 3rd read; Passed. 8/31/15 2nd read 8/27/15 Do pass. (5-2) 6/24/15 **PASS NRW (7-2)** Re-ref APPR. 6/17/15 2nd read. Amended, Re-ref NRW 6/02/15 1st read. To RLS for assignment. 6/02/15 3rd read. **Pass ASM.** To Sen. 6/01/15 2nd read. To third reading. 5/28/15 **PASS (12-4)** 3/25/15 Referred to suspense file. 3/10/15 **PASS WPW 10-2-3** 1/26/15 Ref to WPW			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-142	None	Bigelow (A) Berryhill (S)	**Wild and scenic rivers: Mokelumne River --** Would require the Secretary, in a report analyzing the suitabliity or nonsuitability of a proposed designation of the Mokelumne River, to consider the potential effects of the proposed designation on future water requirements, as specified, and the effects of climate change on river values and water supply, and to consider other factors.	Amend Section 5093.56 and add Sections 5093.548 and 5093.549 to the Public Resources Code, relating to wild and scenic rivers.	9/18/15 Enrolled, presented to Gov 9/10/15 Senate amendemnts concurred 9/09/15 In Assembly. Concurrence. 9/09/15 3rd read; **PASS.** To Assembly. 9/08/15 2nd read. 9/04/15 3rd read; amended. 9/01/15 2nd read, amended. 8/31/15 **PASS** as amended (5-0) 8/17/15 Referred to APPR. suspense file. 7/16/15 2nd read. Amended. Re-ref APPR. 7/16/15 **PASS NRW (9-0).** 6/11/15 Ref to NRW 6/01/15 1st read. To RLS for assignment. 6/01/15 3rd read. **PASS ASM.** To Sen. 5/28/15 2nd read. To 3rd reading. 5/28/15 **PASS APPR (17-0)** 3/23/15 Ref to APPR 3/26/15 **PASS NR (8-1)** 1/26/15 Ref to NR	3/23/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-226	None	Atkins (A)	**Retail food safety: fisherman markets --** would create new type of nonpermanent food facility, that would be a food facility operated by a licensed commercial fisherman, a registered aquaculturist, or an entity representing California seafood producers, that sells only edible aquatic plants, raw fresh fish, or fresh frozen fish, legally caught by California-licensed commercial fishermen or harvested by California-registered aquaculturists, directly to consumers. The bill would establish and impose food safety and sanitation requirements upon a fishermen's market.	An act to amend Sections 113779, 113789, 113839, 113984, and 114266 of, and to add Sections 113729.5, 113780, and 113794.3 to, and to add Chapter 12.7 (commencing with Section 114378) to Part 7 of Division 104 of, the Health and Safety Code, relating to food safety.	4/15/15 **PASS HEALTH(17-0)** 4/8/15 Re-ref to HEALTH 3/2/15 Ref to HEALTH			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-290	Major	Bigelow (A)	**Game mammals: wild pig depredation --** Would define “pigs”, prohibit release into uncontrolled areas, eliminates DFW required management plan, requires 25-40% of funds from sale of wild pig validations be used to remedy damage by pigs, replaces wild pig tag with a validation on the hunting license which permits unlimited take and possession, set price of pig validation at $15 for residents and $30 for nonresidents, prohibit take at night unless the department is notified by 3:00 p.m. prior to the planned take or, if the daylight hours before the planned take are not on a business day, by 3:00 p.m. of the last business day before the planned take and the person taking the wild pig possesses a valid hunting license.	Amend Sections 714, 3953, 4181, 4181.1, 4188, 4650, 4654, and 13005 of, to repeal Sections 4181.2, 4656, and 4657 of, and to repeal and add Sections 4651, 4652, 4653, and 4655 of the Fish and Game Code	4/06/15- Re-ref WPW 3/26/15- Amend. 2nd read. 03/26/15 Ref WPW.			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-298	None	Gonzalez (A)	**Fish and wildlife: violations--** Would make a violation of a specified regulation relating to marine protected areas, marine managed areas, and special closures an infraction or a misdemeanor, except if the person who violates the regulation holds a commercial fishing license or a commercial passenger fishing boat license, or the violation of the regulation occurred within 2 years of a prior violation of the regulation that resulted in a conviction.	Amend Section 12000 of the Fish and Game Code	6/26/15 **Enrolled. Presented to Gov.** 6/22/15 Senate amendments concurred in. **To Engrossing and Enrolling. (76-1)** 6/18/15 Amendments pending. 6/18/15 3rd read. Passed. To Assembly. 6/11/15 2nd read. To Consent. 6/10/15 Pass as amended **(9-0.)** 5/07/15 Ref to NRW 4/20/15 Senate, 1st read, to RLS 4/20/15 3rd read, **PASS (80-0).** 4/15/15 2nd read, to Consent 4/14/15 **PASS (15-0)** 2/23/2015 - Ref to WPW	4/14/2015		6/30/15 Chaptered by Secretary of State - Chapter 31, Statutes of 2015. 6/30/15 Approved by Gov'r.

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-353	None	Lackey (A)	**Protected species: take: Bouquet Canyon: habitat restoration project**. -- Permit DFW to authorize, under the California Endangered Species Act, the take of the unarmored threespine stickleback resulting from impacts attributable to the habitat restoration project to restore and improve riparian habitat on public lands in the Bouquet Canyon area, and projects to restore the flow capacity to Bouquet Creek in Bouquet Canyon on public lands, as specified, if certain conditions are satisfied.	Amend Section 5515 and add Section 2081.6 of the Fish and Game Code	9/18/15 Enrolled, presented to Gov 9/10/15 Urgency clause adopted. **PASS** 9/09/15 In Assembly. Concurrence 9/09/15 3rd read; Urgency clause; **PASS**. 9/04/15 2nd read;. 9/03/15 3rd read; amended. 8/18/15 2nd read. Ordered to 3rd. 8/17/15 2nd read pursuant Rule 28.8 7/16/15 2nd read. Re-ref APPR. 7/15/15 **PASS NRW (9-0)** 5/28/15 Ref ro NRW 5/14/15 In Senate: 1st Read. To RLS 5/14/15 3rd read. **PASS ASM**. 5/07/15 2nd read. To Consent. 5/06/15 **PASS APPR (17-0)**. Consent. 4/28/15 **PASS WPW (15-0)**. Ref APPR 3/26/15 Ref WPW	4/28/2015		
AB-395	Major	Gallagher (A)	**Hunting: nonlead ammunition** -- Would repeal the latter restriction against the use of nonlead ammunition for the taking of all wildlife and related provisions.	Amend Section 3004.5 of the Fish and Game Code	4/20/15 **CANCELLED BY AUTHOR** 3/5/2015 - Ref to WPW	3/21/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-410	Minor	Obernolte (A)	**Administrative procedures** -- Would reqire all agencies to post on its web site any report required by law to submit to a committee of the Legislature. "Report" includes a study or audit, budget change proposal that has been approved by the Department of Finance and submitted to the Joint Legislative Budget Committee, the Assembly Committee on Budget, or the Senate Committee on Budget and Fiscal Review.	Add Section 9796 to the Government Code	9/10/15 Enrolled, presented to Gov 8/31/15 In Assem, Concurrence w/ Sen 08/31/15 Read third time. Passed. 7/14/15 2nd read in APPR. To Consent. 6/29/15 **Pass GO (12-0)**. 5/22/15 - In Senate. First read 5/22/15 - 3rd read. **PASS ASM. (74-0.**) 5/13/15 - **Pass to Consent. (17-0)** 4/29/15 - **PASS AAR (9-0)** 03/26/15 Ref AAR			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-435	Major	Chang (A) Anderson (S)	**California Environmental Protection Agency: Natural Resources Agency: Web casts of public meetings and workshops** -- This bill would require that each department, board, and commission of the Natural Resources Agency and each department, board, and office of the California Environmental Protection Agency Web cast all onsite public meetings, in a manner that enables listeners and viewers to ask questions and provide public comment by telephone or email commensurate with those attending the meeting. The bill would require the agencies to make the recording of a webcast available for no less than 3 years.	Add Sections 12805.4 and 12812.4 to the Government Code	8/18/15 2nd read. Re-ref to APPR. 8/17/15 **PASS as amended (7-0)** 6/25/15 Amended. Re-ref to EQ. 6/24/15 **PASS (9-0)** Re-refer to EQ 6/11/15 Ref to NRW and EQ 6/02/15 3rd read. **Pass ASM.** To Sen. 5/28/15 2nd read and amended. 5/28/15 **PASS as amended. (17-0)** 3/23/15 **PASS AAR (9-0)** 3/2/15 Ref to AAR	3/25/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-498	None	Levine (A)	**Wildlife conservation: wildlife corridors** -- Would declare that it is the policy of the state to encourage wherever feasible and practicable voluntary steps to protect the functioning of wildlife corridors through various means, as applicable. Would provide that a project applicant may receive advance mitigation credits for investing in a mitigation that protects habitat connectivity for affected fish and wildlife resources.	Amend Sections 1797.5, 1930, and 1930.5 of the Fish and Game Code,	9/16/15 Enrolled, presented to Gov. 9/04/15 Senate amendments concurred in. 9/02/15 In Assembly. Concurrence. 9/02/15 3rd read; **PASS** 9/01/15 2nd read 8/31/15 3rd read, amended. 8/18/15 2nd read. Ordered to 3rd read. 8/17/15 2nd read pursuant to Rule 28.8. 7/16/15 Amend, 2nd read. Ref to APPR. 7/15/15 **PASS NRW (8-1)** 6/11/15 Ref to NRW 5/28/15 In Senate. RLS. for assignment. 5/28/15 3rd read. **PASS ASM (52-24)** 5/22/15 3rd read and amended. 5/06/15 **PASS APPR (12-5)** 4/14/15 Re-ref to APPR. 4/14/15 **PASS WPW (8-5)** 3/5/15 Ref to WPW			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-499	Major	Cooley (A)	**Archery season: concealed firearms** -- Would authorize a person with a valid license to carry a firearm capable of being concealed on the person, consistent with the terms of that license, while engaged in the taking of deer with bow and arrow as long as he or she does not take or attempt to take deer with the firearm.	Amend Section 4370 of the Fish and Game Code	5/14/15 Ref to NRW 5/4/15 In Senae, to RLS for assignment. 5/4/15 3rd read. **PASS ASM (78-2)** 4/29/15 2nd read. To consent. 4/28/15 **PASS WPR (15-0)** 3/5/2015 - Ref to WPW	3/26/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-559	None	Lopez (A)	**Monarch butterflies: conservation** -- Would authorize the department to take actions to conserve monarch butterflies and the unique habitats they depend upon for successful migration.	Add Section 1021 to the Fish and Game Code	9/23/15 Enrolled, presented to Gov 9/11/15 Senate amendments concurred 9/10/15 Concurrence in Senate. 9/10/15 3rd read; Passed. 9/08/15 2nd read. 9/04/15 3rd read; amended. 8/31/15 In Assem. Concurrence w/ Sen 8/31/15 3rd read. Passed. To Assembly. 8/27/15 2nd read 8/26/15 3rd read and amended. 7/06/15 **Pass APPR (5-2)** 6/24/15 **Pass NRW (7-2)** Re-refer APPR. 6/16/15 2nd read, amended. 5/14/15 In Senate; Ref to NRW 4/30/15 3rd read. **PASS ASM**. 4/23/15 2nd read. 4/22/15 **PASS APPR (12-4)** 4/14/15 **PASS WPW (10-4)**			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-665	None	Frazier (A)	**Hunting or fishing: local regulation** -- Provides that unless authorized by the Fish and Game Code or other state or federal law, the commission and the department are the only entities that may adopt or promulgate regulations regarding the taking or possession of fish and game on any lands or waters within the state. Requires the commission to consider populations, habitat, food supplies, the welfare of individual animals, public health and safety, and other pertinent facts and testimonywhen adopting certain regulations relating to the taking or possession of fish, amphibians, and reptiles. Makes the intentional discharge of a firearm or release of an arrow or crossbow bolt over or across a public road or other established way open to the public in an unsafe and reckless manner an infraction or a misdemeanor.	Amend Sections 200, 203.1, 3004 and add Sections 200.5 and 200.6 to, the Fish and Game Code	9/10/15 Re-ref to Com. on APPR. 9/10/15 Action rescinded . 9/09/15 Re-ref to W., P., & W. . 9/08/15 In Assembly. Concurrence. 9/08/15 3rd read; Passed.. 8/18/15 2nd read. Ordered to 3rd. 8/17/15 2nd read pursuant to Rule 28.8 6/29/15 Amended. Re-ref to APPR 6/25/15 **Pass NRW (7-0).** Re-refer APPR. 5/14/15 Ref to NRW 4/30/15 Senate -- To RLS. for assignment. 4/30/15 **3rd read. PASS ASM (77-3).** 4/23/15 2nd read, to Consent 4/22/15 PASS APPR (17-0) 4/14/15 Re-ref to APPR 4/14/15 PASS WPW (15-0) 3/9/2015- Ref to WPW			

FISH AND GAME COMMISSION LEGISLATIVE TRACKING LOG 2015

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-731	None	Gallagher (A)	**Maintenance of the codes. --** This bill would make nonsubstantive changes in various provisions of law.	Amend Sections 1652, 1653, 1654, 1745.2, 12002, of the Fish and Game Code	9/01/15 Enrolled, presented to Gov 8/24/15 Sen amendments concurred 8/20/15 In Assembly. Concurrence. 8/20/15 3rd read Passed. (38-0) 7/15/15 **PASS JUD (7-0)** 7/02/15 2nd read. Amend. Re-ref to JUD. 7/02/15 Amended. Re-ref to JUD 5/07/15 Ref to JUD. 4/13/15 In Senate, Ref to RLS 4/13/15 3rd read, **PASS ASM** 4/8/15 2nd read; To consent 4/7/15 **PASS (10-0)** 3/23/15 Ref to JUD			9/21/15 **Approved by Gov** Chapter 303
AB-797	Minor	Steinorth (A)	**Regulations: effective dates and legislative review** -- Would require the agency submit to the appropriate policy committee of each house of the Legislature for review a copy of each *major* regulation that it submits to the Secretary of State, and specifies that a regulation would not become effective if the Legislature passes an overriding statute.	Amend Sections 11343.4 and 11349.3 of the Government Code	5/14/15 Ref to GO 4/30/15 Senate -- To RLS. for assignment. **4/30/15 3rd read. PASS ASM (77-3).** 4/23/15 2nd read, to Consent 4/22/15 Consent, PASS APPR (17-0) 4/15/15 Re-ref to APPR 4/15/15 PASS AAR (9-0) 3/12/15 Ref to AAR	4/15/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-820	None.	Stone (A)	**Fish and shellfish: labeling and identification --** Would prohibit sale or offer for sale any fresh, frozen, or processed fish or shellfish intended for human consumption without clearly identifying at the point of sale whether the fish or shellfish was wild caught or farm raised, and other provisions. This bill would prohibit Pacific red snapper or butterfish from being used as an alternate name for rockfish or sablefish.	Add Section 8379 to the Fish and Game Code, and to add Sections 110796 and 114092 to the Health and Safety Code, relating to fish and shellfish.	4/23/15 Re-ref to AGRI 4/22/15 Amend, 2nd read 4/06/15 Re-ref AGRI. 3/26/15 Amend, 2nd read 3/26/15 Ref AGRI.	4/29/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB 1201	Minor	Salas (A)	**Sacramento-San Joaquin Delta: predation by nonnative species --** Would require the Department, by June 30, 2016, to develop and initiate a science-based approach that addresses predation by nonnative species upon species of fish listed pursuant to the act that reside all or a portion of their lives in the Sacramento-San Joaquin Delta and that considers predation reduction for all Chinook salmon and other native species not listed pursuant to the act.	Ass Section 6940 to Fish and Game Code	8/17/15 Referred to APPR. suspense file. 8/17/15 2nd read, re-ref to APPR. 7/16/15 2nd read. Amended. To APPR. 7/15/15 **PASS NRW (9-0).** 7/7/15 2nd read. Amended. Re-ref to NRW 6/18/15 Ref to NRW 6/04/15 In Senate. 1st read. To RLS 6/04/15 3rd read. **Passed ASM. (74-1)** 6/03/15 2nd read. To 3rd reading. 4/28/15 **PASS WPW (15-0)**. Reref APPR. 4/06/15 Re-ref to WPW 3/26/15 Ref WPW	4/28/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-1259	None	Levine (A)	**Relating to bees, and declaring the urgency thereof, to take effect immediately -** Would authorize Department to authorize the temporary placement of bee hives on department-managed wildlife areas through simple agreements specifying appropriate conditions.This bill would declare that it is to take effect immediately as an urgency statute.	Amend Section 1745.2 of the Fish and Game Code, and to add Section 14670.14 to the Government Code	9/16/15 - Enrolled, Presented to Gov 9/04/15 Senate amendments concurred 9/03/15 In Assembly. Concurrence. 9/03/15 3rd read; Urgency clause adopted. 9/01/15 2nd read 8/31/15 **PASS as amended. (7-0)** 6/30/15 **PASS AGRI (3-0)**. To APPR. 5/28/15 Ref to AGRI 5/14/15 1st read. To RLS for assignment 5/14/15 3rd read. Urgency. **PASS ASM**. 5/7/15 2nd read. To Consent. 5/6/15 **PASS APPR (17-0)** 4/30/15 Re-ref APPR. 4/29/15 2nd read. 4/28/15 Re-ref to APPR to Consent 4/28/15 **Amend, Pass (15-0)**			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-1281	Major	Wilk (A)	**Regulations: legislative review** -- Whenever 25% of the Members of the Assembly or Senate transmit to the Governor their written declaration of opposition to a proposed regulation, would require a majority vote of the Assembly and Senate to adopt that regulation.	Add Section 11346.01 to the Government Code	4/9/2015 - Hearing cancelled by Author 3/23/2015- Ref to AAR and RLS			
AB-1325	None	Salas (A)	**Delta smelt** -- Would enact the Delta Smelt Preservation and Restoration Act of 2016 and require the department to develop a Delta smelt hatchery program to preserve and restore the Delta smelt. The bill would require the department to enter into mitigation banking agreements with banking partners for the purpose of providing take authorizations to banking partners and to obtain funding from banking agreements.	Add Chapter 7.1 (commencing with Section 1710) to Division 2 of the Fish and Game Code	3/23/2015- Ref to WPW			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-1398	??	Wilk (A) Berryhill (S)	**Environmental quality: the Sustainable Environmental Protection Act** -- Would enact the Sustainable Environmental Protection Act and would specify the environmental review required pursuant to CEQA for projects related to specified environmental topical areas. The bill would provide that the Sustainable Environmental Protection Act only applies if the lead agency or project applicant has agreed to provide to the public in a readily accessible electronic format an annual compliance report prepared pursuant to the mitigation monitoring and reporting program.	Add Division 13.6 (commencing with Section 21200) to the Public Resources Code	6/08/15 From committee: Without further action pursuant to Joint Rule 62(a). **4/27/15 Failed passage.** 3/23/2015- Ref to WPW			
AB-1427	None	Lackey (A)	**Fish and Game Commission: hearings** Would make a technical, nonsubstantive change to that provision.	Amend Section 309 of the Fish and Game Code	Pending referral			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-1498	None	Thurmond (A)	**Renewable energy resources: comprehensive planning and environmental compliance services** This bill would make a nonsubstantive change in those provisions.	Amend Section 705 of the Fish and Game Code	Pending referral			
AB-1527	Minor	Committee on Water, Parks, and Wildlife (A)	**Fish and wildlife** - Would apply provisions of code to parts of an animal, reptiles, and amphibians. By applying certain provisions relative to the take and possession of certain animals to include both reptiles and amphibians, the violation of which would be a crime.	Amend various Sections, and to add Sections 80 and 89.5 to, the Fish and Game Code	7/09/15 Enrolled, Presente to Gov 7/09/15 3rd read. **PASS SEN**. To ASM 6/24/15 **PASS NRW (9-0)**. 5/14/15 1st read. 5/14/15 3rd read. **Pass (78-0)**. To Senate 5/07/15 2nd read. 5/06/15 **Pass. APPR (17-0)**. Consent. 4/28/15- **PASS WPW (15-0)**	4/28/2015		8/10/2015 **Approved by Governor** Chapter 154

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
AB-1528	None	Committee on Water, Parks, and Wildlife (A)	**Public resources** - This bill would make lace lichen (Ramalina menziesii) the official state lichen.	Add Section 424.6 to the Government Code, and to amend Sections 5003.6, 5008, 5008.5, 5071.7, 6232, 6311, 30411, and 30419 of, and to repeal Section 5044 of, the Public Resources Code	7/15/15 **Chaptered** 7/15/15 Approved by the Governor. 7/9/15 Enrolled. Presented to Gov at 2 p.m. 6/29/15 3rd read. **PASS SEN**. To Asm. 6/24/15 **Pass NRW (7-2)** 4/30/15 3rd read. **PASSED.** To Senate. 4/28/15 **PASS WPW (14-0)** 3/26/15 Ref WPW	4/28/2015		7/15/2015 **Approved by Gov**
AJR-4	None	Dodd (A)	**Berryessa Snow Mountain National Monument** -- Measure would urge the President of the United States and the Secretary of the United States Department of Interior to designate the area known as the Berryessa Snow Mountain region as the Berryessa Snow Mountain National Monument.		4/9/15 **Chaptered** 4/9/15 Enrolled 4/6/15 In Assembly 3/24/15 3rd reading **PASS (7-2)** 2/17/15- To Senate 2/17/15- **PASS (54-20)** 2/12/15- **PASS WPW (10-4)**			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-17	None	Monning (S)	**California Sea Otter Fund** -- Would extend the operation of the fund to January 1, 2021	Amend Section 18754.3 of the Revenue and Taxation Code	7/16/15 In Senate. 7/16/15 3rd read. **PASS ASM**. To Sen. 7/09/15 2nd read. To consent. 7/8/15 **PASS APPR (14-0)** 6/24/15 **PASS (9-0).** Re-refer to APPR. 5/14/15 Ref REV&TAX. 4/26/15 To Assembly 4/23/15 3rd read, **PASS SEN (35-2)** 4/21/15 2nd read 4/20/15 **PASS APPR (6-1)** 4/8/15 Re-refer APPR 4/8/15 **PASS GOVF (7-0)** 1/15/15 Ref to GOVF	4/20/2015		7/30/15 **Approved by Gov** Chapter 136

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-29	None	Beall (S)	**Peace officer training: mental health** -- Would require Peace Officer Standards and Training (POST) to require field training officers who are instructors for the field training program to have 8 hours of crisis intervention training related to behavioral health. Also requires POST to require 4-hours of training relating to intereactions with persons with mental illness or intellectual disability.	Add Sections 13515.28 and 13515.29 to the Penal Code	9/09/15 Enrolled, presented to Gov 9/03/15 Passed (35-0) 9/02/15 In Senate. Concurrence. 9/02/15 3rd read; Passed. 9/01/15 2nd read, ordered to third reading. 8/28/15 Pass as amended (16-1) 7/14/15 **PASS PUBS (7-0)**. To APPR. 7/8/15 2nd read. Amended. . 6/4/15 In Assembly. 1st read 6/3/15 3rd read. **PASS SEN. (40-0)** 6/2/15 2nd read. 6/1/15 **Pass APPR (7-0)** 4/15/15 Re-ref to APPR, 2nd read 4/14/15 **PASS PUBS (7-0)** 3/5/2015 Re-ref to PUBS	4/7/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-122	Minor	Jackson (S) Hill (S)	**California Environmental Quality Act: record of proceedings** -- Would require the lead agency, at the request of a project applicant and consent of the lead agency, to prepare a record of proceedings concurrently with the preparation of a negative declaration, mitigated negative declaration, EIR, or other environmental document for projects.	Amend Sections 21082.1, 21091, 21159.9, and 21167.6 of, and to add Section 21167.6.2 to, the Public Resources Code	6/30/15 **PASS NR (7-1)**. Re-ref to APPR. 6/11/15 Ref to NR 6/04/15 In Assembly. 1st read. 6/04/15 3rd read. **PASS SEN (24-15)** 6/02/15 2nd read. Amended. To 3rd read 6/01/15 **Pass as amended. (5-0)** 5/28/15 **PASS APPR (5-2)** 4/20/15 2nd read, re-ref to APPR 4/16/15 **PASS EQ (5-1)** 3/26/15- Amend., 2nd read 2/5/15- Ref to EQ	4/15/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-165	None	Monning (S)	**Production or cultivation of a controlled substance: civil penalties** -- Would impose various additional civil penalties for violations of specified provisions of the Penal Code and the Public Resources Code, in connection with the production or cultivation of a controlled substance.	Amend Section 12025 of the Fish and Game Code	07/16/15 To **engrossing + enrolling.** 07/16/15 3rd read. **PASS ASM.** To Sen. 07/09/15 2nd read. To consent. 7/8/15 **Pass APPR (14-0)**. To consent 6/30/15 **Pass WPW (15-0).** To APPR consent. 6/16/15 Re-ref to WPW, to consent. 6/16/15 **Pass PUBS (7- 0.)** 5/28/15 Ref PUBS and WPW 4/30/15 1st read. At Desk. 4/30/15 3rd read. **PASS (36-0)** 4/27/15 To 2nd reading, Senate Rule 28.8. 4/14/15 2nd read, Re-ref to APPR 4/13/15 **PASS (7-0)** 2/19/2015- Ref to PUBS	4/7/2015		8/7/2015 **Approved by Gov** Chapter 139
SB-166	None	Gaines (S)	**California Environmental Quality Act** This bill would make technical, nonsubstantive changes to those provisions.	Amend Section 21000 of the Public Resources Code	2/19/2015- Ref to RLS			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-201	??	Wieckowski (S)	**California Public Records Act**- Would require a court, in an action by a third party to enjoin disclosure of a public record or declaratory relief concerning a request to inspect a public record, to apply the provisions of the California Public Records Act as if the action had been initiated by a person requesting disclosure of a public record. The bill would also require the third party seeking an injunction or declaratory relief to provide notice to the person whose request prompted the action at the same time the defendant public agency in the action is served.	Add Section 6254.50 to the Government Code	2/19/2015- Ref to JUD			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-233	None	Hertzberg (S) Rendon (A)	**Marine resources and preservation.** -- Would require offshore oil applicants to apportion and transmit a portion of the cost savings to the department, the department to apportion those cost-savings fby prescribed schedule, requires State Lands Commission to serve as the lead agency for the environmental review under CEQA and take certain adverse impacts to air quality and greenhouse gas emissions into account.	Amend Sections 6603, 6604, 6610, 6611, 6612, 6613, 6614, 6615, 6616, and 6618 of the Fish and Game Code	07/16/15 2nd read. Re-ref to APPR. 07/15/15 **PASS WPW (12-0)** To APPR 6/15/15 Ref to WPW 6/04/15 In Assembly. 1st read. 6/03/15 3rd read. **PASS SEN (37-2)** 6/02/15 2nd read. 6/01/15 Pass as amended. (7-0) 4/26/15 **PASS NRW (6-1)** 2/26/2015- Ref to NRW	4/28/2015		
SB-234	None	Wolk (S) , Nielsen (S)	**Wildlife management areas: payments** -- Would appropriate $19,000,000 from the General Fund to the department to make payments to counties for unpaid amounts under these provisions.	Appropriations	2/26/2015- Ref to NRW	3/24/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-345	Major	Berryhill (S) Bigelow (A)	**The Sport Fishing Stimulus Act of 2015** -- Would authorize a charitable organization or nonprofit organization to possess fish taken under a sport fishing license in excess of a possession limit if the charitable organization or nonprofit organization was given the fish by a donor intermediary, and requires the commission to recommend legislation or adopt regulations to clarify when a possession limit is not violated by processing into food lawfully taken sport fish, also makes changes to junior sport fishing license age requirements and sport fishing license fees.	Amend Section 7120; amend, repeal, and add Sections 7149, 7149.05, and 7233; and, add Sections 7122 and 7233 to the Fish and Game Code	6/15/15 Ref to WPW 6/04/15 In Asm: 1st read. Held at Desk. 6/04/15 3rd read. **PASS SEN (39-0)** 6/02/15 2nd read. Amended. To 3rd read. 6/01/15 **Pass APPR (5-0)** 5/05/15 2nd read. Re-ref to APPR 5/04/15 **Pass NRW (8-0)** 4/16/15 Re-ref to NRW 4/06/15 2nd read. Re-ref to RLS.	5/18/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-414	Minor	Jackson (S)	**Oil Spill Response** -- This bill would require the administrator, in cooperation with the United States Coast Guard, to establish a schedule of drills and exercises that are required under the federal Salvage and Marine Firefighting regulations.The bill would require the administrator before Jan 1, 2017 to submit to the Legislature a report assessing the best available technology and equipment for oil spill prevention, preparedness, and response, and, to update regulations governing the adequacy of oil spill contingency plans before Jul 1, 2018..	8670.8.5, 8670.12, 8670.13, and 8670.67.5 of, and to add Sections 8670.11, 8670.12.1, 8670.13.3, 8670.31.5, and 8670.55.1 of the Government Code	9/16/15 Enrolled, presented to Gov 9/11/15 **Concurred (26-13)** 9/10/15 **Pass NRW (6-2.)** 9/09/15 Re-ref to N.R. & W 9/09/15 Re-ref to RLS. 8/28/15 2nd read 8/28/15 Pass. (17-0) 7/16/15 **PASS GO (12-0.)** To AAR 7/02/15 2nd read. Amended. Re-ref to GO 7/01/15 **PASS NR (8-1)** 6/19/15 2nd read. Amended. Re-ref to NR 6/15/15 Re-ref to NR 6/08/15 Re-referred to RLS. 6/03/15 2nd read. Amended. Re-ref JUD 5/14/15 Ref JUD. 4/16/15 In Assembly. 1st Read. 4/16/15 **PASS SEN (35-2)** 4/16/15 Ordered to 3rd read 4/13/15 **PASS JUD (7-0)** 3/5/2015- Ref to JUD	4/7/2015		

FISH AND GAME COMMISSION LEGISLATIVE TRACKING LOG 2015

updated 9/24/2015

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-457	Major	Nielsen (S)	**Bobcat Protection Act of 2013** -- Would provide that identifiable features may include roads instead of major roads and provide that landmarks and geographic positions established by navigation and surveying methods may be used to delineate the boundaries of an area described above in which bobcat trapping is prohibited.	Amend Section 4155 of the Fish and Game Code	4/6/15 Re-ref to NRW 4/6/15 Amend., 2nd read 3/5/15 Ref to NRW			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-637	None	Allen (S)	**Relating to dredging -** Requires Department to issue a permit if it determines the use does not cause any significant effects on fish and wildlife, authorizes the Department to adjust the fee to cover all reasonable costs, prohibits the Department from issuing a permit until the permit application is deemed complete, as prescribed.	Amend Section 5653 of the Fish and Game Code, and add Section 13172.5 to the Water Code	9/17/15 Enrolled, presented to Gov 9/11/15 Amendments concurred; **PASS** 9/11/15 In Senate. Concurrence in Assem. 9/11/15 3rd read; Passed. To the Senate. 9/11/15 Assembly Rule 63 suspended. 9/11/15 Ordered to third reading. 8/31/15 2nd read 8/28/15 Pass. (12-5) 7/14/15 **Pass WPW (10-4**) To APPR. 7/07/15 2nd read, amended. 6/04/15 In Assembly. 1st read. 6/03/15 3rd read. **PASS SEN (22-15)** 6/02/15 2nd read. 6/01/15 **Pass APPR (5-2**) as amended 5/05/15 2nd read 4/29/15 **PASS EQ (5-2)** 4/22/15 2nd read. Re-ref to EQ 4/21/15 **PASS (6-0).**			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-718	None	Leno (S) Dodd (A)	**Hazardous Materials Response and Restoration Subaccount.** -- Would authorize up to $500,000 from the Oil Spill Response Trust Fund to the Hazardous Materials Response and Restoration Subaccount to reimburse organizations providing wildlife rescue and rehabilitation services for expenses incurred by rescue and rehabilitation. The bill would prohibit the administrator from making a loan if the total amount made from the loan has not been repaid exceeds $2,500,000	Add Section 8670.48.4 to the Government Code	5/11/15 Amended. 2nd read. Ref to APPR 5/06/15 2nd read. Re-ref to APPR. 5/05/15 **Pass EQ (6-1)** 4/14/15 **PASS NRW (6-2)** 3/19/15 Ref NRW	5/18/2015 4/14/2015		

FISH AND GAME COMMISSION LEGISLATIVE TRACKING LOG 2015

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB 798	Major	Committee on Natural Resources and Water (S)	**Natural resources** -- Would clarify that specified laws relating to administrative regulations and rulemaking do not apply to the sportfishing federal conforming action, make additional conforming changes, and delete other requirements,	An act to amend Section 338 of the Code of Civil Procedure, to amend Sections 205.1, 714, 1050.8, 1053.5, 1055.1, 1056, 1059, 1764, 3050, 7149.2, 7149.3, 7150, 7860, 12002.2.1, 12153, and 13005 of, and to repeal Sections 1053, 1055, 1055.4, 1055.5, 1060, 1070, 3682, 3700, 6596, 7149, 7149.4, 7180, 7181, 7182, 7183, 7184, and 7186 of, the Fish and Game Code, et al.	9/03/15 Enrolled, presented to Gov 8/31/15 To special consent calendar. 8/27/15 In Sen. Concurrence w/ Assem amendments pending. 8/27/15 3rd read. Passed. . 8/20/15 2nd read. To Consent. 7/8/15 2nd read. Re-ref to APPR. 7/2/15 **PASS WPW (15-0)** 6/18/15 Ref to WPW 5/22/15 In Assembly. First read. At Desk. 5/22/15 3rd read. **PASS SEN (38-0.)** 5/06/15 2nd read. Re-ref APPR. 5/05/15 **PASS NR (8-0).** To consent. 03/25/15 Ref to NR	4/28/2015		

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SB-805	Major	Committee on Natural Resources and Water (S)	**Natrual Resources --** Would clarify that laws relating to administrative regulations and rulemaking do not apply to sport fishing conformance tp federal regualtions, among other provisions.	Amend Sections 205.1, 714, 1050.8, 1053.5, 1055.1, 1056, 1059, 1764, 3050, 7149.2, 7149.3, 7150, 7860, 12002.2.1, 12153, and 13005 of, and to repeal Sections 1053, 1055, 1055.4, 1055.5, 1060, 1070, 3682, 3700, 6596, 7149, 7149.4, 7181, 7182, 7183, 7184, and 7186 of, the Fish and Game Code, to amend Section 113 of the Government Code, to amend Sections 741, 8301, and 30315 of, and to repeal Section 30310.5 of, the Public Resources Code	Pending referral			

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Bill No.	Impact	Authors	Title & General Purpose	Fish & Game Code/ Govt Code Sections	Bill Status	Hearing	Summary of FGC Action	Gov Action/Act No.
SJR-3	None	McGuire (S)	**Smith River watershed protection** -- Would urge the President of the United States and Congress to permanently safeguard the currently unprotected North Fork of the Smith River watershed in Oregon from any mining activities that would have the potential impacts on water supplies, economies, or the environment in California's portion of the Smith River watershed.		7/06/15 Enrolled; filed w Secretary of State 7/02/15 **PASS ASM (25-12)** 6/29/15 Concurrence in Assembly 6/23/15 **PASS NR (5-1)** 6/11/15 Ref to NR. 4/09/15 In Asm: Held at Desk. 4/09/15 **PASS SEN (25-12)** 4/07/15 2nd read . 3/24/15 **PASS NRW (7-2)** 2/5/2015 Ref to NRW	3/24/2015		7/06/15 Chaptered by Secretary of State. Res. Chapter 93, Statutes of 2015.

Department of Fish & Wildlife
Legislative Report
October 2015

(as of September 23, 2015)

AB 12 **(Cooley D) State government: administrative regulations: review.**

Introduced: 12/1/2014

Last Amend: 8/19/2015

Status: 8/28/2015-Failed Deadline pursuant to Rule 61(a)(11). (Last location was APPR. on 8/27/2015)

Location: 8/28/2015-S. 2 YEAR

Summary: Current law authorizes various state entities to adopt, amend, or repeal regulations for various specified purposes. The Administrative Procedure Act requires the Office of Administrative Law and a state agency proposing to adopt, amend, or repeal a regulation to review the proposed changes for, among other things, consistency with existing state regulations. This bill would, until January 1, 2019, require each state agency to, on or before January 1, 2018, review that agency's regulations, identify any regulations that are duplicative, overlapping, inconsistent, or out of date, to revise those identified regulations, as provided, and report to the Legislature and Governor, as specified.

AB 56 **(Quirk D) Unmanned aircraft systems.**

Introduced: 12/2/2014

Last Amend: 9/4/2015

Status: 9/11/2015-Failed Deadline pursuant to Rule 61(a)(14). (Last location was INACTIVE FILE on 9/8/2015)

Location: 9/11/2015-S. 2 YEAR

Summary: Would generally prohibit law enforcement agencies from using unmanned aircraft systems, obtaining an unmanned aircraft system from another public agency by contract, loan, or other arrangement, or using information obtained from an unmanned aircraft system used by another public agency, except as provided by the bill' s provisions. The bill would authorize a law enforcement agency to use an unmanned aircraft system if the law enforcement agency complies with specified requirements.

AB 78 **(Mathis R) Groundwater basins.**

Introduced: 1/5/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was PRINT on 1/5/2015)

Location: 5/15/2015-A. 2 YEAR

Summary: Current law requires the Department of Water Resources to categorize each basin or subbasin as high-, medium-, low-, or very low priority and to establish ground water the initial priority for each basin no later than January 31, 2015. This bill would make technical, nonsubstantive changes to this provision.

AB 92 **(Committee on Budget) Water.**

Introduced: 1/7/2015

Last Amend: 3/24/2015

Status: 3/27/2015-Chaptered by Secretary of State - Chapter No. 2

Location: 3/27/2015-A. CHAPTERED

Summary: Current law requires any new diversion of water from any stream having populations of salmon and steelhead that is determined by the Department of Fish and Wildlife to be deleterious to

salmon and steelhead to be screened by the owner of the diversion. This bill would require the department, within 30 days of providing written notice to the owner that the department has determined that the diversion is deleterious to salmon and steelhead, to submit to the owner its proposals as to measures necessary to protect the salmon and steelhead.

AB 96 **(Atkins D) Animal parts and products: importation or sale of ivory and rhinoceros horn.**

Introduced: 1/7/2015

Last Amend: 6/17/2015

Status: 9/16/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/16/2015-A. ENROLLED

Summary: Current law makes it a crime to import into the state for commercial purposes, to possess with intent to sell, or to sell within the state, the dead body, or any part or product thereof, of an elephant. Current law exempts the possession with intent to sell, or sale of the dead body, or any part or product thereof, of any elephant before June 1, 1977, or the possession with intent to sell or the sale of any such item on or after June 1, 1977, if the item was imported before January 1, 1977. This bill would delete this exemption.

AB 102 **(Rodriguez D) Railroad and surface transportation safety and emergency planning and response: hazardous materials.**

Introduced: 1/8/2015

Last Amend: 3/26/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was E.S. & T.M. on 4/28/2015)

Location: 5/1/2015-A. 2 YEAR

Summary: Would create the Regional Railroad and Surface Transportation Accident Preparedness and Immediate Response Force in the Office of Emergency Services, consisting of specified representatives, and would designate this force as being responsible for providing regional and onsite response capabilities in the event of a release of hazardous materials from a rail car or a railroad accident involving a rail car or a hazardous materials release from a truck accident. This bill contains other related provisions and other existing laws.

AB 110 **(Committee on Budget) Public Resources.**

Introduced: 1/9/2015

Last Amend: 6/16/2015

Status: 9/11/2015-Ordered to inactive file at the request of Senator Mitchell.

Location: 9/11/2015-S. INACTIVE FILE

Summary: Current law regulates real property acquired and operated by the state as wildlife management areas, and requires the Department of Fish and Wildlife, when income is directly derived from that real property, as provided, to annually pay to the county in which the property is located an amount equal to the county taxes levied upon the property at the time it was transferred to the state. Current law further requires the department to pay the assessments levied upon the property by any irrigation, drainage, or reclamation district, and requires all of those payments to be made from funds available to the department. This bill would authorize, instead of require, the department to make these payments and only from funds appropriated to the department for those purposes.

AB 115 **(Committee on Budget) Water.**

Introduced: 1/9/2015

Last Amend: 6/18/2015

Status: 9/11/2015-Ordered to inactive file at the request of Senator Mitchell.

Location: 9/11/2015-S. INACTIVE FILE

Summary: Would authorize the State Water Resources Control Board to order consolidation with a receiving water system where a public water system, or a state small water system within a disadvantaged community, consistently fails to provide an adequate supply of safe drinking water. This bill would authorize the state board to order the extension of service to an area that does not have access to an adequate supply of safe drinking water so long as the extension of service is an interim

extension of service in preparation for consolidation.

AB 142 **(Bigelow R) Wild and scenic rivers: Mokelumne River.**

Introduced: 1/12/2015

Last Amend: 9/4/2015

Status: 9/18/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/18/2015-A. ENROLLED

Summary: The California Wild and Scenic Rivers Act provides for a system of classification of those rivers or segments of rivers in the state that are designated as wild, scenic, or recreational rivers, for purposes of preserving the highest and most beneficial use of those rivers. This bill would require the Secretary of the Natural Resources Agency, in a report analyzing the suitability or nonsuitability of a proposed designation of the Mokelumne River, its tributaries, or segments thereof as additions to the system, to consider the potential effects of the proposed designation on future water requirements, as specified, and the effects of climate change on river values and current and projected water supplies, and to consider other factors.

AB 243 **(Wood D) Medical marijuana.**

Introduced: 2/5/2015

Last Amend: 9/11/2015

Status: 9/11/2015-In Assembly. Concurrence in Senate amendments pending. Assembly Rule 63 suspended. Senate amendments concurred in. To Engrossing and Enrolling. (Ayes 60. Noes 13.).

Location: 9/11/2015-A. ENROLLMENT

Summary: Would require the Department of Food and Agriculture, the Department of Pesticide Regulation, the State Department of Public Health, the Department of Fish and Wildlife, and the State Water Resources Control Board to promulgate regulations or standards relating to medical marijuana and its cultivation, as specified. The bill would also require various state agencies to take specified actions to mitigate the impact that marijuana cultivation has on the environment.

AB 266 **(Bonta D) Medical marijuana.**

Introduced: 2/10/2015

Last Amend: 9/11/2015

Status: 9/11/2015-In Assembly. Concurrence in Senate amendments pending. Assembly Rule 63 suspended. Senate amendments concurred in. To Engrossing and Enrolling. (Ayes 59. Noes 14.).

Location: 9/11/2015-A. ENROLLMENT

Summary: Would enact the Medical Marijuana Regulation and Safety Act for the licensure and regulation of medical marijuana and would establish within the Department of Consumer Affairs the Bureau of Medical Marijuana Regulation, under the supervision and control of the Director of Consumer Affairs. The bill would require the director to administer and enforce the provisions of the act.

AB 290 **(Bigelow R) Game mammals: wild pig depredation.**

Introduced: 2/11/2015

Last Amend: 3/26/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was W.,P. & W. on 4/6/2015)

Location: 5/1/2015-A. 2 YEAR

Summary: Current law defines the term "wild pig" for purposes of managing, taking, or hunting that species. The bill would also define "pigs" and prohibit the release of pigs into uncontrolled areas. The bill would provide that an area shall be deemed controlled if the pigs are regularly cared for and enclosed by a lawful fence, as defined. The bill would provide that an owner of a pig that escapes from a controlled area who has complied with this provision is not deemed to be in violation of any law that prohibits the release of any animal.

AB 298 **(Gonzalez D) Fish and wildlife: violations.**

Introduced: 2/12/2015

Last Amend: 6/11/2015

Status: 6/30/2015-Chaptered by Secretary of State - Chapter No. 31

Location: 6/30/2015-A. CHAPTERED

Summary: Would make a violation of a specified regulation relating to marine protected areas, marine managed areas, and special closures an infraction or a misdemeanor, except if (1) the person who violates the regulation holds a commercial fishing license or a commercial passenger fishing boat license or (2) the violation of the regulation occurred within 2 years of a prior violation of the regulation that resulted in a conviction.

AB 300 **(Alejo D) Safe Water and Wildlife Protection Act of 2016.**

Introduced: 2/12/2015

Last Amend: 8/17/2015

Status: 8/28/2015-Failed Deadline pursuant to Rule 61(a)(11). (Last location was APPR. on 8/27/2015)

Location: 8/28/2015-S. 2 YEAR

Summary: Would enact the Safe Water and Wildlife Protection Act of 2016, which would require the State Water Resources Control Board to establish and coordinate the Algal Bloom Task Force, comprised of specified representatives of state agencies, including the conservancy, in consultation with the Secretary for Environmental Protection, and would prescribe the functions and duties of the task force.

AB 311 **(Gallagher R) Environmental quality: Water Quality, Supply, and Infrastructure Improvement Act of 2014.**

Introduced: 2/12/2015

Last Amend: 4/15/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was NAT. RES. on 4/28/2015)

Location: 5/1/2015-A. 2 YEAR

Summary: Would require a public agency, in certifying an environmental impact report and in granting approvals for specified water storage projects funded, in whole or in part, by Proposition 1, to comply with specified procedures. Because a public agency would be required to comply with those new procedures, this bill would impose a state-mandated local program. The bill would authorize the public agency to concurrently prepare the record of proceedings for the project. This bill contains other related provisions and other existing laws.

AB 330 **(Chang R) State government.**

Introduced: 2/13/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was PRINT on 2/13/2015)

Location: 5/15/2015-A. 2 YEAR

Summary: Current law authorizes the Governor, from time to time, to examine the organization of all agencies and to determine what changes are necessary to accomplish specified government goals, including, but not limited to, promotion of more effective management of the executive and administrative branch of state government. This bill would make technical, nonsubstantive changes to these provisions.

AB 353 **(Lackey R) Protected species: take: Bouquet Canyon: habitat restoration project.**

Introduced: 2/17/2015

Last Amend: 9/3/2015

Status: 9/18/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/18/2015-A. ENROLLED

Summary: Would permit the Department of Fish and Wildlife to authorize, under the California Endangered Species Act, the take of the unarmored threespine stickleback (Gasterosteus aculeatus

williamsoni) resulting from impacts attributable to the habitat restoration project to restore, maintain, and improve riparian habitat on public lands in a prescribed portion of Bouquet Creek and projects to restore the flow capacity to Bouquet Creek in Bouquet Canyon on public lands, as specified, if certain conditions are satisfied. This bill contains other related provisions.

AB 367 **(Dodd D) Clear Lake.**

Introduced: 2/17/2015

Last Amend: 4/15/2015

Status: 5/29/2015-Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. on 5/28/2015)

Location: 5/29/2015-A. 2 YEAR

Summary: Would appropriate $2,400,000 from an unspecified fund to the County of Lake for the purposes of restoring Clear Lake wetlands, maintaining the water quality of Clear Lake, preventing the spread of invasive species to Clear Lake, and controlling and eradicating invasive species in Clear Lake. This bill contains other current laws.

AB 395 **(Gallagher R) Hunting: nonlead ammunition.**

Introduced: 2/18/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was W.,P. & W. on 3/5/2015)

Location: 5/1/2015-A. 2 YEAR

Summary: Current las requires, as soon as is practicable, but by no later than July 1, 2019, the use of nonlead ammunition for the taking of all wildlife, including game mammals, game birds, nongame birds, and nongame mammals, with any firearm, and requires the Fish and Game Commission to promulgate regulations by July 1, 2015, that phase in the requirements of these provisions. This bill would repeal the restriction against the use of nonlead ammunition for the taking of all wildlife and related provisions.

AB 410 **(Obernolte R) Reports submitted to legislative committees.**

Introduced: 2/19/2015

Last Amend: 8/24/2015

Status: 9/10/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/10/2015-A. ENROLLED

Summary: Would require a state agency to post on its Internet Web site any report it is required by law to submit to a committee of the Legislature, as specified. The bill would specify that a "report" includes a study or audit, or a budget change proposal that has been approved by the Department of Finance and submitted to the Joint Legislative Budget Committee, the Assembly Committee on Budget, or the Senate Committee on Budget and Fiscal Review.

AB 411 **(Lackey R) Public contracts.**

Introduced: 2/19/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was PRINT on 2/19/2015)

Location: 5/15/2015-A. 2 YEAR

Summary: Current law generally requires the Department of General Services to approve state agency contracts for the acquisition of goods and services. Current law defines several terms relating to these contract acquisitions. This bill would make technical, nonsubstantive changes to the provision of law setting forth these definitions.

AB 435 **(Chang R) California Environmental Protection Agency: Natural Resources Agency: Web casts of public meetings and workshops.**

Introduced: 2/19/2015

Last Amend: 8/18/2015

Status: 8/28/2015-Failed Deadline pursuant to Rule 61(a)(11). (Last location was APPR. on 8/27/2015)

Location: 8/28/2015-S. 2 YEAR

Summary: Would require that each department, board, and commission of the Natural Resources

Agency , except as specified, and each department, board, and office of the California Environmental Protection Agency Web cast all onsite public meetings, in a manner that enables listeners and viewers to ask questions and provide public comment by telephone or electronic communication commensurate with those attending the meeting. The bill would require the agencies to make the recording of a Web cast available online for no less than 3 years for subsequent viewing by interested members of the public.

AB 498 **(Levine D) Wildlife conservation: wildlife corridors.**

Introduced: 2/23/2015

Last Amend: 8/31/2015

Status: 9/16/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/16/2015-A. ENROLLED

Summary: Would declare that it is the policy of the state to encourage, wherever feasible and practicable, voluntary steps to protect the functioning of wildlife corridors through various means, as applicable. This bill contains other related provisions and other existing laws.

AB 499 **(Cooley D) Archery season: concealed firearms.**

Introduced: 2/23/2015

Status: 7/17/2015-Failed Deadline pursuant to Rule 61(a)(10). (Last location was N.R. & W. on 5/14/2015)

Location: 7/17/2015-S. 2 YEAR

Summary: Current law generally prohibits a person taking or attempting to take deer during archery season from carrying, or having under his or her immediate control, a firearm of any kind, except for an active or honorably retired peace officer, as specified. This bill would authorize a person with a valid license to carry a firearm capable of being concealed on the person, consistent with the terms of that license, while engaged in the taking of deer with bow and arrow as long as he or she does not take or attempt to take deer with the firearm.

AB 501 **(Levine D) Resources: Delta research.**

Introduced: 2/23/2015

Last Amend: 4/22/2015

Status: 5/29/2015-Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. SUSPENSE FILE on 4/29/2015)

Location: 5/29/2015-A. 2 YEAR

Summary: Would require a person conducting Delta research, as defined, whose research is funded, in whole or in part, by the state, to take specified actions with regard to the sharing of the primary data, samples, physical collections, and other supporting materials created or gathered in the course of that research. The bill would make a researcher ineligible for state funding if the researcher does not substantially comply with these requirements within 6 months of completing the Delta research project, until the researcher complies with those requirements.

AB 559 **(Lopez D) Monarch butterflies: conservation.**

Introduced: 2/23/2015

Last Amend: 9/4/2015

Status: 9/11/2015-Senate amendments concurred in. To Engrossing and Enrolling. (Ayes 63. Noes 13.).

Location: 9/11/2015-A. ENROLLMENT

Summary: Would authorize the Department of Fish and Wildlife to take feasible actions to conserve monarch butterflies and the unique habitats they depend upon for successful migration. The bill would authorize the department to partner with federal agencies, nonprofit organizations, academic programs, private landowners, and other entities that undertake actions to conserve monarch butterflies and aid their successful migration, including the Monarch Joint Venture.

AB 665 **(Frazier D) Hunting or fishing: local regulation.**

Introduced: 2/24/2015

Last Amend: 8/18/2015

Status: 9/11/2015-Failed Deadline pursuant to Rule 61(a)(14). (Last location was APPR. on 9/10/2015)

Location: 9/11/2015-A. 2 YEAR

Summary: Under current law, a city or county has no authority to regulate fish and game except that a city or county may adopt an ordinance that incidentally affects fishing and hunting for the protection of public health and safety. This bill would provide that the state fully occupies the field of the taking and possession of fish and game. The bill would provide that unless otherwise authorized by the Fish and Game Code, other state law, or federal law, the Fish and Game Commission and the Department of Fish and Wildlife are the only entities that may adopt or promulgate regulations regarding the taking or possession of fish and game on any lands or waters within the state.

AB 728 **(Hadley R) State government: financial reporting.**

Introduced: 2/25/2015

Last Amend: 8/24/2015

Status: 9/15/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/15/2015-A. ENROLLED

Summary: Current law requires state agency heads to, biennially, conduct an internal review and prepare a report on the adequacy of the agency's systems of internal accounting, administrative control, and monitoring practices. Copies of the reports are required to be submitted to the Legislature, the California State Auditor, the Controller, the Department of Finance, the Secretary of Government Operations, and to the State Library where the copy is required to be available for public inspection. This bill would also require the report to be posted on the agency' s Internet Web site within 5 business days after acceptance by the department .

AB 794 **(Linder R) Criminal acts against law enforcement animals.**

Introduced: 2/25/2015

Last Amend: 4/8/2015

Status: 8/13/2015-Chaptered by Secretary of State - Chapter 201, Statutes of 2015.

Location: 8/13/2015-A. CHAPTERED

Summary: Would make specified criminal acts against law enforcement applicable when those acts are carried out against a horse or dog being used by, or under the supervision of, a volunteer who is acting under the direct supervision of a peace officer in the discharge or attempted discharge of his or her assigned volunteer duties. The bill would also require a defendant convicted of those acts to pay restitution for a horse or dog that is used by , or under the supervision of , a volunteer who is acting under the direct supervision of a peace officer, as specified.

AB 815 **(Ridley-Thomas D) Oil spill prevention and response fees: collection.**

Introduced: 2/26/2015

Status: 7/15/2015-Chaptered by Secretary of State - Chapter 108, Statutes of 2015.

Location: 7/15/2015-A. CHAPTERED

Summary: The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act prohibits the oil spill prevention and administration fee from being collected by a marine terminal operator or refinery operator or imposed on the owner of crude oil or petroleum products if the fee has been previously collected or paid on the crude oil or petroleum products at another marine terminal or refinery and, in that case, requires a marine terminal operator, refinery operator, or owner of crude oil or petroleum products to demonstrate that the fee has already been paid. This bill instead would authorize a marine terminal operator or a refinery operator receiving petroleum products derived from crude oil refined in the state to presume the fee has been previously collected.

AB 820 **(Stone, Mark D) Fish and shellfish: labeling and identification.**

Introduced: 2/26/2015

Last Amend: 4/22/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was AGRI. on 4/23/2015)

Location: 5/1/2015-A. 2 YEAR

Summary: Would provide that it is unlawful and constitutes misbranding to sell or offer for sale any fresh, frozen, or processed fish or shellfish intended for human consumption without clearly identifying at the point of sale whether the fish or shellfish was wild caught or farm raised. The bill would exempt a person who sells or offers for sale any fish or shellfish and acts in reasonable reliance on the fish or shellfish package labeling and product invoice from being found in violation of these requirements.

AB 864 **(Williams D) Oil spill response: environmentally and ecologically sensitive areas.**

Introduced: 2/26/2015

Last Amend: 9/4/2015

Status: 9/11/2015-Re-referred to Com. on NAT. RES. pursuant to Assembly Rule 77.2. Action rescinded whereby the bill was re-referred to Com. on NAT. RES. pursuant to Assembly Rule 77.2. Senate amendments concurred in. To Engrossing and Enrolling. (Ayes 65. Noes 11.).

Location: 9/11/2015-A. ENROLLMENT

Summary: Would require, by January 1, 2018, any new or replacement pipeline near environmentally and ecologically sensitive areas in the coastal zone to use best available technologies to reduce the amount of oil released in an oil spill to protect state waters and wildlife. The bill would require, by July 1, 2018, an operator of an existing pipeline near these sensitive areas to submit a plan to retrofit the pipeline, by January 1, 2020, as provided. By creating a new crime, the bill would impose a state-mandated local program.

AB 956 **(Mathis R) California Environmental Quality Act: exemption.**

Introduced: 2/26/2015

Last Amend: 4/13/2015

Status: 6/8/2015-From committee: Without further action pursuant to Joint Rule 62(a).

Location: 5/1/2015-A. 2 YEAR

Summary: The California Environmental Quality Act (CEQA) requires a lead agency to prepare a mitigated negative declaration for a project that may have a significant effect on the environment if revisions in the project would avoid or mitigate that effect and there is no substantial evidence that the project, as revised, would have a significant effect on the environment. This bill would exempt from the requirements of CEQA activities undertaken by a local agency in response to a drought that are necessary for water recycling projects that provide water for drinking and sanitation to specific individuals and communities.

AB 965 **(Garcia, Eduardo D) California and Mexico border: water resources improvement.**

Introduced: 2/26/2015

Last Amend: 8/18/2015

Status: 9/15/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/15/2015-A. ENROLLED

Summary: Would add the Secretary of State and Consumer Services as a member of the California-Mexico Border Relations Council and provide that the Regional Administrator of the United States Environmental Protection Agency, Region 9, may appoint a representative from his or her staff to serve as an ex-officio, nonvoting member of the council. The bill would require the council to invite the participation of representatives of the State of Baja California and the Mexican government to participate in meetings.

AB 1188 **(Gipson D) Importation or sale of endangered animals.**

Introduced: 2/27/2015

Last Amend: 9/4/2015

Status: 9/4/2015-From committee chair, with author's amendments: Amend, and re-refer to committee.

Read second time, amended, and re-referred to Com. on RLS.

Location: 9/4/2015-S. RLS.

Summary: Current law makes it unlawful to import into the state for commercial purposes, to possess with intent to sell, or to sell within the state, the dead body or other part or product of specified endangered animals, including kangaroos. This bill would delete the prohibition on the importation, possession with the intent to sell, and selling within the state of kangaroos. This bill contains other related provisions.

AB 1201 **(Salas D) Fish and wildlife: Sacramento-San Joaquin Delta: predation by nonnative species.**

Introduced: 2/27/2015

Last Amend: 8/17/2015

Status: 8/28/2015-Failed Deadline pursuant to Rule 61(a)(11). (Last location was APPR. on 8/27/2015)

Location: 8/28/2015-S. 2 YEAR

Summary: Would require the Department of Fish and Wildlife, by June 30, 2016, to develop a science-based plan that addresses predation by nonnative species upon species of fish listed pursuant to the California Endangered Species Act that reside all or a portion of their lives in the Sacramento-San Joaquin Delta and that considers predation reduction for all Chinook salmon and other native species not listed pursuant to the act.

AB 1244 **(Gray D) Water rights: small irrigation use.**

Introduced: 2/27/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was W.,P. & W. on 3/23/2015)

Location: 5/1/2015-A. 2 YEAR

Summary: Current law authorizes any person to obtain a right to appropriate water for a small irrigation use upon registering the use with the State Water Resources Control Board and thereafter applying the water to reasonable and beneficial use with due diligence. This bill would require the board to adopt general conditions, in consultation with the Department of Food and Agriculture, the University of California Cooperative Extension, and others, including, but not limited to the Department of Fish and Wildlife, for small irrigation use, unless the board determines that sufficient funds are not available for that purpose.

AB 1251 **(Gomez D) Greenway Development and Sustainment Act.**

Introduced: 2/27/2015

Last Amend: 9/4/2015

Status: 9/11/2015-Senate amendments concurred in. To Engrossing and Enrolling. (Ayes 61. Noes 16.).

Location: 9/11/2015-A. ENROLLMENT

Summary: Would enact the Greenway Development and Sustainment Act and would apply to greenway easements certain creation and transfer provisions similar to those of conservation easements. The bill would define greenway as a pedestrian and bicycle, nonmotorized vehicle transportation, and recreational travel corridor that meets specified requirements. The bill would also include greenways in the definition of "open-space land" for local planning purposes. This bill contains other related provisions and other existing laws.

AB 1259 **(Levine D) Bees: apiculture: state-owned lands.**

Introduced: 2/27/2015

Last Amend: 9/1/2015

Status: 9/16/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/16/2015-A. ENROLLED

Summary: Would require the Department of Fish and Wildlife to consider authorizing, rather than permitting, apiculture on department-managed wildlife areas. The bill would require the department to determine the appropriate fee and lease rent to be assessed for conducting apiculture on department-managed wildlife areas, would specify that the fee determined by the department for those purposes

shall be sufficient to recover the administrative and implementation costs of the department, and would require the lease rent to take into account if the lease is a nonexclusive use of the land.

AB 1281 **(Wilk R) Regulations: legislative review.**

Introduced: 2/27/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was A. & A.R. on 3/23/2015)

Location: 5/15/2015-A. 2 YEAR

Summary: The Administrative Procedure Act governs the procedure for the adoption, amendment, or repeal of regulations by state agencies and for the review of those regulatory actions by the Office of Administrative Law. This bill, whenever 25% of the Members of the Assembly or Senate transmit to the Governor their written declaration of opposition to a proposed regulation, would require a majority vote of the Assembly and Senate to adopt that regulation.

AB 1312 **(O'Donnell D) Ballast water management.**

Introduced: 2/27/2015

Last Amend: 4/15/2015

Status: 9/1/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/1/2015-A. ENROLLED

Summary: Would define the term "port" for purposes of the Marine Invasive Species Act to mean any port or place in which a vessel was, is, or will be anchored or moored, or where a vessel will transfer cargo. This bill contains other related provisions and other existing laws.

AB 1325 **(Salas D) Delta smelt.**

Introduced: 2/27/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was W.,P. & W. on 3/23/2015)

Location: 5/1/2015-A. 2 YEAR

Summary: Would enact the Delta Smelt Preservation and Restoration Act of 2016. The act would require the Department of Fish and Wildlife to develop a Delta smelt hatchery program to preserve and restore the Delta smelt. The bill would require the department to enter into mitigation banking agreements with banking partners for the purpose of providing take authorizations to banking partners and to obtain funding from banking agreements. This bill contains other related provisions.

AB 1390 **(Alejo D) Groundwater: comprehensive adjudication.**

Introduced: 2/27/2015

Last Amend: 9/4/2015

Status: 9/18/2015-Enrolled and presented to the Governor at 4 p.m.

Location: 9/18/2015-A. ENROLLED

Summary: The Sustainable Groundwater Management Act, which applies to all groundwater basins in the state, all basins designated as high- or medium-priority basins by the Department of Water Resources as basins that are subject to critical conditions of overdraft, as specified, are required to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2020. This bill would establish special procedures for a comprehensive adjudication, which is defined as an action filed in superior court to comprehensively determine rights to extract groundwater in a basin.

AB 1398 **(Wilk R) Environmental quality: the Sustainable Environmental Protection Act.**

Introduced: 2/27/2015

Status: 6/8/2015-From committee: Without further action pursuant to Joint Rule 62(a).

Location: 5/1/2015-A. 2 YEAR

Summary: Would enact the Sustainable Environmental Protection Act and would specify the environmental review required pursuant to CEQA for projects related to specified environmental topical areas. The bill would provide that the Sustainable Environmental Protection Act only applies if the lead agency or project applicant has agreed to provide to the public in a readily accessible electronic format

an annual compliance report prepared pursuant to the mitigation monitoring and reporting program. This bill contains other related provisions and other existing laws.

AB 1427 **(Lackey R) Fish and Game Commission: hearings.**

Introduced: 2/27/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was PRINT on 2/27/2015)

Location: 5/15/2015-A. 2 YEAR

Summary: Current law authorizes the Fish and Game Commission, or any person appointed by the commission to conduct a hearing, to cause the deposition of witnesses, as prescribed, and to compel the attendance of witnesses and the production of documents and papers, in accordance with certain requirements. This bill would make a technical, nonsubstantive change to that provision.

AB 1473 **(Salas D) California Environmental Quality Act.**

Introduced: 2/27/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was PRINT on 2/27/2015)

Location: 5/15/2015-A. 2 YEAR

Summary: The California Environmental Quality Act requires a lead agency to prepare, or cause to be prepared, and certify the completion of an environmental impact report on a project, as defined, that it proposes to carry out or approve that may have a significant effect on the environment, as defined, or to adopt a negative declaration if it finds that the project will not have that effect. This bill would make technical, nonsubstantive changes to a provision within the act.

AB 1498 **(Thurmond D) Renewable energy resources: comprehensive planning and environmental compliance services.**

Introduced: 2/27/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was PRINT on 2/27/2015)

Location: 5/15/2015-A. 2 YEAR

Summary: Current law requires the Department of Fish and Wildlife to establish an internal division with the primary purpose of performing comprehensive planning and environmental compliance services with priority given to projects involving the building of eligible renewable energy resources, as defined. This bill would make a nonsubstantive change in those provisions.

AB 1527 **(Committee on Water, Parks, and Wildlife) Fish and wildlife.**

Introduced: 3/18/2015

Status: 8/10/2015-Chaptered by Secretary of State - Chapter 154, Statutes of 2015.

Location: 8/10/2015-A. CHAPTERED

Summary: Current law includes the Fish and Game Code and provides definitions that govern the construction of the code and all regulations adopted under the code unless the provision or the context otherwise requires. Current law requires the code to be administered and enforced through regulations adopted by the Department of Fish and Wildlife, except as otherwise specifically provided by the code, or where the code requires the Fish and Game Commission to adopt regulations. This bill would make various nonsubstantive, minor substantive, and organizational changes to the code.

AB 1528 **(Committee on Water, Parks, and Wildlife) Public resources.**

Introduced: 3/18/2015

Status: 7/15/2015-Chaptered by Secretary of State - Chapter 113, Statutes of 2015.

Location: 7/15/2015-A. CHAPTERED

Summary: Current law declares the official state animal, rock, mineral, grass, insect, and bird, among other official things. This bill would make lace lichen (Ramalina menziesii) the official state lichen. This bill contains other related provisions and other current laws.

SB 17 **(Monning D) California Sea Otter Fund.**

Introduced: 12/1/2014

Status: 8/7/2015-Chaptered by Secretary of State - Chapter 136, Statutes of 2015.

Location: 8/7/2015-S. CHAPTERED

Summary: Current law requires money in the California Sea Otter Fund, upon appropriation by the Legislature, to be allocated to the Department of Fish and Wildlife for the purposes of establishing a sea otter fund to be used for sea otter conservation, and to the State Coastal Conservancy for competitive grants and contracts for research, projects, and programs related to the Federal Sea Otter Recovery Plan or improving the nearshore ocean ecosystem. This bill would extend the operation of these provisions to January 1, 2021.

SB 83 **(Committee on Budget and Fiscal Review) Public Resources.**

Introduced: 1/9/2015

Last Amend: 6/17/2015

Status: 6/24/2015-Chaptered by Secretary of State - Chapter 24, Statutes of 2015

Location: 6/24/2015-S. CHAPTERED

Summary: Current law regulates real property acquired and operated by the state as wildlife management areas, and requires the Department of Fish and Wildlife, when income is directly derived from that real property, as provided, to annually pay to the county in which the property is located an amount equal to the county taxes levied upon the property at the time it was transferred to the state. Current law further requires the department to pay the assessments levied upon the property by any irrigation, drainage, or reclamation district, and requires all of those payments to be made from funds available to the department. This bill would authorize, instead of require, the department to make these payments and only from funds appropriated to the department for those purposes.

SB 88 **(Committee on Budget and Fiscal Review) Water.**

Introduced: 1/9/2015

Last Amend: 6/17/2015

Status: 6/24/2015-Chaptered by Secretary of State - Chapter 27, Statutes of 2015

Location: 6/24/2015-S. CHAPTERED

Summary: Would authorize the State Water Resources Control Board to order consolidation with a receiving water system where a public water system, or a state small water system within a disadvantaged community, consistently fails to provide an adequate supply of safe drinking water. This bill would authorize the state board to order the extension of service to an area that does not have access to an adequate supply of safe drinking water so long as the extension of service is an interim extension of service in preparation for consolidation.

SB 127 **(Vidak R) Environmental quality: Water Quality, Supply, and Infrastructure Improvement Act of 2014.**

Introduced: 1/20/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was E.Q. on 2/5/2015)

Location: 5/1/2015-S. 2 YEAR

Summary: CEQA establishes a procedure by which a person may seek judicial review of the decision of the lead agency made pursuant to CEQA and a procedure for the preparation and certification of the record of proceedings upon the filing of an action or proceeding challenging a lead agency's action on the grounds of noncompliance with CEQA. This bill would require the public agency, in certifying the environmental impact report and in granting approvals for projects funded, in whole or in part, by Proposition 1, including the concurrent preparation of the record of proceedings and the certification of the record of proceeding within 5 days of the filing of a specified notice, to comply with specified procedures.

SB 165 **(Monning D) Production or cultivation of a controlled substance: civil penalties.**

Introduced: 2/4/2015

Last Amend: 4/14/2015

Status: 8/7/2015-Chaptered by Secretary of State - Chapter 139, Statutes of 2015.

Location: 8/7/2015-S. CHAPTERED

Summary: Current law imposes various civil penalties for violations of specified provisions of the Fish and Game Code in connection with the production or cultivation of a controlled substance. Current law

authorizes the Department of Fish and Wildlife to impose those civil penalties administratively. Current law authorizes the department to adopt regulations to implement these provisions and requires the administrative penalties collected to be apportioned in a specified manner. This bill would impose various additional civil penalties, subject to these provisions, for violations of specified provisions of the Penal Code and the Public Resources Code, in connection with the production or cultivation of a controlled substance.

SB 201 **(Wieckowski D) California Public Records Act.**

Introduced: 2/10/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was JUD. on 2/19/2015)

Location: 5/15/2015-S. 2 YEAR

Summary: Would require a court, in an action by a third party to enjoin disclosure of a public record or declaratory relief concerning a request to inspect a public record, to apply the provisions of the California Public Records Act as if the action had been initiated by a person requesting disclosure of a public record. The bill would also require the third party seeking an injunction or declaratory relief to provide notice to the person whose request prompted the action at the same time the defendant public agency in the action is served.

SB 207 **(Wieckowski D) California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund.**

Introduced: 2/11/2015

Last Amend: 3/24/2015

Status: 7/17/2015-Failed Deadline pursuant to Rule 61(a)(10). (Last location was NAT. RES. on 5/14/2015)

Location: 7/17/2015-A. 2 YEAR

Summary: Current law requires a state agency expending moneys from the Greenhouse Gas Reduction Fund to create a record, prior to the expenditure, that includes, among other things, a description of the expenditure proposed to be made and a description of how the proposed expenditure will contribute to achieving and maintaining greenhouse gas emissions reductions, as specified. This bill would require that record to be posted on the Internet Web sites of the state agency and the State Air Resources Board prior to the state agency expending those moneys.

SB 226 **(Pavley D) Sustainable Groundwater Management Act: groundwater adjudication.**

Introduced: 2/13/2015

Last Amend: 9/3/2015

Status: 9/16/2015-Enrolled and presented to the Governor at 4:45 p.m.

Location: 9/16/2015-S. ENROLLED

Summary: Current law authorizes a court to order a reference to the State Water Resources Control Board, as referee, of any and all issues involved in a suit brought in any cou rt of competent jurisdiction in this state for determination of rights to water. This bill would authorize the state to intervene in a comprehensive adjudication conducted as specified in AB 1390 of the 2015- 16 Regular Session. This bill contains other related provisions and other existing laws.

SB 233 **(Hertzberg D) Marine resources and preservation.**

Introduced: 2/13/2015

Last Amend: 7/16/2015

Status: 8/28/2015-Failed Deadline pursuant to Rule 61(a)(11). (Last location was APPR. SUSPENSE FILE on 8/26/2015)

Location: 8/28/2015-A. 2 YEAR

Summary: The California Marine Resources Legacy Act establishes a program, administered by the Department of Fish and Wildlife, to allow partial removal of offshore oil structures. Before the first application to partially remove an offshore oil structure is filed, this bill would authorize a prospective applicant to pay a portion of the startup costs in an amount determined by the department to be necessary for staff and other costs in anticipation of receipt of the first application. The bill would require an applicant, upon conditional approval for partial removal of an offshore oil structure, to

apportion and transmit a portion of the cost savings to the department, instead of to the specified entities and funds.

SB 234 **(Wolk D) Wildlife management areas: payments.**

Introduced: 2/13/2015

Status: 5/28/2015-May 28 hearing: Held in committee and under submission.

Location: 5/28/2015-S. APPR.

Summary: Current law requires the Department of Fish and Wildlife, when income is derived directly from real property acquired and operated by the state as a wildlife management area, as defined, to pay annually to the county in which the property is located an amount equal to the county taxes levied upon the property at the time title to the property was transferred to the state, and any assessments levied upon the property by any irrigation, drainage, or reclamation district. This bill would appropriate $19,000,000 from the General Fund to the department to make payments to counties for unpaid amounts under these provisions.

SB 317 **(De León D) The Safe Neighborhood Parks, Rivers, and Coastal Protection Bond Act of 2016.**

Introduced: 2/23/2015

Last Amend: 5/5/2015

Status: 9/11/2015-Ordered to inactive file on request of Senator Mitchell.

Location: 9/11/2015-S. INACTIVE FILE

Summary: Would enact the Safe Neighborhood Parks, Rivers, and Coastal Protection Bond Act of 2016, which, if adopted by the voters at the November 8, 2016, statewide general election, would authorize the issuance of bonds in the total amount of $2,450,000,000 pursuant to the State General Obligation Bond Law to finance a safe neighborhood parks, rivers, and coastal protection program. This bill contains other related provisions.

SB 345 **(Berryhill R) The Sport Fishing Stimulus Act of 2015.**

Introduced: 2/24/2015

Last Amend: 6/2/2015

Status: 7/17/2015-Failed Deadline pursuant to Rule 61(a)(10). (Last location was W.,P. & W. on 6/15/2015)

Location: 7/17/2015-A. 2 YEAR

Summary: Would authorize a charitable organization or nonprofit organization to possess fish taken under a sport fishing license in excess of a possession limit established by statute or by regulations adopted by the Fish and Game Commission at any time if the charitable organization or nonprofit organization was given the fish by a donor intermediary, as defined, or a person who holds a sport fishing license and an applicable license tag or tags, the charitable organization or nonprofit organization has documentation to that effect, as specified, and the charitable organization or nonprofit organization retains any tag required to be affixed to a fish in the manner prescribed in the Fish and Game Code or regulations adopted by the commission.

SB 389 **(Berryhill R) Environmental quality: the Sustainable Environmental Protection Act.**

Introduced: 2/25/2015

Last Amend: 4/6/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was E.Q. on 4/16/2015)

Location: 5/1/2015-S. 2 YEAR

Summary: Would enact the Sustainable Environmental Protection Act and would specify the environmental review required pursuant to CEQA for projects related to specified environmental topical areas. For a judicial action or proceeding filed challenging an action taken by a lead agency on the ground of noncompliance with CEQA, the bill would prohibit a cause of action that (1) relates any topical area or criteria for which compliance obligations are identified or (2) challenges the environmental document if: (A) the environmental document discloses compliance with applicable environmental law, (B) the project conforms with the use designation, density, or building intensity in an applicable plan, as defined, and (C) the project approval incorporates applicable mitigation requirements into the environmental document. The bill would provide that the Sustainable

Environmental Protection Act only applies if the lead agency or project applicant has agreed to provide to the public in a readily accessible electronic format an annual compliance report prepared pursuant to the mitigation monitoring and reporting program. This bill contains other related provisions and other existing laws.

SB 414 **(Jackson D) Oil spill response.**

Introduced: 2/25/2015

Last Amend: 9/4/2015

Status: 9/16/2015-Enrolled and presented to the Governor at 4:45 p.m.

Location: 9/16/2015-S. ENROLLED

Summary: Would require the administrator for oil spill response, in cooperation with the United States Coast Guard, to establish a schedule of drills and exercises that are required under the federal Salvage and Marine Firefighting regulations. The bill would require the administrator, on or before January 1, 2017, to submit to the Legislature a report assessing the best achievable technology of equipment for oil spill prevention, preparedness, and response and to update regulations governing the adequacy of oil spill contingency plans before July 1, 2018.

SB 457 **(Nielsen R) Bobcat Protection Act of 2013.**

Introduced: 2/25/2015

Last Amend: 4/6/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was N.R. & W. on 4/14/2015)

Location: 5/1/2015-S. 2 YEAR

Summary: The Bobcat Protection Act of 2013 requires the Fish and Game Commission to delineate the boundaries of an area in which bobcat trapping is prohibited pursuant to specified provisions using readily identifiable features, such as highways or other major roads, such as those delineated for Joshua Tree National Park. This bill would provide that these features may include roads instead of major roads and would provide that landmarks and geographic positions established by navigation and surveying methods may be used to delineate the bo undaries of an area described above in which bobcat trapping is prohibited.

SB 615 **(Berryhill R) Waste discharge requirements: waivers: managed wetlands.**

Introduced: 2/27/2015

Last Amend: 4/6/2015

Status: 5/1/2015-Failed Deadline pursuant to Rule 61(a)(2). (Last location was E.Q. on 4/9/2015)

Location: 5/1/2015-S. 2 YEAR

Summary: Would require that managed wetlands be presumed to not pose a significant threat to water quality and would require, with respect to managed wetlands, the state board and regional boards to waive the above-described reporting requirements, regional board prescribed waste discharge requirements, and monitoring requirements of the waiver program, except that the state board or a regional board shall require water quality monitoring of a managed wetland not more than once during the duration of each waiver period unless results of downstream monitoring demonstrate a violation of water quality discharge standards. The bill would limit this monitoring to contaminants that are actually applied by wetland managers to the wetland and contaminants that are known to be naturally present in the wetland environment.

SB 617 **(Block D) Crimes.**

Introduced: 2/27/2015

Last Amend: 4/29/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was PUB. S. on 5/12/2015)

Location: 5/15/2015-S. 2 YEAR

Summary: Would , subject to exceptions, allow misdemeanors punishable by a maximum term of confinement not exceeding 6 months in jail to be charged as a misdemeanor or an infraction, in the discretion of the prosecuting attorney, as specified. The bill would, for a misdemeanor offense that is

charged as an infraction under these provisions, make all statutory provisions of a misdemeanor offense, including fines or penalties, applicable to the infraction as if the offense were charged as a misdemeanor. The bill would prohibit a misdemeanor charged as an infraction pursuant to these provisions from being punished by imprisonment.

SB 637 **(Allen D) Suction dredge mining: permits.**

Introduced: 2/27/2015

Last Amend: 9/10/2015

Status: 9/17/2015-Enrolled and presented to the Governor at 4:45 p.m.

Location: 9/17/2015-S. ENROLLED

Summary: Current law prohibits the use of any vacuum or suction dredge equipment by any person in any river, stream, or lake of this state without a permit issued by the Department of Fish and Wildlife. Current law requires the department to issue a permit, if the department determines that the use of a vacuum or suction dredge will not be deleterious to fish, upon the payment of a specified fee. This bill would instead require the department to issue a permit if the department determines that the use does not cause any significant effects on fish and wildlife and would authorize the department to adjust the specified fee to an amount sufficient to cover all reasonable costs of the department in regulating suction dredging activities.

SB 643 **(McGuire D) Medical marijuana.**

Introduced: 2/27/2015

Last Amend: 9/11/2015

Status: 9/17/2015-Enrolled and presented to the Governor at 4:45 p.m.

Location: 9/17/2015-S. ENROLLED

Summary: Would set forth standards for a physician and surgeon prescribing medical cannabis and require the Medical Board of California to prioritize its investigative and prosecutorial resources to identify and discipline physicians and surgeons that have repeatedly recommended excessive cannabis to patients for medical purposes or repeatedly recommended cannabis to patients for medical purposes without a good faith examination, as specified. The bill would require the Bureau of Medical Marijuana to require an applicant to furnish a full set of fingerprints for the purposes of conducting criminal history record checks.

SB 718 **(Leno D) Hazardous Materials Response and Restoration Subaccount.**

Introduced: 2/27/2015

Last Amend: 5/11/2015

Status: 5/29/2015-Failed Deadline pursuant to Rule 61(a)(5). (Last location was APPR. on 5/28/2015)

Location: 5/29/2015-S. 2 YEAR

Summary: Would authorize the administrator for oil spill response, upon making a specified finding, to loan moneys from the Oil Spill Response Trust Fund to the Hazardous Materials Response and Restoration Subaccount in an amount, not exceeding $500,000 annually, necessary to reimburse organizations providing wildlife rescue and rehabilitation services for expenses incurred by rescue and rehabilitation operations for wildlife injured by spill events of nonoil materials, thereby making an appropriation. The bill would prohibit the administrator from making a loan if the total amount of moneys made from these loans that has not been repaid exceeds $2,500,000.

SB 756 **(Stone R) California Environmental Quality Act.**

Introduced: 2/27/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was RLS. on 3/19/2015)

Location: 5/15/2015-S. 2 YEAR

Summary: Would state the intent of the Legislature to enact legislation to amend CEQA.

SB 772 **(Stone R) Bay Delta Conservation Plan: judicial review.**

Introduced: 2/27/2015

Status: 5/15/2015-Failed Deadline pursuant to Rule 61(a)(3). (Last location was RLS. on 3/19/2015)

Location: 5/15/2015-S. 2 YEAR

Summary: Current law imposes requirements on the Department of Water Resources in connection with the preparation of a Bay Delta Conservation Plan. This bill would state the intent of the Legislature to enact legislation establishing judicial review procedures for the Bay Delta Conservation Plan.

SB 788 **(McGuire D) California Coastal Protection Act of 2015.**

Introduced: 2/27/2015

Last Amend: 6/2/2015

Status: 8/28/2015-Failed Deadline pursuant to Rule 61(a)(11). (Last location was APPR. on 8/27/2015)

Location: 8/28/2015-A. 2 YEAR

Summary: The California Coastal Sanctuary Act of 1994 authorizes the State Lands Commission to enter into a lease for the extraction of oil or gas from state-owned tide and submerged lands in the California Coastal Sanctuary if the commission determines that the oil or gas deposits are being drained by means of producing wells upon adjacent federal lands and the lease is in the best interest of the state. This bill would enact the California Coastal Protection Act of 2015, which would delete this authorization. The bill would make related legislative findings and declarations.

SB 798 **(Committee on Natural Resources and Water) Natural resources.**

Introduced: 3/18/2015

Last Amend: 7/8/2015

Status: 9/3/2015-Enrolled and presented to the Governor at 10 a.m.

Location: 9/3/2015-S. ENROLLED

Summary: Current law authorizes the Fish and Game Commission to establish, by regulation, an automatic process to conform its sport fishing regulations to federal regulations. This bill would clarify that specified laws relating to administrative regulations and rulemaking do not apply to the conforming action implemented pursuant to the automatic process described above. This bill contains other related provisions and other current laws.

For more information call:

Susan LaGrande, CDFW Deputy Director at (916) 651-6719
Julie Oltmann, CDFW Legislative Representative at (916) 653-9772

You can also find legislative information on the web at http://leginfo.legislature.ca.gov/ and follow the prompts to legislation.

From: Orthmeyer, Dennis L - APHIS
Date: September 18, 2015 at 2:57:48 PM EDT
To: Sonke.Mastrup
Subject: Office of Investigator General (OIG) Audit of Wildlife Services

Sonke,

Please distribute to the commissioners if you feel appropriate

Thanks

Dennis

http://www.usda.gov/oig/webdocs/33601-0002-41.pdf

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United States Department of Agriculture

OFFICE OF INSPECTOR GENERAL

APHIS Wildlife Services - Wildlife Damage Management

33601-0002-41

September 2015

APHIS Wildlife Services – Wildlife Damage Management

Audit Report 33601-0002-41

What Were OIG's Objectives

Our objectives were to determine if wildlife damage management activities were justified and effective, assess controls over cooperative agreements, assess MIS for integrity and reliability, and review WS' accountability for hazardous materials and equipment.

What OIG Reviewed

In FY 2014, we observed 40 WS field specialists from 5 sampled States based on their (1) high number of takes of selected predators, (2) most unintentional kills, or in some cases (3) most hours on the job with the fewest takes. To assess data accuracy in MIS, we sampled and reconciled 29,958 logbook entries from January 2012 through March 2014.

What OIG Recommends

APHIS should develop and implement procedures that require a second party reviewer to sample and reconcile field specialists' logbook entries to corresponding MIS entries. APHIS also should enforce the requirement to renew Form 12s at least every 5 years.

OIG audited APHIS' Wildlife Services (WS) to determine whether its damage management activities complied with applicable laws and requirements.

What OIG Found

WS assists a variety of cooperators (farmers, ranchers, and other entities) by providing wildlife management advice and controlling wildlife damage with nonlethal and lethal methods. Wildlife control arrangements are formalized on Form 12s (also known as Work Initiation Documents), and WS field specialists record the results in a database called Management Information System 2000 (MIS).

OIG's audit did not reveal problems with wildlife damage management activities, or with WS' system for tracking controlled materials. WS' actions in these areas complied with all applicable Federal and State laws and regulations. Thus, this report contains no findings or recommendations associated with the first and last objectives of our audit. However, we found that MIS contained inaccurate information, including external party access and data entry errors. These conditions resulted in inflated wildlife control numbers and the transmission of inaccurate data to the public.

WS also was not following its policy of renewing Form 12s at least every 5 years. We found that, nationally, 47,362 (or 30.5 percent) of Form 12s were older than 5 years. WS personnel were not renewing Form 12s because WS policy was not clearly communicated. Almost all WS personnel OIG interviewed believed that the 5-year life cycle for Form 12s was a best practice, not a policy. WS also did not have controls to enforce compliance with its policy. While MIS flagged expired Form 12s, WS personnel ignored them without consequence.

APHIS agreed with our findings and recommendations, and we accepted management decision on all seven recommendations.

United States Department of Agriculture
Office of Inspector General
Washington, D.C. 20250

DATE: September 8, 2015

AUDIT NUMBER: 33601-0002-41

TO: Kevin Shea
Administrator
Animal and Plant Health Inspection Service

ATTN: Marilyn Holland
Deputy Administrator
Marketing and Regulatory Program Business Services

FROM: Gil H. Harden
Assistant Inspector General for Audit

SUBJECT: APHIS Wildlife Services - Wildlife Damage Management

This report presents the results of the subject review. Your written response to the official draft is included at the end of the report. Excerpts from the response and the Office of Inspector General's (OIG) position are incorporated into the relevant sections of the report. Based on your written response, we have accepted your management decision on all seven recommendations.

In accordance with Departmental Regulation 1720-1, final action is to be taken within 1 year of each management decision to prevent being listed in the Department's annual Agency Financial Report. For agencies other than the Office of the Chief Financial Officer (OCFO), please follow your internal agency procedures in forwarding final action correspondence to OCFO.

We appreciate the courtesies and cooperation extended to us by members of your staff during our audit fieldwork and subsequent discussions. This report contains publically available information and will be posted in its entirety to our website (http://www.usda.gov/oig) in the near future.

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Background and Objectives

Background

The Animal Damage Control Act of 1931, as amended, authorized the Secretary of Agriculture to conduct activities for controlling injurious animals.[1] As a result, the U.S. Department of Agriculture (USDA) established the Wildlife Services (WS), a non-regulatory program. In 1939, Congress transferred the program from USDA to the U.S. Department of the Interior. In 1985, Congress returned the program to USDA wherein it was placed under the purview of Animal and Plant Health Inspection Service (APHIS). The Rural Development, Agriculture, and Related Agencies Appropriations Act of 1988, authorized the Secretary of Agriculture to enter into agreements with cooperators[2] and conduct animal damage control activities of nuisance mammals and birds.[3] The WS program also operates under the provisions of numerous other laws, including the National Environmental Policy Act of 1969, as amended,[4] and the Endangered Species Act of 1973, as amended.[5]

WS' Office of the Deputy Administrator, located in Washington, D.C., provides national program oversight and policy guidance. WS has two regional offices (ROs). One is located in Raleigh, North Carolina, and the other in Fort Collins, Colorado. WS also has 42 State offices that work directly with various cooperators to resolve wildlife conflicts.[6] The State offices are divided into districts; each district is assigned a supervisor and field specialists. The National Wildlife Research Center (NWRC), a research arm of WS, conducts scientific research and assessments to refine wildlife management methods and develop new science-based solutions to contemporary wildlife challenges, such as rabies control and reproductive control methods to limit the population of deer and Canada geese.

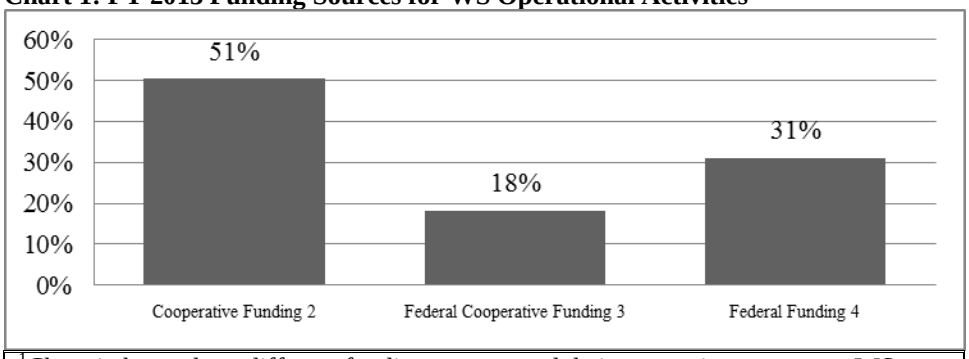
Funding Sources and Allocation

WS receives both Federal appropriations funding and cooperator-provided funds to sustain its operations.[7] WS uses Federal appropriated funds for its national and regional office operations, and for its research functions. It funds State office operations through a combination of Federal appropriated and cooperator-provided funds. WS' total program funds in fiscal year (FY) 2013 were about $165 million, including $85 million in direct appropriations and $80 million in

[1] 7 U.S.C. §426-426b (March 2, 1931).
[2] To help address wildlife damage problems and recover costs for the services provided, WS enters into various agreements with cooperators including interagency agreements with federal entities, and cooperative or reimbursable agreements with state, county, city, university, airport, and private entities (i.e., associations, boards, businesses, and individuals).
[3] 7 U.S.C. §426c (December 22, 1987).
[4] 42 U.S.C. §4321 et seq. (January 1, 1970).
[5] 16 U.S.C. §1531 et seq. (December 28, 1973).
[6] Conflicts occur when wildlife negatively impact agricultural and natural resources, properties, and public health and safety.
[7] WS conducts research and delivers program services that assist cooperators in resolving wildlife damage challenges. Cooperators reimburse WS for the cost of services.

cooperator-provided funds. Of the $165 million, WS used $116 million ($36 million of appropriated funds, plus $80 million of cooperator-provided funds) to support operational activities at the State level (the summary of funding sources for all States is shown in Chart 1 below).

Chart 1: FY 2013 Funding Sources for WS Operational Activities [1]



[1]Chart 1 shows three different funding sources and their proportion to support WS nationwide (except National Office and Regional Office) operational activities in FY 2013: 51 percent from cooperative funding, 18 percent from federal cooperative funding, and 31 percent from federal funding.

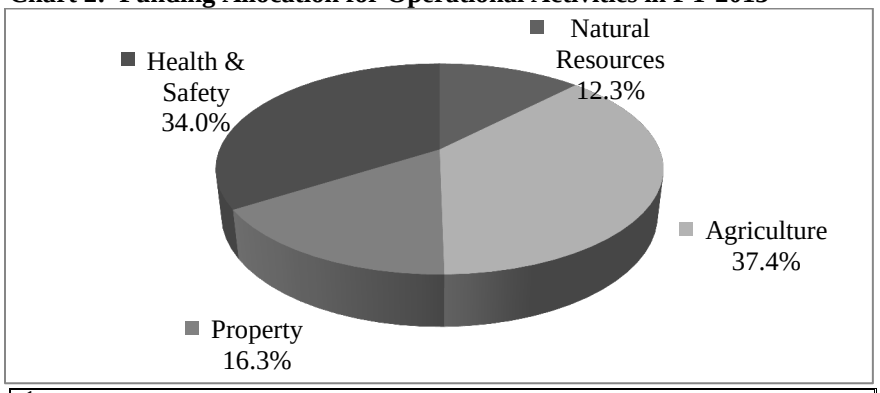
[2] Cooperative funding is funding received through Cooperative Service Agreements with State and local governments and private entities.

[3] Federal Cooperative funding is funding received through Interagency Agreements with other Federal agencies.

[4] Federal funding is funding received through Congressional appropriations.

WS' operational activities at the State level provide wildlife damage control assistance in four major areas: (1) agriculture resources, which includes protecting livestock from predators and alleviating bird damage at aquaculture facilities; (2) natural resources, which includes protecting threatened and endangered species and managing invasive species; (3) property, which includes protecting homes, landscaping, and industrial facilities from damage by mammals and birds; and (4) health and human safety, which includes reducing the risk of aircraft strikes of wildlife around airport runways as well as reducing and monitoring the spread of wildlife diseases to livestock, pets, or humans. The funds allocated to the four major areas in all States for FY 2013 are shown in Chart 2.

Chart 2: Funding Allocation for Operational Activities in FY 2013 [1]



[1] Chart 2 shows the proportion of $116 million allocated to each of the four major areas in which WS conducted operational activities in FY 2013: 34 percent for health & safety, 12.3 percent for natural resources, 16.3 percent for property, and 37.4 percent for agriculture.

WS monitors its fund allocation and expenditures through the Financial Management Modernization Initiative (FMMI).[8] FMMI provides online, real-time transaction capabilities and access. FMMI was designed to improve the agency's planning, budgeting, and reporting process through the use of integrated data from financial and non-financial sources. It also enables the agency to be financially accountable and transparent in its spending. To ensure consistency in its financial control and cost management activities, WS also issued a new directive in August 2013, to provide field offices with specific guidance on cost recovery and accounting oversight for various cost-share agreements.[9]

Coordination with Cooperators

WS enters into memoranda of understanding (MOU) with other Federal agencies and State regulatory agencies to establish the framework governing its activities and coordinate efforts in managing predatory animals.[10] The MOUs define and clarify the respective roles and responsibilities of each agency for resolving wildlife conflicts. An MOU between WS and a State wildlife agency requires both parties to conduct wildlife damage management activities in accordance with applicable Federal, State, and local laws and regulations. While WS assumes primary responsibility for resolving wildlife conflicts involving migratory birds, Federally protected species, and airport hazards, State agencies are responsible for providing wildlife damage assistance with State-regulated species. State agencies also cooperate with WS to ensure that proper permits are secured for wildlife damage management activities.

[8] FMMI is an initiative by the U.S. Department of Agriculture, Office of the Chief Financial Officer, to modernize the Departmental accounting system. APHIS, including WS, adopted FMMI in October 2011, as part of a Departmental mandate.
[9] USDA APHIS Wildlife Services, *Financial Control and Risk Management*, Directive 2.215(August 23, 2013).
[10] WS has signed MOUs with the U.S. Fish and Wildlife Service, the Bureau of Land Management, the U.S. Forest Service, the Federal Aviation Administration, and the Department of Defense. It also has MOUs with many State wildlife, agriculture, natural resource, and public health and safety agencies.

In addition to performing specific wildlife damage tasks directed by Congress and providing technical assistance to the general public,[11] WS enters into cooperative service agreements (CSAs) to resolve specific wildlife conflicts at the request of cooperators, which can be a State, county, city, or private entity (such as a business or an individual farmer or rancher). WS uses CSAs to establish a cooperative framework with the cooperator and recover the partial or entire cost of its services. For each CSA, the WS State office develops both an annual work plan and a financial plan. The work plan describes the actions to be taken and the types of animal to be controlled. The financial plan describes the amount of funds to be spent on the project. The cooperators must review and approve both plans. In order to follow laws unique to State and local governments, cooperative arrangements with WS may vary considerably. In some cases, cooperators pay all of the costs associated with wildlife damage management.[12]
After a CSA is signed, WS field specialists can work directly with cooperators or landowners to address wildlife damage problems.[13] After a landowner makes initial contact with WS, the field specialist will conduct a site visit to assess wildlife damage, examine the property, and discuss options for reducing losses. If the landowner requests that WS conduct direct control activities, both parties negotiate and sign a Work Initiation Document called a Form 12.[14] A Form 12 gives the field specialist access to the cooperator's property; it also specifies WS' methods, tools, and species to be managed.

Although WS uses various methods to mitigate wildlife damage problems, and prevent future predation, WS policy requires its field specialists to address wildlife damage problems by using an integrated wildlife damage management approach. Thus, when selecting damage management techniques for specific wildlife damage situations, the WS field specialists must consider the frequency, extent, and magnitude of the damage. In addition to confirming and assessing damage to the cooperator's property, they must consider the status of target and potential non-target species, local environmental conditions, relative costs of applying management techniques, environmental impacts, and social and legal concerns specific to the case.[15] WS field specialists must formulate a management strategy that minimizes harmful effects on humans, non-target species, and the environment while applying practical wildlife damage prevention methods. For example, if a field specialist uses M-44 (sodium cyanide) devices, he or she must ensure that they are not used near roads, where they could be set off unintentionally, or near a water supply, where they could cause adverse effects on humans or animals.[16]

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[11] Technical assistance is provided in the form of advice, recommendations, information, and materials for use in managing wildlife conflicts.

[12] If a private entity requests WS' direct assistance and the activity is not funded by another source, the entity enters into a CSA with WS and the entity pays WS for all the costs associated with the service provided.

[13] Field specialists are appointed to state-level positions by the State Director. They are responsible for conducting operational activities in the field and responding to requests from the public.

[14] WS field specialists provide direct assistance with their knowledge and expertise to disperse, remove, or relocate the wildlife causing damage, such as vultures, raccoons, coyotes, and bears.

[15] The agreement between WS and the cooperator (Form 12) must list specific target species that need to be managed. If a species is not listed on the agreement, it is considered a non-target species.

[16] M-44(sodium cyanide capsules) devices may only be used for the control of coyotes, red and gray foxes, and wild dogs that are vectors of communicable diseases or are suspected of preying upon livestock, poultry, and Federally designated threatened and endangered (T/E) species. They may also be used for control of arctic foxes that

WS provides both technical and direct assistance to entities and individuals who request help with wildlife conflicts. WS field specialists may provide technical assistance by providing information and guidance, and, at times, they may lend equipment so the requester could resolve wildlife conflicts by themselves. When the wildlife conflict is complex and cannot be safely and effectively resolved by the use of technical assistance, direct assistance will take place, and field specialists use their knowledge and expertise to disperse, remove, or relocate the offending species.

Information Systems

The Management Information System (MIS) is WS' system of record for monitoring wildlife damage management and predator control activities.[17] MIS records efforts to resolve wildlife threats and damage to agricultural products and livestock, private and industrial property, human health and safety, threatened and endangered species, natural resources, and public infrastructure.[18] WS field specialists are required to report in MIS their daily tasks, animal "takes"[19], methods used, resources protected and lost, and all other pertinent data.

MIS enables WS managers to have access to valuable data in a timely manner. It also assists researchers by making data available that, in the past, could not be collected. It provides field specialists with the independent capability to generate specialized reports for cooperators that include the number of takes on a property, the species taken on a property, and the value of the livestock killed by predators. It facilitates enhanced information gathering and distribution, both internally, for decision makers, and externally, for those requesting information through appropriate channels.[20]

Within MIS is an inventory system called Controlled Materials Inventory Tracking System (CMITS), which allows WS to fully account for its hazardous materials (e.g., M-44 devices, poisonous chemicals, etc.). Field specialists who use hazardous material are assigned a virtual CMITS warehouse; for instance, if an M-44 device is deployed in the field, field specialists enter a work task in the system accordingly, and the system deducts the M-44 device from the virtual warehouse. WS upgraded its security and storage facilities for hazardous materials after receiving additional funding in FYs 2002 and 2003.

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depredate Federally designated T/E species in the Aleutian Islands, Alaska. M-44 devices must be used in accordance with the U.S. Environmental Protection Agency use restrictions.

[17] MIS is a non-mission critical system.

[18] USDA APHIS, System Security Plan (SSP) for Management Information System 2000 (January 15, 2014).

[19] "Takes" is the common term used by WS to denote animals that are relocated, dispersed, released, captured, or killed.

[20] USDA APHIS, System Security Plan (SSP) for Management Information System 2000 (January 15, 2014).

Related Prior Audits

In 2004, the Office of Inspector General (OIG) audited WS' controls over its hazardous material inventory.[21] The audit found that WS was unable to fully account for its inventories of hazardous pesticides and controlled drugs. Furthermore, these inventories were not always stored in a safe and secure manner. Since WS management had not established effective controls over its inventories to ensure full accountability and effective safeguarding measures were in operation, hazardous materials remained vulnerable to undetected theft and unauthorized use, which posed a threat to human and animal safety. The audit did not review CMITS because it was being implemented at that time.

In 2001, the U.S. Government Accountability Office (GAO) conducted a review of WS' program to determine (1) the nature and severity of threats posed by wildlife, (2) the actions the program had taken to reduce such threats, (3) the studies done to assess specific costs and benefits of program activities, and (4) opportunities for developing effective nonlethal methods of predator control on farms and ranches.[22] The review found that some wildlife can pose significant threats to people and their property, leading to costly damage and loss. Most nonlethal control methods for these animals – such as fencing, guard animals, and animal husbandry practices – are most appropriately implemented by the livestock producers themselves, with technical assistance from WS.

Objectives

Our objectives were to: (1) determine whether wildlife damage management activities were justified and effective, (2) assess the controls over cooperative agreements, (3) assess WS' information system for reliability and integrity, and (4) follow up on the implementation of prior audit recommendations, such as the accountability over hazardous materials and equipment.

Overview of Objectives

WS' wildlife damage management activities can be controversial among the general public, animal rights organizations, and conservation groups. The agency has received considerable media attention due to alleged unsanctioned activities conducted by some of its field employees. OIG has received numerous hotline complaints and letters from the public outlining concerns about WS' employees and wildlife management activities. The complaints by animal rights organizations have included the following concerns: (1) WS uses indiscriminate methods to kill animals, which result in the killing of animals that are not the target of WS' wildlife management activities; (2) animals suffer because WS' wildlife management activities do not result in immediate death; and (3) WS wildlife management activities are not transparent. The organizations that raised these complaints, as well as some members of Congress, requested that we perform an audit of WS' wildlife management activities.

[21] Audit Report 33001-05-Hy, *Animal and Plant Inspection Services Control over Hazardous Material* (July 2004).
[22] GAO-02-138, *Wildlife Service Program Information on Activities to Manage Wildlife Damage* (November 2001).

In light of these concerns, based on the complaints we received, we undertook to determine in this audit whether WS' wildlife management activities were justified and effective. We examined Federal and State laws, as well as State and local requirements, to determine whether WS was in compliance with these requirements and therefore justified in their actions. We also examined WS' policies and procedures and determined that WS was generally in compliance. We also performed extensive tests of agency records and observed conditions at numerous locations in the field. While performing site visits, we observed WS field specialists conducting wildlife damage management activities, and we verified that the results of those activities were in accordance with agency policies and procedures. In addition, during our site visits, we determined that WS specialists were using WS' decision model[23] to assess the damage and to justify the course of action to pursue.

We interviewed owners or managers of 15 properties and 27 State game and wildlife officials. Based on OIG's interviews, we concluded that they found WS activities to be necessary and effective.[24] As one property owner put it, "WS guys are an absolute necessity for our business. The number of sheep they save is huge and we cannot function without them. […] WS specialists are professional and good at what they do." In support of this same point, a State game official we interviewed explained that WS provides help for wildlife and is run efficiently. A State agricultural official we interviewed characterized the collaboration of State and Federal programs to manage control predators and protect domestic livestock and wildlife as "seamless". Operationally, WS received $80 million in cooperator-provided funding for wildlife damage management during FY 2013. These cooperative funds provide evidence of the public's need for WS' services. The following subsections describe the work we performed as it relates to our first objective to determine if WS' actions were justified and effective.

Observation of Field Specialists

During our field site visits, we observed WS field specialists conducting activities, which included the setting and checking of traps, snares, M-44 devices, shooting, and other typical field activities. We also interviewed each field specialist we accompanied to determine that specialist's process for assessing predation on a landowner's property. During our visits, we confirmed that livestock had been killed by predators.[25]

There were two matters of concern raised by several animal rights organizations and members of Congress that we also deemed significant: (1) the indiscriminate killing of non-target animals that were not the target of WS' wildlife damage management activities, and (2) the suffering of animals not immediately killed by WS. We specifically watched for these conditions during our field visits, and observed that agency officials were generally following prescribed and allowable practices to either avoid or mitigate these conditions.

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[23] USDA APHIS Wildlife Services, WS Decision Model, Directive 2.201 (July 21, 2008). WS' personnel use the WS Decision Model to determine the appropriate damage management method(s) to implement. WS personnel evaluate the appropriateness of strategies, and methods are evaluated for availability (legal and administrative) and suitability based on biological, economic, and social considerations.

[24] We accompanied the field specialists to 99 properties based on the activities reported in MIS. We did not pre-announce our visits to the selected properties. However, we were able to meet with owners or managers of 15 of the 99 properties we visited during our field visits.

[25] We observed the carcasses of three lambs, three goats, a chicken, and a deer.

We did, however, occasionally observe the unintentional killing of non-targeted animals by WS, as well as targeted animals not killed immediately. We noted in each case, however, that the WS field specialist had followed prescribed agency practices, which adhered to applicable laws and regulations. For instance, we observed 8 targeted animals (out of 27 targeted animals caught by snares or hit by M-44s) that were still alive during our field visits. Seven coyotes were still alive in snares and one coyote was still alive after being hit by an M-44 device. The WS specialists subsequently euthanized the coyotes. The field specialists had set the snares and M-44 devices, which we determined to be the appropriate actions and in accordance with laws and regulations. We also observed three unintentional deaths: two javelinas[26] were trapped by snares, and a porcupine was killed by a foothold trap. In these cases, the field specialists had set the traps, which we concluded were in accordance with applicable laws and regulations. Lastly, we observed one field specialist as he freed a javelina that had been caught in a snare.

We also observed two separate aerial hunting operations and reviewed their records in MIS.[27] Before these operations began, WS personnel planned and coordinated activities between the aerial crews and the ground crews. The ground crews were responsible for tracking and spotting targeted animals and radioing their location to the pilots. The aerial hunting operations that we observed resulted in the killing of 14 coyotes and 28 feral swine. Based on our observations, the aerial hunting crews' wildlife management activities adhered to applicable laws and regulations.

While conducting fieldwork, we also observed the application of non-lethal means for predator control, such as fencing, guard dogs, and human herders, which were the responsibility of the producers. We noted that, on all the sites we visited, the producers were using some form of non-lethal predator control. It is WS' position that, currently, in predator control, the number of non-lethal direct control methods available to WS personnel is limited and these available methods focus on resource management rather than control of the offending animal. Further, WS believes that these methods are more appropriately applied by the resource owner.

Our observations of both the field specialists' activities and WS' aerial hunting operations revealed no systemic problems with the process or manner with which WS conducted its predator control program. WS field specialists complied with both Federal and State requirements, including WS directives, in carrying out wildlife damage management activities. We also recognized that Federal law provides WS broad authority in conducting its program. It allows WS to take any action the Secretary considers necessary, with regards to injurious animal species, in conducting the program.[28]

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[26] Javelinas are members of the peccary family. There are three species of peccaries, but the only species found in the United States is the collared peccary, also known as a javelina.

[27] We selected the two aerial facilities in Texas because at the time of our site visit there were ongoing scheduled aerial operations that we were able to observe. We did not accompany WS personnel on a third operation in Utah because the pilot and specialist were both injured in a helicopter crash prior to our arrival at the facility. We selected Texas due to the high number of aerial activities and Utah because WS' Aviation Program and Training Center was located at Cedar City, Utah. The other three States in our sample (see Scope and Methodology section under "Selected Sample States"; CA, MN, and WY, did not have aerial operations at the time of our visit.

[28] 7 U.S.C. §426.

WS is required to follow all applicable State and local laws that do not directly and substantively conflict with WS' Federal statutory authorities.[29] We noted that WS field specialists complied with State laws. For example, the State of California banned the use of M-44 devices. While we were conducting site visits in California, we examined the hazardous materials records of WS' State and district offices, and of its field specialists. In addition, we conducted a physical inventory of WS' State, districts, and field specialists' hazardous materials inventories. We determined that WS in California did not use or maintain M-44 devices. Additionally, while we were out with a field specialist taking a mountain lion, we verified he had the proper permit from the State.

We also interviewed various State game wardens to determine if WS' field specialists were substantively following all applicable State laws and regulations, and the State game wardens confirmed that they were.

Finally, our audit did not identify any findings related to the Controlled Materials Inventory System (CMITS), WS' system for tracking controlled materials. Thus, this report contains no findings or recommendations associated with the first and last objectives of our audit.

[29] USDA APHIS Wildlife Services, Compliance with Federal, State, and Local Laws and Regulations, Directive 2.210 (October 27, 2009).

Finding 1: WS' Database Contains Inaccurate Information

WS' Management Information System 2000 (MIS), which tracks the agency's wildlife management activities, contained inaccurate data. Specifically, we found data entry errors, unsupported data, and data for activities carried out by external non-agency individuals. We attributed these conditions primarily to weak controls over data integrity, which included an inadequate verification of whether the information entered into MIS was accurate and complete, as well as the lack of policy addressing whether external party activities should be entered into MIS. Consequently, WS incorrectly reported its official wildlife management activities to the public and other parties.

WS Directive 4.205 states that "all WS personnel are accountable for field activities and technical assistance work they conduct while on official duty." The directive further states, "employees are expected to accurately report work activities conducted […], and to accurately and completely report all wildlife damage management activities, animals taken (species, number, intentional/unintentional, etc.), methods employed, resources protected and lost, recommendations made to the cooperator, methods tried by the cooperator, and all other pertinent data prescribed on MIS data entry forms and formats [...]"[30]

WS summarizes MIS data into reports that may be disseminated to internal and external parties, and used in actions such as investigations and court proceedings. For example, field specialists can generate a property itinerary for cooperators, which details the WS activities conducted on the cooperator's property for a specific timeframe.[31] Therefore, MIS data must accurately and reliably reflect the program's activities.

Our audit in 5 States and 12 districts found numerous instances where the data in MIS did not accurately reflect WS' activities, which included the entering of external party activities in MIS, and data entry errors.

External Party Activities were Recorded in MIS

WS limits direct access to data in MIS to WS personnel;[32] however, WS had not established policy or guidelines concerning the recording of external activities in MIS. We identified numerous instances where external party activities were included in MIS, thus overstating WS' take numbers. The following are some examples of our findings:

- Four individuals in California, who were county employees and not supervised by WS, had entered wildlife management activities into MIS since 2005. The current WS State Director informed us that WS had a long history of collaboration with county officials in California, and that a former WS State Director had granted

[30] USDA APHIS Wildlife Services, Data and Activity Reporting, Directive 4.205 (July 2013).
[31] Activities include "takes," which are animals killed/euthanized, removed from the area, freed/released/relocated to another area, and/or dispersed back to nature.
[32] Access to WS data is determined by the data usage role of the employee, which is determined by their duties and responsibilities. Direct access to data in the system is limited to WS personnel only, with one exception for the USDA-OCIO-National Information Technology Center.

those individuals access to MIS. The agricultural commissioners of the counties where the four county employees worked had originally requested access to MIS because it was a better record keeping system than the counties' systems. The current WS State Director stated that he was not completely comfortable with the arrangement and added that WS' activities were inflated by the county employees' activities.

WS did not have any guidance on whether external party activities should be included in MIS. However, the WS handbook stated that access to MIS was limited to WS personnel.[33] We analyzed the activities of the four county employees and determined that they entered 1,864 and 2,036 takes into MIS for FYs 2012 and 2013, respectively.[34] Those numbers increased WS' activities in California by 12 percent in FY 2012, and by 14 percent in FY 2013.

- The WS supervisors in four of eight districts in Texas included activities in MIS from private aerial companies, contracted by the Sheep and Goat Predatory Management Board to conduct aerial hunting. WS employees were not aboard the flights. However, the State Director explained that WS coordinated with the contractors and the district offices validated the invoices before the Sheep and Goat Predatory Management Board made payments. The State Director explained that for transparency reasons, he decided to have the district offices enter the activities into MIS. He stated it was best to fully report the direct and indirect consequences of the program rather than appear to try and hide the activities. Consequently, reporting such activities increased WS' aerial takes in Texas by 2,350 (30 percent) and 1,099 (12 percent) for FYs 2012 and 2013, respectively.

We discussed this issue with WS national officials, and they agreed that the external parties should not have access to, or be allowed to enter, information into MIS. Further, they agreed it was not appropriate to include any external party data in MIS because it inflated WS' take numbers. Additionally, they agreed that guidance was warranted to establish whether external party activities can be recorded in MIS.

Data Entry Errors

Typically, WS field specialists use daily hand-written logbooks to note the cooperators they serviced, the time spent on a work site, the activities performed (such as the number and types of species takes), the number of livestock losses, and the equipment used or checked while in the field. WS requires its field specialists to, on a periodic basis, transfer information from their logbooks into MIS.[35]

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[33] USDA APHIS Wildlife Services, *2012 Information and Data Management Handbook* §9 (2012).
[34] Our analysis only included the specific species taken (killed and euthanized) by the four county employees. Those species included black bears, beavers, bobcats, coyotes, feral dogs, gray foxes, mountain lions, woodchucks, minks, Virginia opossums, raccoons, striped skunks, fox squirrels, western squirrels, and feral swine.
[35] Field specialists enter data into MIS at different frequencies, but the majority of them do it once every 1-2 weeks.

According to the WS Directive, the district supervisor and then the State Director review the entries in MIS for accuracy. A district supervisor might determine if the time spent on a particular agreement appeared consistent with the type of work. However, district and State offices did not generally reconcile field specialists' logbook entries to the corresponding MIS entries to ensure accuracy of the data.

We reconciled 40 sampled field specialists' logbook entries to the corresponding MIS entries and noted the following deficiencies: [36]

- We found that 32 of 40 sampled field specialists made data entry errors. In our view, since nearly all of the field specialists made data entry errors, WS needs to implement additional controls, such as having a second party review to compare information in the field specialists' logbooks to data entered into MIS. Most errors we found were related to the number of takes entered into the system by the field specialists that included instances of both under reporting and over reporting.[37] We found numerous instances of entries in logbooks that were not entered into MIS. Conversely, we found numerous entries in MIS that were not supported by the logbooks. Additionally, field specialists had not always entered producer losses in MIS, even though they were recorded in the logbooks. Table 1 summarizes the types of discrepancies we identified.

Table 1: Summary of Discrepancies

Discrepancies	Totals
Under reported or over reported takes	425
Entry in MIS, but not in logbook	118
Entry in logbook, but not in MIS	80
Equipment related*	31
Method related**	15
Double entry	9
Reported loss not reported in MIS	8
Incorrect site location	1

The table above summarizes the types of discrepancies we identified when we reconciled field specialists' logbooks against their corresponding MIS entries.
* Equipment related discrepancies relate to equipment that must be accountable such as M-44 devices and traps.
** The method used to take the animal was not reported correctly in MIS.

- We also determined that 6 of the 40 field specialists we accompanied on our site visits had incorrectly reported their activities or takes in MIS on the dates of our

[36] We reviewed 29,958 entries and found discrepancies with 619 entries. Some entries contained multiple discrepancies; thus, the total discrepancies we identified do not equal total entries with errors.
[37] Takes were either under reported or over reported depending on the individual MIS entry we reviewed.

visits.[38] We identified several entry errors when we verified each of the MIS entries associated with our observations. We found instances where takes were both under reported and over reported and where a method associated with the takes was not correctly reported in MIS. For example, one field specialist reported in MIS that one coyote was taken during the field visit. However, we did not observe any coyotes taken during the visit.

Form 12 Discrepancies

Before WS begins work on a property, the landowner or a representative must sign a Work Initiation Document (Form 12).[39] The Form 12 includes information such as the location of the work site, what species will be managed, and what methods or tools will be used on the property. WS field specialists transfer the information from the Form 12 into MIS and the signed form is then sent to the WS State office where the records are kept. At the State Offices, WS needs to strengthen controls to prevent unsupported changes to Form 12 information in MIS. Under the current system, a specialist can change information in MIS without any supporting documentation.

It is essential that information, such as species and methods authorized, on the Form 12s be accurately reflected in MIS. For instance, if coyotes were listed in the "species" section of the agreement, then all coyote takes will subsequently be classified as "target" takes in MIS.[40] Conversely, if coyotes were not listed in the "species" section, then all coyote takes would subsequently be classified as "non-target" takes in MIS. We sampled 756 agreements (including addenda) for accuracy, and found data integrity issues with MIS.

Our analysis also disclosed discrepancies between the species and methods listed on 224 Form 12s (30 percent), and the corresponding information listed on Form 12s entered into MIS.[41] Our analysis further identified data integrity issues; specifically, there were 77 instances where species or methods were listed in the agreements but not entered into MIS; and 231 instances of species or methods that were entered into MIS, but were unsupported by both the agreement and addenda. Consequently, there were 22 instances of "takes" that were misclassified in MIS as "target" rather than "non-target".

Based on the aforementioned deficiencies, we conclude that WS needs to ensure that information entered into MIS accurately reflects program activities. It is essential that WS work towards data integrity as MIS is especially important for recording and reporting activities in several areas of the wildlife damage management program. WS uses the data to annually report its performance measures to Congress and to report its activities to cooperators. WS needs to determine whether

[38] During site visits with the selected field specialists, we recorded all activities and takes observed during our visit.
[39] A permission document signed by a cooperator allowing WS access to lands owned or controlled by the cooperator, and allowing the use of stipulated methods to address identified damage agent(s) in a WS conducted activity (WS *Information Data Management Handbook* Pg. 1). The signed Form 12 is sent to the State office for approval, and a specialist at the State office would approve the corresponding version in MIS. The original signed Form 12 is maintained at the applicable State office.
[40] Target is defined by what species is (identified) on the Form 12 (MIS Manual FAQ).
[41] Some of the agreements included more than one type of discrepancy.

external party activities can be recorded in MIS. WS should also revise its directives to require a second party reviewer to sample and reconcile field specialists' logbook entries to the corresponding MIS entries. To ensure accuracy, WS needs to implement a second party review and sign-off on all changes to Form 12 information in MIS.

Recommendation 1

Remove MIS access privileges from non-WS affiliated individuals.

Agency Response

APHIS agrees with this Recommendation. Effective April 1, 2015, WS' managers and supervisors notified non-WS affiliated individuals that they would no longer be able to use the MIS to report and document non-WS activities, nor have access to the MIS. In addition, the WS Deputy Administrator will issue a revision of WS Directive 4.205 by August 20, 2015, to all supervisors and managers communicating the new procedure, and stating that written approval is required from the WS Deputy Administrator or his designee for access to MIS data base by non-WS personnel.

OIG Position

We accept APHIS' management decision on this recommendation.

Recommendation 2

Determine whether external party activities should be recorded in MIS.

Agency Response

APHIS agrees with this recommendation. WS has determined that external party activities, such as species taken, will not be entered into the MIS data base; however, such activities as cooperator employed methods, depredation permit information, or similar activities that provide documentation of the WS decision model will be entered. As stated in our response to Recommendation #1, the WS Deputy Administrator will issue a revision of WS Directive 4.205 to all supervisors and managers stating that written approval is required from the WS Deputy Administrator or his designee for access to the MIS data base by non-WS personnel.

OIG Position

We accept APHIS' management decision on this recommendation.

Recommendation 3

Develop and implement procedures that require a second party reviewer to sample and reconcile field specialists' logbook entries to the corresponding MIS entries.

Agency Response

APHIS agrees with this Recommendation and will implement the following:

- A reminder will be issued by September 30, 2015, that all field supervisors immediately review item 14 of WS Form 82, Field Inspection Report, that requires the supervisor to review the field log (i.e. diary, book, electronic device) for consistency with the specialist's MIS itinerary report.

- During the employee field inspection visit, the field supervisor will randomly pick 4 weeks of MIS electronic data from the previous 12 months and verify against the employee field diary or log book records. Checking item 14 on WS Form 82 will be acknowledgement that the verification has been accomplished at least once each year.

- In addition, WS will issue guidance by September 30, 2015, to all personnel and require all WS personnel who enter data into the MIS to review and electronically verify the accuracy of their data entries as reported in a standard MIS monthly employee itinerary report.

- Employee Data verification will occur every 30 days.

- In most cases, field personnel should enter data into the MIS on a daily basis, if not a weekly basis; but not less often than every 2 weeks.

- WS personnel who do not enter MIS data on a daily basis, will be required to record these activities in a journal, field diary, paper, or electronic form and transfer the data into MIS as required.

- Employees who are not able to abide by these requirements because of remote connectivity issues should work with their supervisor to resolve them and implement measures that allow for regular and consistent data entry until the connectivity issues have been resolved.

OIG Position

We accept APHIS' management decision on this recommendation.

Recommendation 4

Establish a policy requiring a second party review and sign-off on all Form 12 information in MIS.

Agency Response

APHIS agrees with this Recommendation. WS will issue new guidance by August 31, 2015, to all WS supervisors and managers reasserting that the appropriate data technicians will review all work initiation documents (field agreements) by comparing the electronic copy against the signed hard copy for any discrepancies and only switch the work initiation document from a pending to an active status when all data fields have been verified for accuracy.

OIG Position

We accept APHIS' management decision on this recommendation.

Finding 2: WS Did Not Timely Renew its Form 12s

WS did not timely renew 47,362 of 155,481 (30.5 percent) Work Initiation Documents (Form12)[42]. Some WS personnel incorrectly believed renewing Form 12s after 5 years was a best practice, not a policy. Also, some personnel were unaware of the requirement because it was in a directive concerning information and data management and security. Furthermore, for the WS personnel who were aware of the policy, WS did not have sufficient controls in place to ensure the policy was followed by the field staff. As a result, if the Form 12s for ongoing projects are not renewed timely, WS cannot ensure that it has current information on changes in ownership, address, and borders at the properties it serves. This may lead to inadvertent trespassing by WS personnel. Further, the cooperators may no longer want the same species targeted or the same methods used on their property.

WS policy states that the "life cycle of a Work Initiation Document [WID] is five years" for ongoing projects, WIDs "must be renewed through review, update, and signature of a new document by the Cooperator or his/her assigns at least every five years."[43] The WID "identifies the location of the work site, what species WS will manage, [and] what methods or tool will be used." The policy was co-mingled in a directive concerning information and data management and security,[44] rather than in a separate directive. WIDs are also known as Form 12s.

In the five States we sampled, we found 219 of 975 (22 percent) Form 12s had not been renewed after their 5-year life cycle. Of these, 59 forms were signed 20 to 30 years ago, and 12 were more than 30 years old. We later expanded our scope and determined that the nationwide rate for Form 12s that were not renewed beyond the 5 year life cycle was 30.5 percent as of February 2015. Even though these Form12s were out of date, WS field personnel continued to perform work on these properties.

OIG found that many WS personnel believed the 5-year life cycle was not a requirement, but rather a best practice. Only two of the five State Directors we interviewed knew it was a WS policy. The 12 district supervisors and 14 of the 15 field specialists we interviewed also were unaware that the requirement to renew Form 12s for ongoing projects was a WS policy documented in a Directive.[45]

In addition to the lack of timely renewal, WS did not provide specific guidance to its personnel on how to renew a Form 12. We noted inconsistent renewal practices among the States and, at times, within the same districts. Many field specialists did not fill out the "species" and "methods" sections of the new Form 12, but simply wrote "same …" or left it blank and had the cooperator sign it. Because some cooperators have several addenda added to their prior

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[42] The number was obtained from MIS by a WS IT Staff Officer on March 2, 2015; the actual number could be higher than 30.5 percent, because the "Last Signed" field in MIS does not always match the date that the Form 12 was signed.

[43] USDA APHIS Wildlife Services, *2012 Information and Data Management Handbook*, §3 (2012).

[44] USDA APHIS Wildlife Services, Information and Data Management Security, Directive 4.130 §4 (August 29, 2011).

[45] Although we interviewed 40 field specialists in 12 different districts, only 15 provided us with information regarding Form 12s' renewal process and only 1 field specialist was aware of the WS policy.

agreements, it could lead to a misunderstanding between WS and the cooperator on which species and methods the cooperator has authorized. Further, this could lead to WS targeting species and using methods not actually authorized by the cooperator.

WS needs a system that will allow employees to track expiring or out of date Form 12s. The current system does not always accurately track the 5-year life cycle of Form 12s. WS uses MIS' "Last Signed" field to track the age of Form 12s. However, we noted that the "Last Signed" field in MIS did not always match the date that the Form 12 was signed. For example, we found a few Form 12s that were beyond the 5 year life cycle, but were listed as current in MIS. Additionally, we also found that on almost half of the 219 Form 12s we reviewed, the signed date differed from the "Last Signed" date in MIS. According to the IT Staff Officer, who wrote the 5-year life cycle policy and is responsible for coordinating WS' annual report, the "Last Signed" field in MIS changes if something is added to or edited in MIS, but in the Form 12 document, the date remains the same.

The IT Staff Officer, who wrote the 5-year life cycle policy, affirmed that the 5-year requirement applied to all Form 12s, including those in place prior to the issuance of the policy in August 2011. WS national officials and some employees also stated that the 5-year life cycle policy was an appropriate and important measure. A national official agreed that renewing Form 12s every 5 years is an appropriate requirement due to changes in addresses, land ownership, and property borders in the regions.

In order to prevent potential problems arising from the failure to follow the 5-year life cycle policy, OIG recommends that WS ensure its personnel are aware of and follow the 5-year renewal requirement, and establish a process regularly to remind employees of when their Form12s are near the end of the 5-year life cycle; further controls should be implemented to ensure the enforcement of the policy.

Recommendation 5

Ensure WS personnel are aware of and follow the policy to renew Form 12s at least every 5 years.

Agency Response

APHIS agrees with this Recommendation. On August 5, 2015, the WS Deputy Administrator reissued WS Directive 4.130, "Information and Data Management and Security," to all WS managers and supervisors reasserting the WS policy requirement to renew Form 12 every 5 years. Specifically, the Directive states that the life cycle of the Work Initiation Document (WID) is five years and that the "Wildlife Services Information and Data Management Handbook" provides additional information about the initiation, completion and renewal of the WID.

OIG Position

We accept APHIS' management decision on this recommendation.

Recommendation 6

Establish a process that will give employees a formal reminder of expiring Form 12s, and include more detailed procedures for the renewal of Form 12s.

Agency Response

APHIS agrees with this Recommendation. By August 31, 2015, WS will issue new guidance directing all supervisors and managers to issue a report, "Agreements, Years old Listing" or equivalent report, every 6 months to all field personnel that lists all Work Initiation Documents set to expire at the end of the current 5 year cycle. This new guidance will include detailed instructions addressing requirements for amending species and methods information; signature requirements for renewing including signatures by absentee landowners; no activity within a 5 year period; and distribution of hard or electronic copies to supervisors and data technicians. This new guidance will also reinforce the current requirement for a completed Work Initiation Document to be in place prior to any work being initiated. The MIS Field Handbook will be modified, by September 30, 2015, to reflect this new guidance.

OIG Position

We accept APHIS' management decision on this recommendation.

Recommendation 7

Ensure MIS can accurately track the 5-year life cycle of the Form 12 by including a "Form 12 signed date" field in MIS that cannot be changed.

Agency Response

APHIS agrees with this Recommendation. By August 31, 2015, WS will issue new guidance that reasserts the need to enter the current agreement date into the MIS data field entitled, ''Form 12 signed date''. The current data field entitled, "Last Signed Date'' will be converted to, ''Form 12 signed date" and will be hard coded and only select personnel with the appropriate administrative rights can manipulate this data field, if needed.

OIG Position

We accept APHIS' management decision on this recommendation.

Scope and Methodology

We conducted a nationwide audit of APHIS' WS animal damage management activities covering FY 2012 through the second quarter of FY 2014.[46] To accomplish our audit objectives, we performed fieldwork at APHIS' headquarters in Riverdale, Maryland, and the two APHIS regional offices: Eastern Region in Raleigh, North Carolina, and Western Region in Fort Collins, Colorado. We performed fieldwork at the APHIS National Wildlife Research Center (NWRC) in Fort Collins, Colorado; a NWRC field station in Millville, Utah; the Aviation Safety, Training and Operations Center in Cedar City, Utah; 5 APHIS WS State offices (California, Minnesota, Texas, Utah, Wyoming); and 12 APHIS WS field offices (see exhibit A for a complete list of audit sites). In completing this audit, we looked at documentation covering the period from FY 2012 to FY 2014. We also examined some trust account documents related to FY 2015. We also reviewed 10 complaints sent to OIG and APHIS related to WS' animal damage management program to determine whether the complaints were related to our audit objectives.[47] We conducted fieldwork from January 2014 to March 2015.

In accomplishing our objectives for this audit, we performed the following steps and procedures:

- **Reviewed Criteria:** We reviewed Title 7 U.S.C. § 426; USDA Departmental Regulation 1074-001, Scientific Integrity (May 10, 2013); 9 C.F.R § 2.31 and § 2.37; USDA APHIS, 2010 Cooperative Agreements Manual; WS' policy directives; and the USDA APHIS, *2012 Wildlife Services Information and Data Management Handbook*.

- **Selected Sample States:** We non-statistically selected four APHIS Western Region States (California, Texas, Utah, and Wyoming) and one Eastern Region State (Minnesota) to conduct fieldwork. We selected more States in the Western Region because of its higher number of predator control activities. The majority of the highest funded States are also in that region. We selected our sample based on the following criteria:

    a. States with large allocated budgets for FYs 2012 and 2013.
    b. States with the most kills of our selected predators (bears, bobcats, coyotes, feral dogs, foxes, mountain lions, and wolves) during FYs 2012 and 2013.
    c. States with the most diversity of kills of our selected predators.
    d. The State with the least number of non-target kills.

- **Selected APHIS District Offices and Field Specialists:** We non-statistically selected 50 percent of the APHIS WS district offices in each of our sampled States. We based our selection on the district offices with the highest number of kills of our selected predators. If there were fewer than three districts, we reviewed 100 percent of the districts. In

[46] To determine the nation-wide rate for Form 12s that were not renewed beyond the 5 year life cycle (see finding 2), we expanded our documentation review to February 2015.

[47] OIG reviewed 10 complaints for audit consideration. We received 11 complaints, but 1 complaint was outside of USDA's authority.

Texas, we selected at least four field specialists per sampled district, and in California and Utah[48], we selected three specialists in each district, based on the (1) highest predator take, (2) most unintentional kills, or (3) most hours on the job with the fewest takes. We adjusted our sampling methodology in Minnesota and Wyoming by selecting two field specialists per district with the (1) highest predator take or (2) most unintentional kills during the period of our audit. We adjusted our methodology because each State was structured differently including the number of specialist and the types of activities varied in each State. We selected each of our States based on different criteria, see the above bullet on our State selection.

- **Interviewed APHIS and State Agency Personnel:** We interviewed 96 personnel at APHIS' National and regional offices, WS' State and district offices, the National Wildlife Research Center in Colorado, a NWRC field station in Utah, and WS' Aviation Safety, Training and Operations Center in Utah. We also interviewed 27 State wildlife personnel, such as directors, deputy directors, and game wardens in our sampled States. These State personnel were from the California Department of Fish and Game, the Minnesota Department of Natural Resources, the Wyoming Department of Agriculture, the Wyoming Game and Fish Department, the Utah Department of Agriculture and Food, the Utah Division of Wildlife Resources, Texas Parks and Wildlife Department, and the Texas Agrilife Extension.

- **Reviewed Activities at the NWRC:** At NWRC, we obtained information about NWRC policies, procedures, and activities conducted. We determined how research projects are ranked and prioritized for funding. We also reviewed a non-statistical sample of research projects to identify sources of funding, purposes of the projects, and expected goals and actual outcomes.

- **Accompanied WS and State Personnel:** We accompanied 40 WS field specialists in the field while they conducted their wildlife damage management activities to observe the different methods used to reduce damage caused by predators. We also flew with aerial program pilots to observe their operations for predator control.

- **Interviewed Property Owners:** We interviewed owners or managers of 15 properties who utilize WS to control predation problems on private property to obtain comments regarding the need for the program, the quality of service received, and if improvements could be made. We did not pre-announce our visits to the property. Therefore, we were only able to interview owners or managers of 15 of the 99 properties, who were physically present at the time of our field visit. We also interviewed 3 board members of Wildlife Associations in Texas and Wyoming.

- **Reviewed Cooperative Service Agreements:** We non-statistically selected and reviewed CSAs. We picked our sampled CSAs based on the CSAs with the highest

[48] Although we initially selected three field specialists in Utah, we conducted site visits with two specialists. The third field specialist was injured in a helicopter crash prior to our arrival.

funding. We selected 50 percent of the CSAs between WS and State, county, municipal, and private cooperators at the five sampled WS State offices. If there were less than 20 CSAs at a WS State office, we reviewed 100 percent of the CSAs. We reviewed the CSAs to determine if relevant regulations, policies, and procedures were followed and to determine if funding between WS and cooperators was equitable.

We also non-statistically selected and reviewed a sample of agreements under the thresholds, which are not required to be approved by WS' regional office.[49] The agreements (CSA and Cooperative Service Field Agreements) are between WS and local governments and private entities. We picked our sampled Cooperative Service Field Agreements based on those with the highest funding. We selected 50 percent of the Cooperative Service Field Agreements between WS and county cooperators, and private cooperators at the five sampled WS State offices. If there were less than 20 Cooperative Service Field Agreements at a WS State office, we reviewed 100 percent of the Cooperative Service Field Agreements. We reviewed the Cooperative Service Field Agreements to determine if relevant regulations, policies, and procedures were followed.

- **Assessed MIS:** We used Audit Command Language to match the MIS users list to the selected States' employee roster to determine whether external parties had access to MIS. We also compared 29,958 MIS entries with our sampled field specialists' logbooks/trapping records to determine the accuracy of MIS data and the adequacy of existing controls over MIS. We obtained each of our specialist's logbooks and sampled a complete month for each quarter that spanned from January 2012 through March 2014.

- **Compared CMITS to the State, District, and Field Specialists Inventories:** We compared the CMITS printouts for the State, District, and field specialists and reconciled the physical inventories of hazardous materials, including M-44 devices and Livestock Protection Collars.

- **Analyzed Form 12s:** We took a 25 percent non-statistical sample of Form 12s from our sampled districts in our sampled States. We selected our sample based on the Form 12s with the highest associated number of takes of our selected predators. We compared our sampled Form 12s with data reported in MIS to determine if predators taken and methods used were accurately entered and reported, if WS renewed these documents every 5 years, and if there were any agreements with extensive gaps in activity.

- **Reviewed National Environmental Policy Act (NEPA) Documentation:** We reviewed Environmental Assessments dealing with predator control for all five of our sampled States to determine whether WS was following the applicable law.

- **Reviewed WS Financial Data:** We reviewed WS and APHIS financial records, including both the WS trust fund account and revolving reimbursable accounts, which are

[49] State Directors in Western Region can sign CSAs under $7,500, and State Directors in Eastern Region can sign CSAs up to $20,000, so we used $7,500 as a threshold for Western Region and $20,000 as a threshold for Eastern Region when selecting CSAs.

funded by CSAs. We reviewed these documents and determined that WS is no longer entering cooperator funds into the trust fund account and WS is spending down the remaining funds in the trust fund account WS pays its field specialist salaries and expenses; and is later reimbursed by the cooperators for their services. We determined that the reimbursed funds from cooperators were being accounted for in the APHIS' Salaries and Benefits appropriation account.

During the course of our audit, we did limited verification of information in WS' electronic information systems, and make no representation regarding the adequacy of any agency computer system or the information generated from it.

We conducted this audit in accordance with generally accepted government auditing standards issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provide a reasonable basis for our findings and conclusions based on our audit objectives.

Abbreviations

APHIS .....Animal and Plant Health Inspection Service
CFR .....Code of Federal Regulations
CMITS .....Controlled Materials Inventory Tracking System
CSA.....Cooperative Service Agreement
DR .....Departmental Regulation
FMMI.....Financial Management Modernization Initiative
FY .....Fiscal Year
GAO.....Government Accountability Office
IDMH.....Information Data Management Handbook
MIS .....Management Information System
MOU .....Memorandum of Understanding
NWRC.....National Wildlife Research Center
NEPA .....National Environmental Policy Act
OIG .....Office of Inspector General
PL.....Public Law
RO.....Regional Office
T/E.....Threatened and Endangered
USDA.....United States Department of Agriculture
WID.....Work Initiation Document
WS……..Wildlife Services

Exhibit A: Audit Sites Visited

Organization	Location
APHIS National Office	Riverdale, MD
APHIS National Wildlife Research Center	Fort Collins, CO
Logan Field Station	Millville, UT
APHIS Wildlife Services Western Regional Office	Fort Collins, CO
Texas State Office	San Antonio, TX
Corpus Christi District Office	Corpus Christi, TX
San Angelo District Office	San Angelo, TX
Canyon District Office	Canyon, TX
College Station District Office	College Station, TX
California State Office	Sacramento, CA
North District Office	McArthur, CA
Sacramento District Office	Sacramento, CA
San Luis District Office	Taft, CA
Utah State Office	West Valley City, UT
Northern District Office	West Valley City, UT
Southern District Office	Richfield, UT
Aviation Training & Operations Center	Cedar City, UT
Wyoming State Office	Casper, WY
East District Office	Torrington, WY
Southwest District Office	Rock Springs, WY
APHIS Wildlife Services Eastern Regional Office	Raleigh, NC
Minnesota State Office	St. Paul, MN
Grand Rapids District Office	Grand Rapids, MN

USDA'S
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
RESPONSE TO AUDIT REPORT

United States Department of Agriculture

Animal and Plant Health Inspection Service

Office of the Administrator

1400 Independence Avenue SW
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MEMORANDUM

TO: Gil Harden
Assistant Inspector General
for Audit

August 19, 2015

FROM: Kevin Shea
Administrator

SUBJECT: APHIS Response and Request for Management Decision on OIG Report "APHIS Wildlife Services – Wildlife Damage Management" (33601-0002-41)

Thank you for the opportunity for the Animal and Plant Health Inspection Service (APHIS) to comment on your August 12, 2015, Official Draft Report. We have restated each Recommendation below, along with our planned corrective actions and the timeframes for implementation of these actions.

Recommendation 1: Remove Management Information System (MIS) access privileges from non-Wildlife Services (WS) affiliated individuals.

APHIS Response: APHIS agrees with this Recommendation. Effective April 1, 2015, Wildlife Services' (WS) managers and supervisors notified non-WS affiliated individuals that they would no longer be able to use the MIS to report and document non-WS activities, nor have access to the MIS. In addition, the WS Deputy Administrator will issue a revision of WS Directive 4.205 by August 20, 2015, to all supervisors and managers communicating the new procedure, and stating that written approval is required from the WS Deputy Administrator or his designee for access to MIS data base by non-WS personnel.

Recommendation 2: Determine whether external party activities should be recorded in MIS.

APHIS Response: APHIS agrees with this recommendation. WS has determined that external party activities, such as species taken, will not be entered into the MIS data base; however, such activities as cooperator employed methods, depredation permit information, or similar activities that provide documentation of the WS decision model will be entered. As stated in our response to Recommendation #1, the WS Deputy Administrator will issue a revision of WS Directive 4.205 to all supervisors and managers stating that written approval is required from the WS Deputy Administrator or his designee for access to the MIS data base by non-WS personnel.

Recommendation 3: Develop and implement procedures that require a second party reviewer to sample and reconcile field specialists' logbook entries to the corresponding MIS entries.

APHIS Response: APHIS agrees with this Recommendation and will implement the following:

- A reminder will be issued by September 30, 2015, that all field supervisors immediately review item 14 of WS Form 82, Field Inspection Report, that requires the supervisor to review the field log (i.e. diary, book, electronic device) for consistency with the specialist's MIS itinerary report.

- During the employee field inspection visit, the field supervisor will randomly pick 4 weeks of MIS electronic data from the previous 12 months and verify against the employee field diary or log book records. Checking item 14 on WS Form 82 will be acknowledgement that the verification has been accomplished at least once each year.

- In addition, WS will issue guidance by September 30, 2015, to all personnel and require all WS personnel who enter data into the MIS to review and electronically verify the accuracy of their data entries as reported in a standard MIS monthly employee itinerary report.

- Employee Data verification will occur every 30 days.

- In most cases, field personnel should enter data into the MIS on a daily basis, if not a weekly basis; but not less often than every 2 weeks.

- WS personnel who do not enter MIS data on a daily basis, will be required to record these activities in a journal, field diary, paper, or electronic form and transfer the data into MIS as required.

- Employees who are not able to abide by these requirements because of remote connectivity issues should work with their supervisor to resolve them and implement measures that allow for regular and consistent data entry until the connectivity issues have been resolved.

Recommendation 4: Establish a policy requiring a second party review and sign-off on all Form 12 information in MIS.

APHIS Response: APHIS agrees with this Recommendation**.** WS will issue new guidance by August 31, 2015, to all WS supervisors and managers reasserting that the appropriate data technicians will review all work initiation documents (field agreements) by comparing the electronic copy against the signed hard copy for

any discrepancies and only switch the work initiation document from a pending to an active status when all data fields have been verified for accuracy.

Recommendation 5: Ensure WS personnel are aware of and follow the policy to renew Form 12s at least every 5 years.

APHIS Response: APHIS agrees with this Recommendation. On August 5, 2015, the WS Deputy Administrator reissued WS Directive 4.130, "Information and Data Management and Security," to all WS managers and supervisors reasserting the WS policy requirement to renew Form 12 every 5 years. Specifically, the Directive states that the life cycle of the Work Initiation Document (WID) is five years and that the "Wildlife Services Information and Data Management Handbook" provides additional information about the initiation, completion and renewal of the WID.

Recommendation 6: Establish a process that will give employees a formal reminder of expiring Form 12s, and include more detailed procedures for the renewal of Form 12s.

APHIS Response: APHIS agrees with this Recommendation. By August 31, 2015, WS will issue new guidance directing all supervisors and managers to issue a report, "Agreements, Years old Listing" or equivalent report, every 6 months to all field personnel that lists all Work Initiation Documents set to expire at the end of the current 5 year cycle. This new guidance will include detailed instructions addressing requirements for amending species and methods information; signature requirements for renewing including signatures by absentee landowners; no activity within a 5 year period; and distribution of hard or electronic copies to supervisors and data technicians. This new guidance will also reinforce the current requirement for a completed Work Initiation Document to be in place prior to any work being initiated. The MIS Field Handbook will be modified, by September 30, 2015, to reflect this new guidance.

Recommendation 7: Ensure MIS can accurately track the 5-year life cycle of the Form 12 by including a "Form 12 signed date" field in MIS that cannot be changed.

APHIS Response: APHIS agrees with this Recommendation. By August 31, 2015, WS will issue new guidance that reasserts the need to enter the current agreement date into the MIS data field entitled, "Form 12 signed date". The current data field entitled, "Last Signed Date" will be converted to, "Form 12 signed date" and will be hard coded and only select personnel with the appropriate administrative rights can manipulate this data field, if needed.

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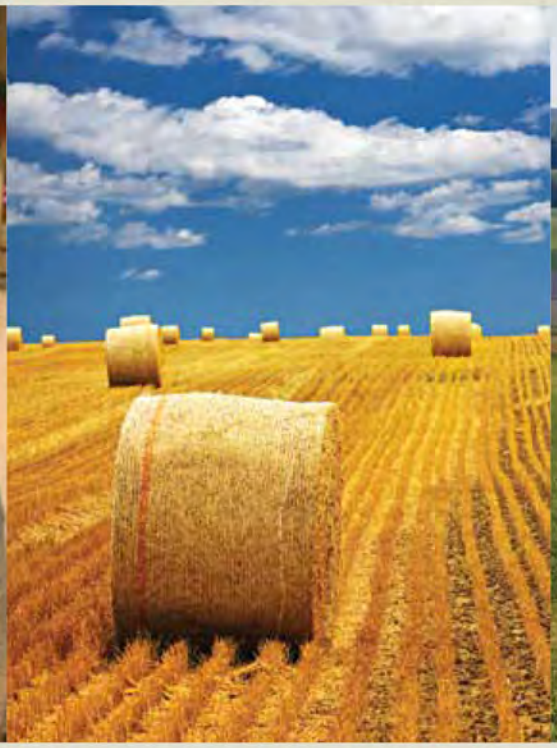

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NOAA announces up to $10 million available to support fisheries projects under Saltonstall-Kennedy Grants Program

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FOR IMMEDIATE RELEASE:
September 3, 2015

Deadline for proposals is November 2, 2015

As part of its efforts to build resilient coastal communities and sustainable marine resources, today, NOAA announced the availability of approximately $10 million in competitive grants through the 2016 Saltonstall-Kennedy Grant Program. The program addresses the needs of fishing communities, and increases opportunities to keep working waterfronts viable by funding fisheries research and development projects.

Through this year's program, emphasis is being placed on rebuilding fish stocks, maintaining and restoring healthy ocean and coastal ecosystems, and promoting the economic vitality of fishery working waterfront communities. The program is also emphasizing community-based projects to help coastal communities retool fishing fleets, shore services and port facilities into sustainable and innovative businesses.

"The Saltonstall-Kennedy Program helps fishing communities across the country keep their economies thriving by building and maintaining sustainable fisheries and practices," said Eileen Sobeck, assistant NOAA administrator for fisheries. "Funds from the program keep working waterfronts vibrant and help coastal communities with conservation and management measures. We hope to see proposals from across the nation and U.S. territories, each providing a unique approach to research and project development."

To be considered for funding, projects should advance research in one of the following focus areas:

- Aquaculture
- Fishery data collection
- Techniques for reducing bycatch and other adverse impacts
- Adapting to climate change and other long term ecosystem change
- Promotion, development, and marketing
- Socio-economic research
- Science coming from within the U.S. territories

The 2016 deadline for proposals is November 2, 2015. Information on eligibility and application requirements can be found at www.grants.gov. Additional application instructions are available on the NOAA Fisheries website.

The Saltonstall-Kennedy Act established a fund used by the Secretary of Commerce to provide grants or cooperative agreements for fisheries research and development projects addressing aspects of U.S. fisheries, including, but not limited to harvesting, processing, marketing and associated business infrastructures. The objective of the Saltonstall-Kennedy Grant Program is to address the needs of the fisheries and fishing communities in optimizing economic benefits by building and maintaining sustainable fisheries and practices.

President Dwight Eisenhower signed the Saltonstall-Kennedy Act into law in July 1954, which established the fund and its annual grants. Massachusetts senators Leverett Saltonstall and John F. Kennedy, the future president, authored the Act to promote and market domestic seafood.

NOAA’s mission is to understand and predict changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources. Join us on Twitter, Facebook, Instagram and our other social media channels.

NOAA FISHERIES
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NOAA's new Climate Science Strategy aims to reduce effects of climate change on fisheries and living marine resources

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FOR IMMEDIATE RELEASE:
August 25, 2015

Plan outlines efforts to build resilience

As ocean conditions continue to change, putting ocean ecosystems and the communities that rely upon them at risk, today, NOAA took a first step in providing regional fisheries managers and stakeholders with information they need to reduce the effects of climate change and build resilience.

“NOAA just announced that for the globe the month of July -- and actually, the entire year so far -- was the warmest ever recorded, driven largely by record warm ocean temperatures,” said Eileen Sobeck, assistant NOAA administrator for fisheries.“Those warmer waters – along with rising seas, coastal droughts and ocean acidification – are already putting people, businesses, and communities at risk. With this strategy, we’re taking a proactive approach in providing information on current and future conditions to try and reduce impacts and increase our resilience.”

The NOAA Fisheries Climate Science Strategy identifies seven key steps to increase production, delivery, and use of climate-related information to support the management of fish stocks, fisheries, and protected species. The steps focus on how a changing climate affects living marine resources, ecosystems, and the communities that depend on them, and how to respond to those changes.

“We are already seeing marine animals change where they live to deal with changing climate. We're even seeing population numbers of some species drop,” said Richard Merrick, Ph.D, NOAA Fisheries director of scientific programs and chief science advisor. “Providing more information on current and future conditions will fill a crucial need. Our nation’s marine resource managers, along with the businesses and communities that depend on those resources, need to know what changes are coming so they can take appropriate action to mitigate any negative effects on our economy and environment.”

The strategy identifies key risks in the U.S. from climate change, including millions of U.S. jobs, ocean fisheries worth billions, protected marine species, habitats that provide valuable services, and the health and enjoyment of our oceans and coasts from recreation and tourism.

Following release of the strategy, NOAA Fisheries science centers and regional offices will work with partners and stakeholders – including fishery management councils, other federal agencies, and tribes – to develop and finalize regional action plans by late 2016 that address objectives in the strategy. These regional action plans will identify strengths, weaknesses, priorities, and actions to implement the Strategy in each region over the next five years.

NOAA's mission is to understand and predict changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources. Join us on Twitter, Facebook, Instagram, and our other social media channels.

You can also follow NOAA Fisheries news announcements on Twitter: NOAAFishMedia

Check out our new podcast on climate change.

US Fish & Wildlife Service

Thursday, August 13, 2015 12:20 PM

California to Receive Nearly $16 Million in Grants to Boost Endangered Species Conservation Efforts

Service grants of $37.2 million to 20 States will help collaborative efforts to conserve imperiled species

The U.S. Fish and Wildlife Service is awarding $37.2 million in grants to 20 states - including nearly $16 million to California - to support conservation planning and acquisition of vital habitat for threatened and endangered species across the nation. The grants, awarded through the Cooperative Endangered Species Conservation Fund (CESCF), will benefit numerous species, ranging from the coastal California gnatcatcher to the Karner blue butterfly. For a complete list of the 2015 grant awards and project descriptions, see www.fws.gov/endangered/grants/index.html.

“Private landowners and natural resource managers play a vital role in conserving our nation’s most imperiled wildlife,” said Service Director Dan Ashe. “By cultivating partnerships between federal, state and local governments, private organizations and individuals, we can establish creative and effective solutions to some of the greatest conservation challenges of our time. These grants are one of many tools available under the Endangered Species Act, and we look forward to providing continued guidance and support for these programs.”

Authorized under Section 6 of the Endangered Species Act (ESA), these competitive grants enable states to work with private landowners, conservation groups and other government agencies to initiate conservation planning efforts and acquire or protect habitat for the conservation of threatened and endangered species.

The grants are funded in part by the Land and Water Conservation Fund, which was established byCongress in 1964. The fund promotes access to outdoor recreation resources for present and future generations, and provides money to federal, state and local governments to purchase land, water and wetlands for the benefit of all Americans. For the past 50 years, the fund has supported more than 40,000 conservation and outdoor recreation projects nationwide. Without action from Congress, authorization for the program will expire in September. President Obama has proposed to fully and permanently fund the program.

“These grants enable the U.S. Fish and Wildlife Service to tap into the considerable capacity of the state fish and wildlife agencies and their partners to advance the stewardship of our nation's fish and wildlife resources,” said Larry Voyles, President of the Association of Fish and Wildlife Agencies. “The states’ proactive, science-based conservation programs and partnerships to restore vital habitats are more effective and less costly to American taxpayers than an emergency room approach to save species in peril.”

CESCF grant funding is provided through three programs that advance creative partnerships for the recovery of imperiled species: the Habitat Conservation Planning Assistance Grants

Program, Habitat Conservation Plan Land Acquisition Grants Program, and Recovery Land Acquisition Grants Program.

This year, the Habitat Conservation Planning Assistance Grants Program will provide $4.7 million in grants - $1.7 million to California - to support the development of Habitat Conservation Plans (HCPs) through funding of baseline surveys and inventories, document preparation, outreach and similar planning activities. HCPs are agreements between the Service and private landowners, states or counties that allow certain activities to take place that may impact one or more ESA-listed species. In return, landowners agree to conservation measures designed to avoid, minimize and mitigate the impact of those actions. In California, the grants will help fund development of the Placer County Conservation Plan, Placer County Conservation Plan, Yuba Sutter Regional Conservation Plan, Upper Santa Ana River Watershed HCP, United Water Conservation District Multiple Species HCP and the City of Santee Multiple Species Conservation Program.

Nearly $20.3 million will be awarded this year under the HCP Land Acquisition Grants Program, which provides grants to states or territories for land acquisitions that complement the conservation objectives of approved HCPs. California will receive $12 million to fund acquisition of lands in support of locally-driven Habitat Conservation Plans in Contra Costa, Los Angeles, Riverside and San Diego counties. For example, the Western Riverside County Multiple Species Conservation Plan (MSHCP) will received $2 million to support the acquisition of approximately 1,025 acres of land in Riverside County that will benefit numerous sensitive species including the California gnatcatcher, arroyo toad and Quino checkerspot butterfly. The acquisition will support the assembly of a 500,000-acre preserve that is part of the Western Riverside County MSHCP by protecting large blocks of coastal sage scrub, chaparral and grassland habitats.

California will also receive two grants totaling more than $2.3 million under the Recovery Land Acquisition Grants Program which provides funds to states and territories to acquire habitat for endangered and threatened species with approved recovery plans. Habitat acquisition to secure long-term protection often is an essential element of a comprehensive recovery effort for a listed species.

The ESA provides a critical safety net for America's native fish, wildlife and plants. The Service is working to actively engage conservation partners and the public in the search for improved and innovative ways to conserve and recover imperiled species. For more information visit www.fws.gov/endangered.

The U.S. Fish and Wildlife Service works with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. For more information on our work in California, Nevada and Southern Oregon, visit http://www.fws.gov/cno. Connect with ourFacebook page, follow our tweets, watch our YouTube Channel, and download photos from our Flickr page.

-FWS-

US Fish & Wildlife Service: Field Notes Entry

PACIFIC SOUTHWEST REGION: Pritchard Lake Fish Screen and Intake Facility To Improve Fish Passage on the Sacramento River

California-Nevada Offices , May 29, 2015

The recently completed Pritchard Lake Fish Screen and Intake Facility, located on the Sacramento River, 12 miles north of downtown Sacramento. - Photo Credit: n/a

By Dan Meier

Natomas Mutual Water Company (Natomas Mutual) and its partners, including the U. S. Fish and Wildlife Service and the Bureau of Reclamation, held a dedication ceremony on the Sacramento River to celebrate the completion of the Pritchard Lake Fish Screen and Intake Facility, on May 29.

Located approximately 12 miles north of downtown Sacramento, the new fish screen will allow water flow to irrigation pumps while keeping fish out and allowing them to safely pass by the water diversion. At a total cost of just over $9.2 million, the facility will improve passage conditions for migratory fish species in the lower portion of the Sacramento River.

"This project represents a successful collaborative effort to improve fish passage on Sacramento River," said **Brett Gray**, General Manager of Natomas Mutual Water Company. "And at the same time, it will increase water supply reliability for water users."

The Sacramento River serves as a critical migration route for Chinook salmon and Central Valley steelhead which migrate to the ocean as young fish and then return in subsequent years as adults.

According to Bureau of Reclamation officials, the fish screen and intake facility has a diversion capacity of 150 cubic feet per second. It consists of three retrievable cylindrical fish screen units made of stainless steel with openings of about a sixteenth of an inch.

Each screen unit is 22 feet long and 4.5 feet in diameter. The cylindrical screen shape allows for a compact intake facility and the retrievable design allows for easy access for screen maintenance. The screen design also provides for both internal and external brush cleaning of the screens.

A close up view of a fish screen drum. Two large screens are connected to tracks that allow them to be raised and lowered to adapt to varying water levels. - Photo Credit: n/a

One side of the fish screen raised for display. - Photo Credit: n/a

Funding for the fish screen and intake was provided by federal and state agencies and the Sacramento Area Flood Control Agency. Approximately 35 percent of the fish screen funding, roughly $3.2 million, was provided through the Anadromous Fish Screen Program, a federal program jointly implemented by the U. S. Fish and Wildlife Service and Bureau of Reclamation.

Project partners included the California Department of Fish and Wildlife and the National Marine Fisheries Service. Natomas Mutual provides water for over 34,000 acres in the Natomas basin for agricultural, municipal and habitat preservation purposes.

- fws -

Dan Meier is a program manager with the Anadromous Fish Screen Program at the Pacific Southwest Regional Office in Sacramento.

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US Fish & Wildlife Service: Field Notes Entry

BAY-DELTA: Restoration Efforts Paying Dividends for Two Key San Francisco Bay Area Endangered Species

California-Nevada Offices , August 21, 2015

This is one of the four endangered salt marsh harvest mice found on A21 during the recent survey. - Photo Credit: n/a

Supervising wildlife biologist Joy Albertson holds up a western harvest mouse that was trapped on July 23, 2015. - Photo Credit: n/a

By Steve Martarano

The week of July 20 proved to be a huge milestone for two endangered species and a restoration area known as Pond A21, located on the Don Edwards San Francisco Bay National Wildlife Refuge near San Jose, CA.

Pond A21, one of the Island Ponds, is a key component of an impressive effort that began in 2003, when the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife acquired approximately 15,000 acres of former commercial salt ponds from the Cargill Salt Company with the goal of restoring the area for a variety of native species – including endangered salt marsh harvest mouse and California clapper rail, recently renamed Ridgway's rail. Another significant marker occurred in 2006, when A21 was breached as part of the Initial Stewardship Plan of the South Bay Salt Pond Restoration Project.

Since the 2006 breach, the Tidal Marsh Recovery Plan was published, and each year the Service instituted a survey plan while waiting for vegetation to develop to be able to support those species. Eventually, those newly restored marshes will be populated to connect current areas that have Ridgway's rails and salt marsh harvest mice , thereby increasing marsh acreage and habitat connectivity.

Efforts started to pay off last year in a big way, when the first Ridgway's rail was spotted in A21 in July 2014 by staff with the Invasive Spartina Project. Then, during the first surveys for salt marsh harvest mice on July 22 this year, biologists heard the call of the first breeding pair of Ridgway's rails.

After setting more than 100 live-traps over three nights, biologists caught four salt marsh harvest mice during those first surveys. Biologists caught a total of 63 unique small mammals at A21, including salt marsh harvest mice, Western harvest mice, deer mice and house mice.

“Everyone was extremely excited; it was well above our expectations for how quickly this would happen, being less than 10 years since the area was breached,” said Service wildlife biologist Rachel Tertes, who heads up the survey efforts for the refuge. “This shows that we’re accomplishing what we’re trying to accomplish, that if we provide habitat the species will come.”

That both Ridgway’s rail and salt marsh harvest mice are already moving into the newly created habitat took everyone by surprise, said Tertes, who started with Service as an intern on the Refuge in 1999. She estimates there are at least the two Ridgway’s rails on A21, and possibly more. The Service has done breeding season surveys since 2012, but it wasn’t until last summer that detection occurred, even though proper habitat and vegetation were in place.

Tertes said there weren’t any mammals on A21 before the breach, only waterfowl and shorebirds.

“We were also pleasantly surprised to find deer mice during the recent surveys,” Tertes said. “Though deer mice aren’t rare, it was exciting for us to find a new species we generally don’t catch during our small mammal trapping efforts.” She said UC Davis researchers also found longfin smelt – listed as threatened by the State of California and as candidate for protection by the Service – as well as Mysid shrimp at the site.

Red flags indicate the locations traps are located on A21. More than 100 traps were set and checked during the recent salt marsh harvest mouse surveys. - Photo Credit: n/a

The July 23, Service survey crew. L-R: Wildlife biologist Cheryl Strong; wildlife biologist Colin Grant; supervising wildlife biologist Joy Albertson; volunteer Rob Witthaus, and survey leader, wildlife biologist Rachel Tertes. - Photo Credit: n/a

“It’s been pretty impressive to see all of the parties who have come together on this restoration effort, from Fortune 500 companies to environmental groups,” said Colin Grant, the endangered species listing and recovery biologist in San Francisco Bay-Delta Fish and Wildlife Office. Grant was part of the survey crew on July 22 when the Ridgway’s rail breeding pair was detected.

The recent successful surveys came at the end of Phase 1 of the South Bay Salt Pond Restoration Project, the largest tidal restoration effort on the West Coast. Phase 2 planning for Alviso and Ravenswood ponds has already begun – a public meeting and walking tours were held August 4. Phase 2 restoration and public access alternatives will include options such as enhancing the ponds for pond birds or shore birds, adding bird islands and habitat transition areas, building public trails, improving levees, designing the ponds to store stormwater, potential incorporating the City of Redwood City’s Bayfront Canal and Atherton Channel Projects.

“In 10 years, the area will be a fully tidal marsh that has well-structured channels and the appropriate vegetation to sustain endangered species and other plants and animals,” Tertes said.

Steve Martarano is the public affairs officer for the Bay-Delta Fish and Wildlife Office located in Sacramento, Calif. **Contact Info:** Steve Martarano, 916-930-5643, steve_martarano@fws.gov

US Fish & Wildlife Service: Field Notes Entry

PACIFIC SOUTHWEST REGION: Refuge Benefits From Forward-Looking Process to Conserve California's Central Valley

Region 8, August 26, 2015

The giant garter snake, a threatened species, can be found on refuges, agricultural wetlands and other waterways in California's central valley. - Photo Credit: n/a

By Scott Flaherty

For migrating birds, waterfowl and other wildlife, national wildlife refuges in California's Central Valley likely appear as welcomed islands of calm in a shifting sea of agriculture. For managers of the Service's 10 refuges and six wildlife management areas in the Central Valley, the outlook is less welcoming. Consecutive years of severe drought and its associated water problems have brought managers and biologists face-to-face with climate change and new challenges to managing wildlife habitats across a landscape nearly the size of West Virginia.

For partner agencies and organizations in the California Landscape Conservation Cooperative (LCC), the Central Valley is a global biodiversity hot-spot and a priority for conservation. The Central Valley is more than 42,000 square miles in size, running 450 miles from Shasta County in the north, to Kern County in the south. The landscape is highly vulnerable to continuing land use changes, increasing temperatures, drought, and loss of important habitats for wildlife, including numerous imperiled species. Central Valley refuges, like those in the Sacramento, San Luis and Kern/Pixley complexes, provide significant resting and nesting spots for migrating birds on the Pacific Flyway and habitat for other wildlife, including imperiled species.

"It wasn't that long ago when I would hear about climate change and mentally acknowledge it as something we would deal with at refuges in the future," said **Dan Frisk**, Project Leader at the 68,000-acre Sacramento National Wildlife Refuge Complex. "Now climate change is right in my face and I am managing a refuge through consecutive years of severe drought. It's a challenge."

For Frisk and his colleagues in the Central Valley, managing through severe drought means being strategic about how, when and where to use available surface water - both permanent and temporary. Water feeds seasonal wetlands for millions of migrating waterfowl and other birds, as well as other habitats for threatened and endangered species such as giant garter snake, valley elderberry longhorn beetle and vernal pool species. For tools to prepare the refuge for the future, Frisk says he is looking beyond the traditional practices and expanding the refuge's traditional alliance of partners to include the LCC and its Central Valley Landscape Conservation Design (LCD) Project.

The San Joaquin kit fox, an endangered species, is one of several priority natural resources that will be assessed for their vulnerability to a changing landscape over the next 50 years. - Photo Credit: n/a

“We benefit from our work with our traditional refuge partnerships, but the LCD workshops really amps things up by providing new models that are really making a difference to how we are managing on the ground,” Frisk said. “It’s beneficial to hear from new voices at the table. I am always learning something new or acquiring more depth of knowledge on things I’ve learned from others.”

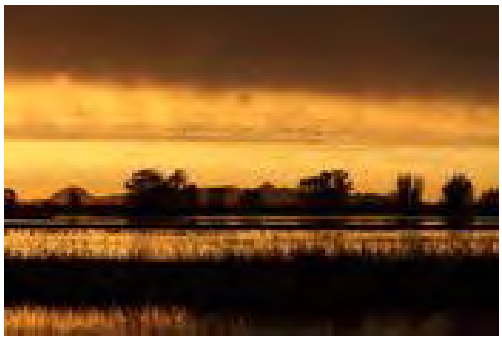
The LCD project engages resource managers and scientists who have been working for decades on conservation in the Central Valley, including the state, federal and local agencies, non-profits and existing partnerships,” said LCC Science Coordinator **Rebecca Fris**.

The LCC brings together agencies and organization representing resource managers and scientists from California’s conservation community to develop climate-smart adaptation strategies and actions for the Central Valley LCD. In addition to refuge managers and biologists, there is strong participation from the Service’s Ecological Services and Fisheries and Aquatic Conservation programs and the Central Valley Joint Venture.

“We are strengthening existing conservation efforts by developing a shared vision for the future of the Central Valley’s biodiversity, incorporating climate change, and identifying adaptation strategies that will help resources managers identify on-the-ground actions that reflect future conditions,” Fris said.

Over the past year, three workshops have convened partners around the steps of the forward-looking Climate-Smart Conservation process, an adaptive-planning cycle in use across the country to think through the impacts of climate change and other stressors as well as the full range of possible responses for resource management.

The LCD process began with a scenario exercise that produced a set of four plausible but very different futures for the region. To do this, the group identified the most important factors driving changes that effect biodiversity in the Central Valley, which they determined to be water availability combined with a broad mix of human activities that influence conservation across the landscape. The group then envisioned what the Valley would be like under different combinations of the extremes of these drivers. The resulting “Central Valley Future Scenarios” is a basis for choosing management actions that will provide benefits despite uncertainty about how these changes will unfold over the 50-year planning horizon.



Sunrise at Sacramento National Wildlife Refuge near Willows, in California's central valley. - Photo Credit: n/a

“The best case scenario we labelled California Dreamin’. At the other end, it was California Dust Bowl,” Frisk said, adding that all scenarios indicate increased demands for resources, especially water. “At the end of the day I ask myself, ‘what can I do?’ and focus on the things we can control.”

To achieve the goal of a suite of effective adaptation strategies and actions, the partnership next identified a list of priority natural resources—a shared list of habitats, groups of species and individual species whose health would scale up to a functioning network of ecosystems for the Central Valley. In October, experts will come together to assess the vulnerability of the priority habitats and species to the changes described in the future scenarios.

Once the vulnerability of the priority natural resources is evaluated this fall, the partnership will develop adaptation strategies and a set of maps to guide climate-smart actions in the future.

Frisk clearly believes the formal conservation design process will benefit the Sacramento refuge complex into the future. “I know that our management needs and challenges are going to be addressed because the refuge is at the table and part of the design process,” he said. “It provides us with tools we can use now and into the future.”

For Frisk, the future is now. The immediate challenge is managing his water allocation to ensure seasonal wetlands are irrigated and “filled with groceries” for the millions of migrating waterfowl and other wetland dependent birds that descend on the refuge’s wetlands between August and April. He fears that this year, refuges may be one of the few places in the Valley with a welcome mat out for migrating waterfowl.

“Prior to two years ago, we would typically see about 300,000 acres of post-harvest rice fields and other agricultural land in the Valley flooded up and ready for migrating birds to feed on,” Frisk said. Last year about 130,000 acres were flooded. This year we’re expecting somewhere between 75,000 and 100,000 acres. Our refuges may be the only show in town for birds this year.”

For more information about the Central Valley Landscape Conservation Design Project, visit http://CaliforniaLCC.org

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US Fish & Wildlife Service: Field Notes Entry

SACRAMENTO: Service Working to Combat Killer Chytrid in California Frog Populations

California-Nevada Offices , August 28, 2015

According to Dr. Lee Skerratt, a senior fellow at James Cook University, Australia, “the impact of Chytridiomycosis on frogs is the most spectacular loss of vertebrate biodiversity due to disease in recorded history.” - Photo Credit: USFWS

The Sacramento Fish and Wildlife Office has funded two grants, totaling $175,000, which will help pay for (B. dendrobatidis) monitoring and treatment efforts for five years. - Photo Credit: Rick Kuyper/USFWS

By John Garn

In some cases it’s good to have a thin skin, especially if you’re a frog. Yet millions of amphibians globally are facing extinction because their skin is too thick; victims of Chytridiomycosisa, a virulent, highly transmissible, often fatal infectious disease that has caused the extinction or critical decline of over 200 species of frogs and salamanders.

The U.S. Fish and Wildlife Service’s Sacramento Fish and Wildlife Office and our partners are working hard to understand and combat this terrible disease.

As tadpoles, frogs breathe much like fish; they have gills and stay completely submerged in water. But, during metamorphosis into froglets, they lose their gills, develop rudimentary lungs, and start breathing through their nose and mouth (which has membranes that transfers oxygen much like the skin). In all stages, frogs absorb oxygen (cutaneous gas exchange) and exchange water (osmoregulation) through their skin; which means they need moist, thin skin in order to live.

Chytridiomycosis is caused by the aquatic fungal pathogen Batrachochytrium dendrobatidis (*B. dendrobatidis*). *B. dendrobatidis* feeds on a substance called keratin, which is a protein found in hair, skin, scales, feathers, fur, among other places, like your fingernails or a rhino’s horn. This isn’t a significant problem for tadpoles, because keratin is only found around their mouths and Bd usually doesn’t interfere with breathing or the ability to forage for food. However, when a tadpole becomes a frog, keratin begins to be produced in other parts of their body.

B. dendrobatidis creates cysts in the keratinized areas on an adult frog’s skin, resulting in thickening and sloughing of the skin, which prevents the cutaneous gas exchange and osmoregulation. In essence, it stops the frog from breathing and absorbing water, which means the infected frog becomes lethargic and

slow to react. This makes it an easy meal for predators or, if the disease progresses long enough, the frog dies from a heart attack, brought on by electrolyte imbalance, oxygen starvation, and nervous system collapse.

On April 29, 2014, the Service finalized listing the three Sierra amphibians (the Sierra Nevada yellow-legged frog, the northern Distinct Population Segment (DPS) of the mountain yellow-legged frog, and the Yosemite Toad) under the Endangered Species Act (Act), bringing the total listed amphibian species under the Act in the U.S. to 35. As a part of the listing and recovery efforts for these various species, the Service has been actively involved in researching and fighting this disease; funding myriad studies and treatment efforts in the U.S. and globally; and collaborating with various partners in an effort to prevent the decline or extirpation of all at risk amphibian species.

In 2010, the Service started the Amphibians in Decline Program through Wildlife without Borders and has since awarded over $3,500,000 to fund 40 projects in 23 countries.

Closer to home, there are approximately 22 Sierra Nevada yellow-legged frog and Northern DPS mountain yellow-legged frog communities in the Sierra Nevada that remain Bd free. Thirteen of these occur within Sequoia and Kings Canyon National Parks (SEKI) and the remainder occur in the adjacent Sierra, Sequoia, and Inyo National Forests.

These populations comprise the largest remaining groupings of both species, with sizes commonly exceeding 1000 adults. As such, these communities are critically important for their role as donor populations for current and future frog conservation efforts. Unfortunately, based on the current rates, all are expected to become *B. dendrobatidis*-positive and suffer serious declines or extinctions within the next 10 years.

It's possible that the severity of these declines can be mitigated by using anti-*B. dendrobatidis* treatments applied at the beginning of an outbreak. This can increase community survival by allowing time for treated frogs to develop an effective immune response which subsequently renders them much less susceptible to Bd. To allow effective treatments to be conducted, intensive monitoring is necessary to detect *B. dendrobatidis* infections at an early stage and quickly implement a treatment effort. The Sacramento FWO has allocated funding for two grants, totaling $175,000, which will pay for these monitoring and treatment efforts for five years.

The Service is partnering with the University of California-Santa Barbara, Sierra Nevada Aquatic Research Laboratory (SNARL) and the Sequoia and Kings Canyon National Parks (SEKI) to implement the monitoring program and manage treatment operations in the event of an outbreak.

All sites will be visited at least twice each summer for the first 3 years, with SNARL personnel visiting two-thirds of the sites and SEKI personnel visiting the remaining third, in order to assess the disease state of the incumbent population. Ten to twenty swabs will be taken at each site and analyzed within 2 weeks .

If an outbreak is identified at a site, 500 frogs will be collected, penned, and separated into 2 groups: treatment and control. All the frogs will be tagged, swabbed, and held on-site. The control group will only be monitored, while the treatment group with receive daily Itraconazole exposure for seven days; after which all frogs will be released. To accurately determine the efficacy of treatment, funding will be sought to continue monitoring the affected sites for an additional 2-3 years.

Finally, if conditions warrant significant intervention, early life cycle (eggs or tadpoles) may be collected and brought to a captive rearing location (i.e. zoo or aquarium) and the frogs will be raised to adulthood, infected with Bd, treated until disease free, and then reintroduced into the site from which they were taken.

Chytridiomycosis is a significant hurdle to recovery efforts and threatens amphibians globally. With ongoing research, varied treatment plans and captive rearing efforts currently underway, it is hoped that through the efforts of the Service and our partners, will be able to meet the challenge it presents.

-- FWS --

John Garn admin officer for the Carlsbad FWO, wrote this article while serving on detail as a public affairs specialist in the Sacramento FWO.

US Fish & Wildlife Service: Field Notes Entry

YREKA: Fall Waterfowl Migration Underway at Lower Klamath NWR

California-Nevada Offices , September 10, 2015

By Matt Baun

Water is flowing to the Lower Klamath National Wildlife Refuge this week and that is great news for the white fronted geese, mallards and pintails that have already begun arriving into the Klamath Basin.

Tens of thousands of waterfowl will arrive in the coming weeks, with peak migration expected in late October and early November. It has been said that of all the wetlands in the American West, no area provides more feeding, resting and nesting habitat for migratory waterfowl than the marshes and lakes of the Klamath Basin that spans more than 25-square miles along the California-Oregon border.

The water is coming into the refuge from the Klamath River via the Ady Canal, which is one of two arteries into the Lower Klamath NWR. Water is also pumped into Lower Klamath NWR from Tule Lake by the Tulelake Irrigation District. The last time water came to the refuge from Ady canal was November 2013.

The Bureau of Reclamation said it is making the deliveries as a result of additional water that is available due to summer precipitation and water conservation activities of the Klamath Irrigation Project.

“It is always a challenge to balance water in the Klamath Basin and the delivery of 9,000 acre feet of water is a good start considering the Refuge has been completely dry most of the summer,” said refuge manager **Greg Austin**.

“Every drop of water counts and we anticipate that the delivery will provide some immediate benefits to the migrating waterfowl. Our goal now will be to provide as much habitat as we can with this water."

Austin said it is still possible to have some hunting but the first priority will be to ensure there is enough water to provide sanctuary for incoming birds. The amount of water expected this week should flood about 3,000 acres of wetlands.

With higher-than-normal air temperatures expected this week that Service staff will be monitoring for avian botulism outbreaks which can kill waterfowl, he said.

The Service and Bureau of Reclamation will be discussing additional water deliveries and a delivery schedule in the coming weeks.

-- FWS –

Matt Baun is the Service's public affairs officer for the Yreka FWO and the Klamath Basin.

Contact Info: Matt Baun, 530-842-5763, matt_baun@fws.gov

State of California
Department of Fish and Wildlife

Memorandum

2015 SEP 4 PM 12: 16

Date: August 31, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Agenda Item for the October 7-8, 2015 Fish and Game Commission Meeting Initial Private Lands Wildlife Habitat Enhancement and Management (PLM) Area License**

The Department of Fish and Wildlife (Department) has reviewed the Initial Management Plan for 2 properties in 3 counties consisting of approximately 6,100 acres. The management plan for these properties is in compliance with Fish and Game Commission (Commission) policy requirements for private lands management. The applicants have identified the location where records will be kept and made available for inspection.

Public notices were published in local newspapers, and certified letters were mailed to adjacent landowners with notification of the applicant's intent to enter into the program. No letters of concern were received by the Department.

Habitat improvements accomplished under this plan will enhance and maintain wildlife resources on and around the PLM area. The goals and objectives stated in the management plan are compatible with Department management plans for appropriate species in these areas. In addition, access to public lands will not be diminished under implementation of these management plans.

The Department recommends that the Commission approve the specified wildlife management plan, application, and the 2015 harvest program under conditions specified in the attached table.

If you have any questions, please contact Ms. Victoria Barr at (916) 445-4034 or by email at victoria.barr@wildlife.ca.gov.

Attachment

ec: Dan Yparraguirre, Deputy Director
Wildlife and Fisheries Division
Dan.Yparraguirre@Wildlife.ca.gov

Eric Loft, Ph.D., Chief
Wildlife Branch
eric.loft@wildlife.ca.gov

Craig Stowers, Environmental
Program Manager
Wildlife Branch
craig.stowers@wildlife.ca.gov

Stuart Itoga, Senior Environmental
Scientist
Wildlife Branch
stuart.itoga@wildlife.ca.gov

Victoria Barr, Environmental Scientist
Wildlife Branch
victoria.barr@wildlife.ca.gov

PLM AREA LICENSE ***INITIAL APPLICATION, 2015-2020*** ***PROPOSED SEASONS, HARVESTS, AND HABITAT IMPROVEMENTS***		
PLM Area	**Proposed Season and Harvest**	**Habitat Improvement Program**
BAY DELTA REGION		
PACHECO RANCH DEER ZONE A SANTA CLARA 673+ ACRES	***Authorized Harvest***: No tags requested during the initial year in the program	➢ Hand prune 1 acre of decadent chamise. ➢ Mechanically remove 5 acres of decadent chamise in irregular pattern. Broadcast native seed in cleared area. ➢ Mechanically and/or chemically remove chamise that is encroaching on blue oak woodland in order to maintain at least 30% blue oak woodland. ➢ Enclose at least 20 blue oak seedlings with no-climb horse fencing. ➢ Plant up to 50 blue oak seedlings grown from local nursery stock, collect acorns to continue planting program in future years.
CENTRAL REGION		
CAMP 5 OUTFITTERS-ROTH RANCH PLM MONTEREY/SAN LUIS OBISPO 5,400 ACRES A-ZONE	***Authorized Harvest:*** No tags requested during the initial year in the program	➢ Clear 5 acres of old growth brush to stimulate growth of new forage for wildlife. ➢ Re-seed 5 acre cleared area with appropriate range mix. ➢ Adapt 1 existing water source to make it more wildlife accessible. ➢ Maintain and improve water system. ➢ Build 3-5, 100 square foot brush piles to provide cover for wildlife. ➢ No grazing allowed in the 40 acre riparian area. ➢ Plant 10 areas of barley or other suitable cover crop for wildlife use. ➢ No grazing on Fowler or Roth ranches. ➢ Install 1 elk crossing in Roth ranch fence line or where best utilized on the other ranch parcels.

State of California
Department of Fish and Wildlife

RECEIVED
CALIFORNIA
FISH AND GAME
COMMISSION

2015 SEP 21 PM 3: 39

Memorandum

Date: September 21, 2015

To: Sonke Mastrup, Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: Request for 30-day extension—Humboldt marten CESA Listing Petition Evaluation

Pursuant to Section 2073.5 of the Fish and Game Code, the Department requests an extension of time, by 30 days, to allow further review of the subject petition and the recommendations of our evaluation report.

The Department is currently processing seven petitions to list species pursuant to the California Endangered Species Act. This unprecedented workload and the limited staff time available, makes this extension request necessary.

If this extension is granted, the due date for the Department's evaluation and review period of 120 days will be October 16, 2015.

If you have any questions or need additional information, please contact Wildlife Chief, Dr. Eric Loft at 916-445-3555.

ATCC
AL TAUCHER CONSERVATION COALITION

U.S. SPORTSMEN'S ALLIANCE

September 8, 2015

The Honorable Jack Baylis, President

California Fish and Game Commission

1416 Ninth Street, Suite 1320

Sacramento, CA 95814

RE: Predator Working Group Participant Selection

Dear President Baylis:

The United States Sportsmen's Alliance ("USSA") is a national organization dedicated to the protection and promotion of America's sporting pursuits. For nearly forty years, USSA has sought to reinforce the role of hunters, fishermen, and trappers in the furtherance of the North American Wildlife Management model, and partners with the Al Taucher Conservation Coalition ("ATCC") to promote conservation efforts here in California. ATCC is an organization comprised of more than 27 state and national conservation, union, and volunteer organizations, and represents the interests of more than one million Californians who contribute over 3.6 billion dollars to California's growing economy.

ATCC is formally seeking clarification of actions the Commission recently took at the Commission's 5-AUG-15 meeting in Fortuna whereby individuals were publicly appointed to the Predator Policy working group ("PWG"). These appointments appear to be in stark conflict with the protocol the Commission previously set forth whereby parties interested in participating in the PWG could submit their applications in response to the Commission's solicitation, and then be selected according to their qualifications the Commission set forth after an application period of thirty days.

The California Fish and Game Commission is tasked with a very important role in conserving California's natural resources and safeguarding the ability of all Californians to recreate in Nature according to the dictates of their conscience, and as with any action that could potentially impact communities of Californians, our state's flora and fauna, agricultural enterprises, and recreational opportunities, it is

ATCC
AL TAUCHER CONSERVATION COALITION

U.S. SPORTSMEN'S ALLIANCE

of paramount importance that the Commission establish and adhere to a well-defined process of involving stakeholder and public input. As you know, ATCC has been supportive of the effort to establish policies by which to guide the activities of the Wildlife Resources Committee ("WRC"), so it is concerning to our member organizations that the process has not been observed in this case; doing so only serves to further alienate and disenfranchise public input and invites distrust and antagonism to the governance of our state's natural resources and those tasked with setting forth policy.

I look forward to the Commission's prompt response to my concerns.

Sincerely,

Michael Flores
Al Taucher Conservation Coalition

California Fish and Game Commission
Staff Proposal for Predator Policy Workgroup

July 26, 2015

Background

The response by the public to the Wildlife Resources Committee's (WRC) predator policy workgroup (PWG) meeting in March 2015 was overwhelming, and outstripped staff capacity to host all the interest. Staff presented WRC with a preliminary report and recommendations at the meeting on May 6, 2015, and Co-Chair Baylis proposed appointing a balanced group of stakeholders to draft and vet policy and/or regulatory options for consideration and discussion at future WRC meetings. The proposal was discussed and tentatively approved at the June 11, 2015, Commission meeting with requests by Commissioners Kellogg and Hostler-Carmesin for additional information.

Proposal

The proposal requires the Commission to appoint representatives to one of two workgroups to support predator policy review and development. The first group, consisting of six representatives, is responsible for refining ideas and drafting language for review by the WRC. The second group, consisting of 10-15 representatives, is responsible for receiving input to inform the drafting group.

The workgroups are tasked with presenting draft recommendations in a report to the WRC in 2016, at which point the WRC will discuss and make final recommendations for consideration by the Commission in 2017.

Tier 1: Drafting Group (drafters)

The Commission would appoint six volunteers that can demonstrate their commitment to helping draft policy.

- Consists of six seats
- Meet often with each other and the review group
- Goal: To draft new predator policy and regulatory concepts for WRC consideration
- Objectives
    - Receive input from review group
    - Receive expert input
    - Review existing policy/regulatory concepts
    - Draft policy, best management guidelines and regulatory proposals

Tier 2: Review Group (reviewers)

The Commission would appoint no more than 15 volunteers that can demonstrate their commitment to providing constructive input to the drafters.

- Consists of 12-15 seats
- Meet frequently with each other, the drafting group, and key stakeholders

- Goal: To provide input, guidance, and support for the drafting group
- Objectives
    - Review draft from drafting group
    - Provide recommendations to drafting group based on input from stakeholders
    - Negotiate compromises, identify key issues and conceptual changes
    - Debate proposed policies and regulatory concepts
    - Identify best management practices

Appointment Process

Solicitation – Commission staff will distribute a notice of interest for persons willing to volunteer for either tier on the webpage and through the listserv. The notice will include the list of desired qualifications and will outline the task and anticipated term. There will be a 30-day period to apply.

Selection - The applicants will be screened by Commission staff for those meeting the minimum qualifications. The successful applicants will be presented to the Commission at the next available meeting for final selection to fill both tiers.

Minimum Qualifications

- Both drafters and reviewers must demonstrate ability and willingness to work with others of diverse opinions and views and show a commitment and ability to represent key stakeholders.
- Drafters: must demonstrate writing skills and ability to evaluate policy and regulations.
- Reviewers: must demonstrate ability to evaluate policy and regulations. Experience working collaboratively.

Workgroup Input Needs

1. Clear and specific objectives from the Commission and WRC
2. Commission staff support of effort
3. DFW expertise on science, management practices, law, and administration
4. Public attitudes, expectations, needs (depredation, anthropomorphic, property rights)
5. Webpage platform for announcements, key documents, etc.
6. Independent scientific input and/or review
7. Rules of conduct, expectations, roles and responsibilities of participants
8. Discussion starter (draft list of issues/concerns)

California Fish and Game Commission: Wildlife Resources Committee

List of Applicants for Predator Policy Workgroup

September 25, 2015

Name	Group Requested	Representing
Robert R. Smith	Review	San Diego County Wildlife Federation
Tom O'Key	Review	Project Bobcat
Tony Linegar	Not Stated	Sonoma County Ag Commissioner
Dale T. Steele	Not Stated	Expert on predator issues (Retired DFW employee)
Chuck Morse	Not Stated	Mendocino County Ag Commissioner
Les Wright	Not Stated	Fresno County Ag Commissioner
Damon Nagami	Review	Natural Resources Defense Council
George Osborn	Not Stated	California Association for Recreational Fishing
Jennifer Fearing	Drafting	Humane Society of the United States
Sally Barron	Either	Ag and hunters
Erica Sanko	Drafting	California Wool Growers Association
Rebecca Dmytryk	Drafting	Wildlife Rescue groups
Kirk Wilbur	Either	California Cattlemen's Association
Dennis Orthmeyer	Review	APHIS Wildlife Services
Steven Childs	Review	California State Varmint Callers Association
Bill Saksa	Not Stated	Predator Callers of Orange County
Ronald Stephens	Either	Predator hunting groups
Grandville Crow	Either	Predator hunting groups
Kimberly Richard	Either	Wildlife advocate
Jim Conrad	Either	San Diego County Fish and Wildlife Advisory Committee
Noelle Cremers	Drafting	California Farm Bureau Federation
Josh Brones	Drafting	Sportsman's Alliance/Al Taucher Conservation Coalition
Mark Hennelly	Drafting	California Waterfowl
Jean Su	Drafting	Center for Biological Diversity
Tom Pederson	Not stated	California Rifle and Pistol Association
Ed Worley	Not Stated	National Rifle Association
Bill Gaines	Drafting	Gaines & Associates, Government Relations
Sharon Ponsford	Review	California Council for Wildlife Rehabilitators

NATIONAL SHOOTING SPORTS FOUNDATION, INC.
11 Mile Hill Road • Newtown, CT 06470-2359 • Tel (203) 426-1320 • Fax (203) 426-7182 • www.nssf.org

LAWRENCE G. KEANE
SENIOR VICE PRESIDENT
& GENERAL COUNSEL

September 24, 2015

VIA E-Mail
Mr. Jack Baylis, President,
Mr. Jim Kellogg, Vice President.
Ms. Jacque Hostler-Carmesin
Mr. Anthony C. Williams
Mr. Eric Sklar
Mr. Sonke Mastrup, Executive Director
California Fish and Game Commission
1416 Ninth Street, Room 1320
Sacramento, CA 95814

Re: Request for Transparency, Structure and Fairness in the Operations of the California Wildlife Resources Committee

Dear Sirs and Madam:

The National Shooting Sports Foundation ("NSSF") is the trade association for America's firearms, ammunition, hunting, and recreational shooting sports industry. Its mission is to promote, protect and preserve hunting and the shooting sports. NSSF has a membership of nearly 13,000 manufacturers, distributors, firearms retailers, shooting ranges, and sportsmen's organizations. Our manufacturer members make the firearms used by law-abiding California sportsmen, the U.S. military and law enforcement agencies throughout the state.

The purpose of this letter is to address continued concerns of NSSF regarding the transparency of the Wildlife Resources Committee ("WRC"). The policies and decisions of the California Fish and Game Commission ("Commission"), and the actions of the WRC have a direct and substantial, material impact on the businesses of a significant number of our members, including those based in California.

In our July 18, 2014 letter (attached) expressing our concerns about the Wildlife Resources Committee, apparently viewed by the Commission as an "informal" committee, we pointed out that "a committee is no longer considered to be strictly advisory if the committee members advise or make recommendations to the decision maker either directly or without significant intervening substantive review." Note that the WRC is further delegating authority to a self-appointed Predator Policy Workgroup ("Workgroup") that was not statutorily convened and is being appointed by the Commission using subjective criteria with virtually no transparency on

the process used to select candidates. Furthermore, while neither the invitation to apply to the Workgroup nor the official Fish and Game Commission website identifies any deadlines for applications, we see on the October 7-8, 2015 agenda that the Commission will be making the appointments at that meeting. As the notice for Workgroup nominations was posted on September 11, 2015 and the appointments are to be made at the October 7-8 meeting, very little time is available for the receipt and evaluation of nomination appointments before the final selection.

Since the WRC's inception on January 15, 2014 and subsequent meetings held in 2014 on May 7, July 28, and September 17, and in 2015 on January 14, May 6, and September 9, the WRC continues to function without formal policies and procedures that have been made clear to the public.

NSSF is again expressing concern as we seek further clarification about recent activities at the FGC meeting on August 5, 2015 when the President of the Fish and Game Commission without public discussion, attempted to appoint members to a Predator Policy Workgroup that had not been previously disclosed to the public. On September 11, 2015 the FGC publicly noticed the request for nominations to the Predator Policy Workgroup, thus creating even more confusion about the working of the WRC and the Commission's actions at its August 5 meeting.

Numerous questions arise in reviewing the proposed nomination process criteria for participation in the Predator Policy Workgroup. Of concern are the proper functioning of the WRC and what appear to be extremely subjective criteria. There is little disclosure of how this process will be conducted and how the subjective criteria will be validated. Under "Review Group: negotiate compromises, identifying key issues and conceptual changes" is an example: stakeholders being appointed to this Workgroup are to negotiate compromises on the behalf of a state-convened body. We would also note that references to such things as "best management practices" and "input from qualified experts" are very subjective and would be the choice of the individual appointed to the committee. Will there be a rating criteria for such appointments, such as knowledge or experience with web-based software under "Criteria for Selection"?

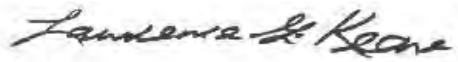
A list of organizations and individuals with whom they would be communicating is included under information that should be provided in the nomination. Knowledge of the names on the list, itself, is not a qualification for appointment without the consensus of the stakeholders. Most troubling in the criteria is the qualification that the individual should be able to work collaboratively with those of diverse opinions. There is nothing in the objectives of the WRC that requires this as a criterion (minority opinions provide valuable input to a fact-finding, deliberative and fair process). Exclusion of those voices appears to be self-defeating to the entire purpose of the WRC.

These are just a few of our concerns about this most recent development of the WRC, and we ask the Commission to step back and prioritize formal policies and procedures in public hearings before it proceeds with the adoption of WRC policy. This request has been made

numerous times in writing and during the Public Forum in both FGC and WRC meetings. For the sake of transparency, a public response is necessary.

NSSF exhorts you to consider the future of the Wildlife Resource Committee's effectiveness if a structure of fairness and openness is not provided that allows the participation of all stakeholders.

Sincerely,



Lawrence G Keane
Senior Vice President & General Counsel
National Shooting Sports Foundation

cc: Governor Edmund G. Brown, Jr.
Mr. Chris Ames, Attorney General's Office
National Shooting Sports Foundation

Attachment: NSSF Letter, dated July 18, 2014

Safari Club International

A NON-PROFIT ORGANIZATION • DEDICATED TO CONSERVING WILDLIFE AND PRESERVING HUNTING

SCI FIRST FOR HUNTERS

SAFARI CLUB INTERNATIONAL FOUNDATION FIRST FOR WILDLIFE

California Chapters

September 24, 2015

VIA E-Mail
Mr. Jack Baylis, President,
Mr. Jim Kellogg, Vice President.
Ms. Jacque Hostler-Carmesin
Mr. Anthony C. Williams
Mr. Eric Sklar
Mr. Sonke Mastrup, Executive Director
California Fish and Game Commission
1416 Ninth Street, Room 1320
Sacramento, CA 95814

Re: Request for Transparency, Structure and Fairness in the Operations of the California Wildlife Resources Committee

Dear Sirs and Madam:

Safari Club International (SCI) is a worldwide non-profit organization with the mission to protect the freedom to hunt and to promote wildlife conservation. SCI recognizes and promotes hunting as a valuable wildlife management and conservation tool. SCI currently has over 48,000 members and over 6,500 members in California. SCI also has 30,000 California Affiliates, 950,000 U.S. Affiliates and over 7,000,000 International Affiliates.

There are thirteen California Chapters of Safari Club International, collectively representing over 5,000 of SCI's California members who hunt and participate in sustainable wildlife conservation. SCI's California chapters and their members participate in numerous conservation projects throughout the state. SCI California chapters attend Wildlife Resource Committee (WRC) and Fish and Game Commission (FGC) meetings and make every effort to play active roles in the state's decision-making concerning wildlife conservation and management. Despite SCI California chapters' efforts to contribute to and improve the effectiveness and propriety of the WRC's decision-making process, the activities of the WRC continue to deprive SCI California chapters and their members of fair and equal access to these important decisions.

Since the WRC's inception on January 15, 2014 and subsequent meetings held in 2014 on May 7, July 28 and September 17 and in 2015 on January 14, May 6 and September 9, the WRC continues to function without formal policies and procedures and have not made the process that they follow clear to the public. In a letter dated July 14, 2014 SCI's California

chapters outlined some of our concerns about the operation of the WRC. To date we have received no written communication responding to our concerns nor have we seen remedies to the problems we identified. (Please see attached letter, July 14, 2014)

SCI's California chapters are writing again to express our concerns as we seek further clarification about recent activities at the FGC meeting on August 5, 2015 when, without public discussion, the President of the Fish and Game Commission attempted to self-appoint members to a Predator Policy Workgroup that had not been previously disclosed to the public. Ostensibly to remedy this apparent error, on September 11, 2015 the FGC publicly noticed a request for nominations to the Predator Policy Workgroup. This unexplained request for nominations after the President's announcement of an illegal, unilateral and biased designation of nominees, created even more confusion about the workings of the WRC, the actions of the Commission at its August 5 meeting, and the Commission's relationship with stakeholders at the WRC.

The proposed nomination process criteria for participation in the Predator Policy Workgroup does little to improve the problems introduced by the President's inappropriate actions. The announcement of the nomination process does not answer the numerous ongoing questions about the proper functioning of the WRC or the apparent extremely subjective criteria for nominee selection. The WRC continues to offer little disclosure of how the selection of Predator Policy Workgroup members will be made and/or how the subjective criteria will be validated. We also note that there is no due date clearly listed for nominations to be submitted to the WRC, nor is a date by which the member selection will take place.

Once the members are selected, the problems increase. The process, or lack thereof, remains rife with subjective failings. For example, the "Review Group" is expected to negotiate compromises, identify key issues and conceptual changes. It is curious and likely illegal that stakeholders from specific interest groups that are appointed to this workgroup are being given the authority to negotiate compromises on the behalf of a state-convened body. This authority is being delegated without any rules to govern the conduct of these workgroup members. Further no definitions or criteria have been provided for subjective phrases such as "best management practices" and "input from qualified experts." However, the individuals appointed as members are given no guidance as to how to apply these subjective criteria. As a result, these evaluations will be left to the discretion of the individuals appointed to the committee, without consequence for abusing this discretion. It appears that the Drafting and Review groups within the Predator Policy Workgroup will be dictating policy in a vacuum while conducting meetings outside the public's view.

SCI's California chapters believe that the overall criteria for selection potentially excludes some of the most important voices with technical and on-the-ground experience. The process for selecting members of the Predator Policy Workgroup appears to be skewed towards those who lack this kind of technical and on-the-ground knowledge and is in conflict with the very purpose of the WRC for outreach to a variety of stakeholders and consumptive users who do not possess these attributes.

Aside from the criteria for the selection of the Predator Policy Workgroup with all of its obvious problems, the WRC has not announced or codified any formal procedures for the workings of the WRC or the Workgroup. We refer back to our July 14, 2014 letter in urging the Commission to step back and prioritize formal policies and procedures in public hearings before it proceeds with the adoption of WRC policy. SCI and other organizations and individuals have made this request numerous times in writing and during the Public Forum in both FGC and WRC meetings. We still await an answer and we continue to be subjected to WRC meetings that lack consistency and reliability in their management. For the sake of transparency, a public response to our concerns is necessary.

We urge you to consider the future of the WRC's effectiveness if a structure of fairness and openness is not provided for the participation of all stakeholders.

Sincerely,

Lisa C. McNamee

Lisa McNamee
Co-Legislative Coordinator
California Chapters

Don Giottonini

Don Giottonini
Co-Legislative Coordinator
California Chapters

cc: Governor Edmund G. Brown, Jr.
Mr. Chris Ames, Attorney General's Office
Safari Clubs International, California Chapters

Attachment: SCI Letter to Fish and Game Commission, July 14, 2014

CALIFORNIA FISH AND GAME COMMISSION
DECISION LIST FOR REGULATORY REQUESTS RECEIVED THROUGH AUG 5, 2015

FGC - California Fish and Game Commission **DFW** - California Department of Fish and Wildlife **WRC** - Wildlife Resources Committee **MRC** - Marine Resources Committee

Grant (previously Accept): FGC is *willing to consider* the petition through a process
Deny (previously Reject): FGC is *not willing to consider* the petition
Refer: FGC *needs more information* before deciding whether to grant or deny the petition

Green cells: Referrals to DFW for more information
Blue cells: Referrals to FGC staff or committee for more information
Lavender cells: Accepted and moved to a rulemaking
Yellow cells: Current action items

Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
6/5/2015 7/8/2015	Michel & Associates, on behalf of the National Rifle Association of America and the California Rifle and Pistol Association	Correspondence		Requests regulation to require all (1) FGC and (2) DFW staff conduct correspondence concerning official business via government issued email addresses.	Action scheduled 10/7-8/2015 **Staff recommendation:** **(1) Refer to legal counsel for evaluation, and, (2) Deny; FGC has no authority over DFW staff.**		
6/24/2015 6/24/2015 7/1/2015 7/6/2015 7/13/2015 7/28/2015	Joan Jones Holtz Dave Master Georganne Walker Elisabeth Lamar Erica Stanojevic Kimberlee Goebel	Crab fishing nets and traps in coastal waters		Requests ban on all crab fishing nets and crab traps in coastal waters due to whale entanglement risk.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Commercial-- Deny; FGC has no authority over this matter.** **Recreational-- Refer to DFW.**		
7/27/2015 8/4/2015	Center for Biological Diversity, et al. Oceana	Whale enganglement in commercial fishing gear		Request for actions to ensure CA fisheries are no longer responsible for whale entanglements.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Refer to DFW.**		
6/24/2015	Chip Warren	Commerical fishing and crabbing		Requests ban on commerical fishing and crabbing equipment that threatens marine life.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; FGC has no authority over commercial crab fishing.**		

Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
6/24/2015	Robin Wallace	Crab lines		Requests limitation on where crab lines may be placed during whale migrations.	Action scheduled 10/7-8/2015 **Staff recommendation: Commercial-- Deny; FGC has no authority over this matter. Recreational-- Refer to DFW.**		
6/29/2015	Mia O'Dell	Sugar gliders		Legalize possession of sugar gliders.	Action scheduled 10/7-8/2015 **Staff recommendation: Deny; no new data to support request.**		
6/30/2015, 8/5/2015	Eric Mills	Commission by-laws, public forum		Requests FGC adopt formal by-laws to (1) require a unanimous vote when only three commissioners are present; and (2) to add public forum to the beginning and end of each meeting day.	Action scheduled 10/7-8/2015 **Staff recommendation: Grant; refer tp FGC meeting procedures rulemaking.**		
7/15/2015	Dennis Fox	Salmon restoration, take of predators in San Joaquin River		(1) Requests a review of the salmon restoration program; and (2) liberalized take of salmon predators in the San Joaquin River.	Action scheduled 10/7-8/2015 **Staff recommendation: (1) Deny; FGC has no authority over the administration of DFW, and (2) Refer to DFW.**		
7/12/2015	Terr Jelcick	Shark feeding		Requests ban on shark feeding and baiting for research, education, etc., within the Monterey Bay National Marine Sanctuary and West Coast of the U.S.	Action scheduled 10/7-8/2015 **Staff recommendation: Refer to staff for evaluation.**		
7/13/2015	Trent Donohue, Wild Fish, et al.	Emergency fishing regulations		Requests implementation of emergency fishing closures when rivers exceed 18ºC.	Action scheduled 10/7-8/2015 **Staff recommendation: Grant; per current rulemaking process.**		
7/14/2015	Fred Darlington	Preference points		Requests to amend the hunting preference point system to permit opportunity.	Action scheduled 10/7-8/2015 **Staff recommendation: Deny; Insuffient staff resources.**		
7/4/2015	Jason Robinson	Rock crab permit transfer process		Requests discussion of the rock crab permit transfer process at next FGC meeting.	Action scheduled 10/7-8/2015 **Staff recommendation: Deny; Insuffient staff resources.**		

Date Received	Name of Petitioner	Subject of Request	Code or Title 14 Section Number	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
7/23/2015	Jose Figueroa	Trapping		Request to ban all trapping in California because it is cruel and inhumane.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; FGC has no authority, requires statutory change.**		
7/25/2015	Megan Clenney	Hedgehogs		Legalize possession of hedgehogs.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; no new data to support request.**		
8/4/2015 8/24/2015	April Wakeman, The Sport Fishing Conservancy	Fishing and hunting license possession	Sec. 700, Title 14	Request to amend regulations to specifically include a digital license viewable on a cell phone or tablet as being 'in possession' if and when such digital licenses are authorized.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Refer to DFW.**		
8/4/2015	Dan Yoakum	Herring experimental gear		Request changes to regulation to permit expermimental gear and conformance with NOAA regulations to exclude seals in fishery.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; FGC will consider this during adoption of the FMP.**		
8/4/2015	Greg Helms, Ocean Conservancy, et al.	Forage Fishery		Consider initializing regulations to conform state regulations with PFMC guidelines and other federal regulations.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; premature until PFMC final guidelines are published.**		
8/4/2015	Paul Weakland	Abalone		Request to re-open for abalone harvest the counties south of San Francisco.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; no new data to support request.**		
8/4/2015	Lynn Cullens	Mountain lions		Requests changes to depredation regulations to require non-lethal methods prior to issuance of a lethal permit for take.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; FGC has no authority over this matter, requires statutory change.**		
8/5/2015	Lynn Boulton	Trapping		Requests regulations to require hunters and trappers to provide all the same information required for bobcats to apply to all furbearers and nongame predators.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Refer to WRC**		

CALIFORNIA FISH AND GAME COMMISSION
DECISION LIST FOR NON-REGULATORY REQUESTS RECEIVED THROUGH AUG 5, 2015

FGC - California Fish and Game Commission **DFW** - California Department of Fish and Wildlife **WRC** - Wildlife Resources Committee **MRC** - Marine Resources Committee

Grant (previously Accept): FGC is *willing to consider* the petition through a process **Deny (previously Reject):** FGC is *not willing to consider* the petition
Refer: FGC *needs more information* before deciding whether to grant or deny the petition

Green cells: Referrals to DFW for more information **Blue cells:** Referrals to FGC staff or committee for more information
Lavender cells: Accepted and moved to a rulemaking **Yellow cells:** Current action items

Date Received	Name of Petitioner	Subject of Request	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
7/21/2015	Dan Yoakum	HEOK Experimental Permit	Requests re-consideration of his experimental gear proposal.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; no longer qualifies as experimental gear.**		
7/21/2015	Amie Akridge	LA-DWP Impacts on Native and Migratory Birds	Requests oversight of Los Angeles Department of Water and Power's management impacts on native and migratory bird habitat in and around the Chatsworth Nature Preserve.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; FGC ha no authority over this matter.**		
7/31/2015	Calif. Sea Urchin Commission	Sea Urchin Fishery	Requests sea urchin be placed on October meeting agenda for authorization to publish notice.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; item not yet scheduled for action.**		
7/28/2015	Peggy Palmer	Banning Ranch Conservancy	Request to help stop development activity by City of Newport Beach due to negative impacts on Banning Ranch Conservancy.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; FGC ha no authority over this matter.**		
8/5/2015	Tom Raftican, The Sport Fishing Conservancy	WRC Meetings	Request to move the January 2016 WRC meeting from Sacramento to Los Alamitos in order to accommodate participation from non-consumptive users dealing with wildlife issues in their neighborhoods.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; FGC adopted 2016 meeting locations in August 2015.**		
8/5/2015	Eric Mills	Public Forum and Live Animal Food Markets	Requests the Commission (1) add public forum to the end of the agenda, as well as to the beginning. There should be multiple opportunities for people to comment. And, (2) reagendize live animal food markets for consideration.	Action scheduled 10/7-8/2015 **Staff recommendation:** **(1) Grant; refer to FGC meeting procedures rulemaking, and (2) Deny; No new data to support request.**		

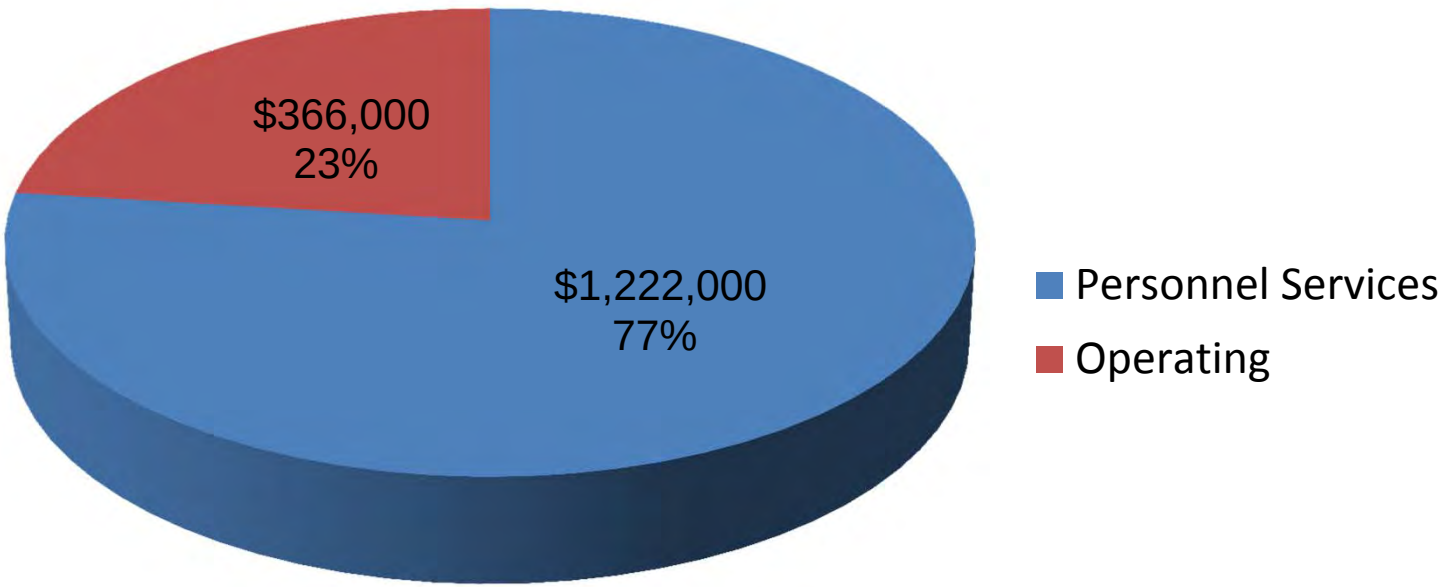
Date Received	Name of Petitioner	Subject of Request	Short Description	FGC Decision	DFW/FGC Staff Response	Final Action, Other Outcomes
8/5/2015	Tom Wheeler, Environmental Protection Information Center	Northern Spotted Owl CESA	Request FGC take a firmer stance and demand DFW bring it's status review of the NSO petition sooner as opposed to later. The status review has been delayed twice thus far.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Deny; FGC will receive the review when it is completed by DFW.**		
6/19/2015	Lisa Belenky, Center for Biological Diversity	Tricolored Blackbird	Request to reconsider the decision on whether listing the tricilored blackbird as threatened or endangered species may be warranted.	Action scheduled 10/7-8/2015 **Staff recommendation:** **Grant; scheduled for consideration at October 2015 meeting.**		
9/24/2015	Sean Brady, Michel & Associates, representing National Rifle Association	Committee Procedures	Requests rules and procedures be establsihed for the WRC through normal regulatory approval process before WRC takes any further action.	**Action Scheduled 12/9-10/2015**		
8/6/2015	Ilson New representing Dan Yoakum	HEOK Experimental Permit	Requests clarification on the definition of HEOK fishing.	**Action Scheduled 12/9-10/2015**		
9/10/2015	Michael Flores, Al Taucher Conservation Coalition	Predator Policy Workgroup	Requests clarification of actions the at FGC Aug meeting in Fortuna whereby individuals were publicly appointed to the Predator Policy working group in conflicht with the process previously establsihed by the Commission.	**Action Scheduled 12/9-10/2015**		
8/11/2015	Diane Pleschner-Steele, CA Wetfish Producers Association	WRC Meeting	Request to provide update on squid research at MRC and FGC meetings.	**Action Scheduled 12/9-10/2015**		
9/11/2015 9/13/2015	Hazel Kimberly Leonard Frances LiBrandi	Urban Coyotes	Request to help control urban coyote problems.	**Action Scheduled 12/9-10/2015**		
6/18/2015	William Lemos	North Coast Human Waste	Requests something be done to address the human waste problem occuring along the north coast during abalone season.	**Action Scheduled 12/9-10/2015**		

Commission Budget

2015-16 Allotment

Presented to the California Fish and Game Commission by
Commission Staff on October 8, 2015

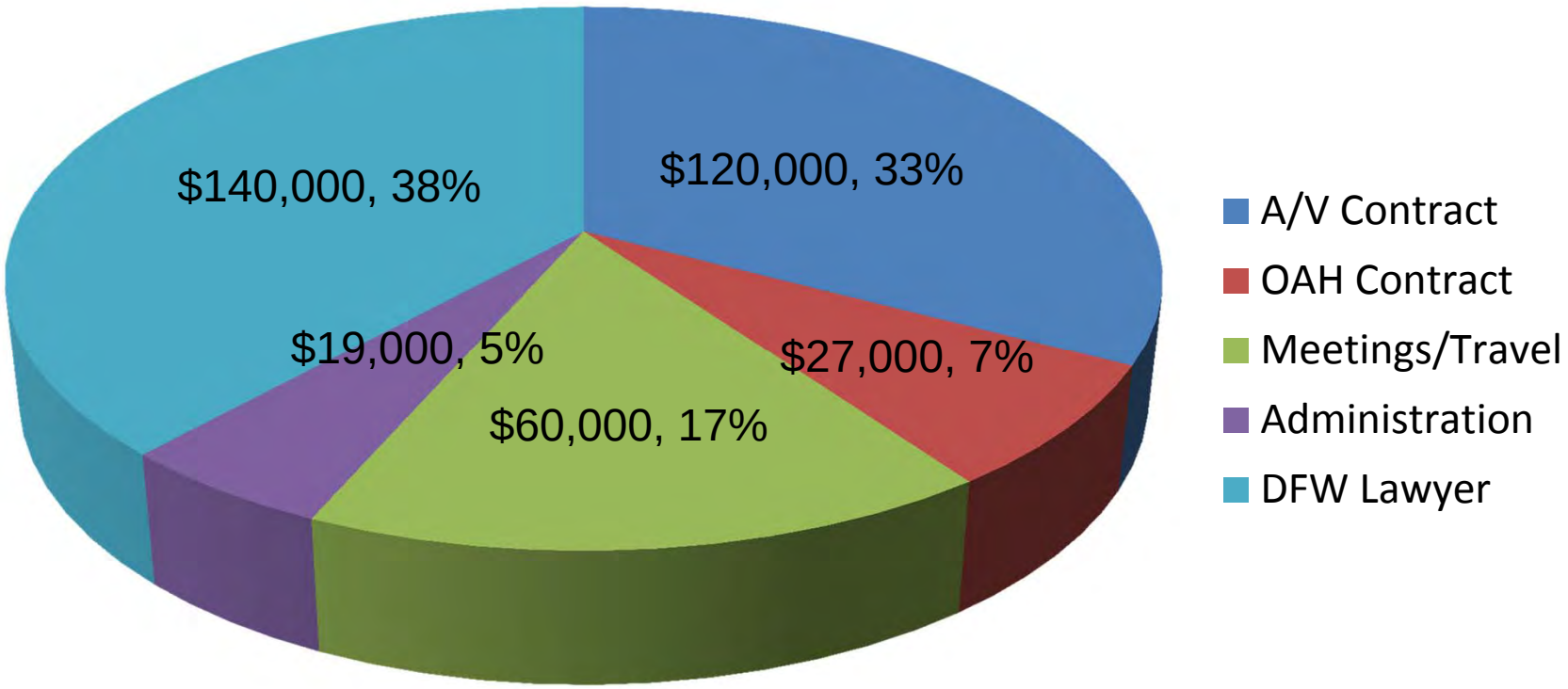
FGC 2015-16 Allotment
$1,588,000



FGC 2015-16 Allotment

Operating

$366,000



From: Jean Su [mailto:jsu@biologicaldiversity.org]
Sent: Monday, August 17, 2015 5:11 PM
To: Mastrup, Sonke@FGC; Woodson, Caren@FGC; FGC
Cc: 'Brendan Cummings'
Subject: CBD letter re: effective date of bobcat trapping ban

Dear Sonke and Caren,

I hope you are both doing well, and congratulations for leading a very productive meeting in Fortuna. Thank you also for the Commission staff's great efforts on the regulation since last year, and for working with us throughout this process.

Please find attached a letter expressing CBD's concerns about the effective date of the bobcat trapping ban regulation for your consideration.

Kind regards,
Jean

Jean Su
Staff Attorney
CENTER *FOR* BIOLOGICAL DIVERSITY
1212 BROADWAY STREET, SUITE 800
OAKLAND, CA 94612
Phone: (510) 844-7139
Fax: (510) 844-7150
http://www.biologicaldiversity.org

CENTER for BIOLOGICAL DIVERSITY Because life is good.

Sent via electronic mail

August 17, 2015

Director Sonke Mastrup
California Fish and Game Commission ("the Commission")
1416 Ninth Street, Room 1320
Sacramento, CA 95814
Fax: (916) 653-5040
fgc@fgc.ca.gov

Re: Bobcat Trapping Ban (14 CCR §§ 478, 479) — Effective Date of Regulation

Dear Director Mastrup and Commissioners:

On behalf of the Center for Biological Diversity ("the Center") and its over 100,000 members and supporters in California, we highly commend and express our gratitude to the Commission for the adoption of the statewide ban on bobcat trapping, amending sections 478 and 479 of Title 14 of the California Code of Regulations ("CCR"). At the same time, we have concerns that, absent specific direction from the Commission, the newly adopted ban may not be effective prior to November 24, 2015, the commencement date of the bobcat trapping season under the now superseded regulations. To avoid administrative and enforcement confusion and uncertainty, as well as conflict with the clear mandates of AB 1213, we ask the Commission to ensure that the effective date of the bobcat trapping ban regulation is set prior to what would otherwise be the commencement of the bobcat trapping season under the old regulations.

As noted by the Department of Fish and Wildlife ("the Department") in the Pre-Adoption Statement of Reasons and as drafted in the regulatory language for the ban[1], the bobcat trapping ban regulation is intended to be effective "prior to the start of the 2015 trapping season."[2] We are concerned, however, that the effective date of the new regulation may surpass this deadline. It is our understanding that the Commission's practice is to generally follow the quarterly effective date schedule outlined in section 11343.4(a) of the Administrative Procedure Act ("APA"). Under this section, the Office of Administrative Law ("OAL") must file the bobcat trapping ban regulation with the Secretary of State by August 31, 2015 in order to ensure an effective date of October 1, 2015; otherwise, the effective date would be delayed to the subsequent quarterly effective date of January 1, 2016—well past the commencement date of the 2015-2016 bobcat trapping season under the old regulations. Given that the Final Statement of Reasons has not yet been published and the OAL has not yet started its review, it seems very difficult if not impossible to meet the filing deadline at the close of August to ensure a quarterly effective date prior to the start of the bobcat trapping season under the old regulations.

[1] As drafted in the regulatory amendments to 14 CCR § 479, "After November 1, 2015, the department shall not affix a department mark or shipping tag on any bobcat pelt." The Department assumed that the ban would be effective prior to the commencement of the 2015-16 trapping season.
[2] *See* Department of Fish and Wildlife, "Pre-Adoption Statement of Reasons" (July 21, 2015), at 2.

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California Fish & Game Commission
Re: Effective Date of Bobcat Trapping Ban Regulation
August 17, 2015

In the event that OAL does not file the regulation by August 31, 2015, the Commission has full discretion, under section 11343.4(b) of the APA, to set the effective date of the bobcat trapping ban regulation outside of the quarterly effective dates provided for under section 11343.4(a) of the APA. Specifically, section 11343.4(b) of the APA states:

> "(b) The effective dates in subdivision (a) shall not apply in all of the following: . . . (4)(A) A regulation adopted by the Fish and Game Commission pursuant to Article 1 (commencing with Section 200) of Chapter 2 of Division 1 of the Fish and Game Code. . . ." APA §11343.4(b).

The bobcat trapping ban regulation squarely falls into section 200 of the California Fish & Game Code, which broadly governs the Commission's rulemaking processes regarding the management of California's wildlife. Therefore, the quarterly effective date schedule under section 11343.4(a) of the APA need not apply to the bobcat trapping ban regulation, and the Commission has the authority (and under AB 1213, the obligation) to set an effective date prior to what would be the start of the 2015-2016 bobcat trapping season under the old regulations.

We understand and appreciate the hardworking efforts of Commission and Department staff to finalize the regulation and respond to public comments in accordance with the law. Nevertheless, it is imperative that these documents and the administrative process be completed early enough such that OAL has sufficient time to undertake administrative review and file the regulation with the Secretary of State so that the regulations are effective prior to what would otherwise be the 2015-2016 bobcat trapping season commencement date. We urge the Commission to direct the regulation process accordingly and ensure that the bobcat trapping ban regulation is effective prior to November 24, 2015.

Thank you for your consideration of these comments. If you have any questions, please feel free to contact me directly.

Sincerely,

Jean Su
Staff Attorney
Center for Biological Diversity
1212 Broadway Street, Suite 800
Oakland, California 94612
Phone: (510) 844-7139
jsu@biologicaldiversity.org

From:	k m
To:	Wildlife DIRECTOR; FGC
Cc:	Channel 5 KPIX
Subject:	RE: CA Bobcat trapping ban delay....why?
Date:	Wednesday, September 02, 2015 7:55:25 PM

Hon. Officials:
Please enforce this bobcat trapping ban immediately. A delay tactic is not ethical and legal and will invite scrutiny from the media and legal authorities. I urge you to impose and enforce this trapping ban NOW. Please respond accordingly.
Kind Regards,
M. Kirsch/Oakland, CA

CENTER for BIOLOGICAL DIVERSITY Because life is good.

Sent via electronic mail

September 14, 2015

Director Sonke Mastrup
California Fish and Game Commission ("the Commission")
1416 Ninth Street, Room 1320
Sacramento, CA 95814
Fax: (916) 653-5040
fgc@fgc.ca.gov

Re: Bobcat Trapping Ban (14 CCR §§ 478, 479) — Implementation of Bobcat Trapping Ban

Dear Director Mastrup and Commissioners:

On behalf of the Center for Biological Diversity ("the Center") and its over 100,000 members and supporters in California, we reiterate our commendation of and gratitude to the Commission for the adoption of the statewide ban on bobcat trapping, amending Sections 478 and 479 of Title 14 of the California Code of Regulations ("CCR"). Since the Commission's vote in favor of the ban over a month ago, we have increasing concerns that the ban regulation may not be effective prior to November 24, 2015, the commencement date of the bobcat trapping season under the now superseded regulations.

On August 17, 2015, we sent a letter to the Commission expressing these concerns (*see* Exhibit A). Since that time we have seen media articles quoting the Department of Fish and Wildlife ("the Department") as stating that the agency did not expect the rule to be effective before the end of this year. Further, at the recent Wildlife Resources Committee meeting on September 9, 2015, Commission staff reported that the ban may not be implemented until midway through or completely after the 2015-2016 trapping season. Such a delay would be unlawful and result in significant administrative and enforcement confusion, as well as could subject the Commission, Department and the trappers themselves to liability.

Specifically, allowing any continued bobcat trapping would violate:

1. the newly adopted regulatory language in the CCR;
2. state law under the Bobcat Protection Act of 2013 ("AB 1213") and Sections 4006 and 4115 of the Fish & Game Code ("FGC"); and
3. federal requirements under the Convention on International Trade in Endangered Species of Wild Flora and Fauna ("CITES") and the Lacey Act.

First, permitting bobcat trapping for any part of the 2015-2016 trapping season directly conflicts with the language of the newly adopted regulations. The regulatory amendment to 14 CCR § 479 states: "After November 1, 2015, the department shall not affix a department mark or shipping tag on any bobcat pelt." Therefore, any bobcat trapping occurring during the 2015-2016 season would be inconsistent with this provision, as the bobcat could not lawfully be tagged, and consequent possession or attempted sale of the bobcat's pelt would be unlawful. Moreover, the Department, in the Pre-Adoption Statement of Reasons, stated that the bobcat trapping ban regulation was to be effective "prior to the start of the 2015

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Phone: 510-844-7100 x 339 • Fax: 510-844-7150 • jsu@biologicaldiversity.org

trapping season."[1] These statements make clear that the Department and Commission assumed the ban would be effective prior to November 24, 2015. The regulations adopted by the Commission were premised on such an effective date, and any derivation from this hard deadline would be unlawful.

Second, allowing trapping in the 2015-2016 trapping season would violate the unequivocal statutory mandates of AB 1213 and FGC §§ 4006 and 4115(e), including the cost recovery provisions. Given trapping license fees for all commercial trappers have already been set for the 2015-2016 season at $117.16 and no additional tag or validation fees have been established, it is undisputed that the Commission would fail to be in compliance with the statutory mandate to set such fees in any season in which bobcat trapping is allowed at "the levels necessary to fully recover" the costs of both the Department and Commission in administering, implementing and enforcing the existing trapping program. F&G Code §§ 4006(c); 4155(e).

Third, as explained in previous Center letters to the Commission, CITES requires that all bobcat pelts be marked according to specific requirements—including supplying information on the place, time, date and method of take—to ensure they were legally caught and lawfully exported. *See* 50 C.F.R. § 23.69(e). According to Department emails, the Department's bobcat tags as well as the existing state trapping regulations are noncompliant with federal tagging requirements, rendering every bobcat exported from California to be in violation of federal law and United States treaty obligations. Under federal law, district courts have jurisdiction to enjoin state officials from such violations of law. *See* 16 U.S.C. § 1540(g). Separately, any transport in interstate or foreign commerce of bobcat pelts derived from the 2015-2016 trapping season would violate the Lacey Act, which prohibits trade and transport of wildlife that have been taken, possessed, transported or sold in violation of any state or federal law or regulation, including the laws enumerated in this letter. *See* 16 U.S.C. § 3372. Consequently anyone trapping bobcats in California during the unlawfully permitted 2015-2016 trapping season would be subject to civil and criminal penalties, including forfeiture of vehicles, under the Lacey Act.

We understand and appreciate the hardworking efforts of Commission and Department staff to finalize the regulation and respond to public comments in accordance with the law. Nevertheless, it is imperative that the administrative process be completed promptly such that the State's Office of Administrative Law and Department of Finance have sufficient time to undertake administrative review and file the regulation with the Secretary of State so that the regulations are effective prior to what would otherwise be the 2015-2016 bobcat trapping season commencement date.

We urge the Commission to direct the regulation process accordingly and ensure that the bobcat trapping ban regulation is effective prior to November 24, 2015. However, in the event the Commission fails to take all necessary measures to ensure timely implementation of the new regulations, the Center and our allies will likely be compelled to seek recourse against the Department and Commission in federal and/or state court. We sincerely hope to be able to avoid this path.

[1] *See* Department of Fish and Wildlife, "Pre-Adoption Statement of Reasons" (July 21, 2015), at 2.

Thank you for your consideration of these comments. If you have any questions, please feel free to contact me directly.

Sincerely,

Jean Su
Staff Attorney
Center for Biological Diversity
1212 Broadway Street, Suite 800
Oakland, California 94612
Phone: (510) 844-7139
jsu@biologicaldiversity.org

Exhibit A

[*See attached*.]

CENTER for BIOLOGICAL DIVERSITY Because life is good.

Sent via electronic mail

August 17, 2015

Director Sonke Mastrup
California Fish and Game Commission ("the Commission")
1416 Ninth Street, Room 1320
Sacramento, CA 95814
Fax: (916) 653-5040
fgc@fgc.ca.gov

Re: Bobcat Trapping Ban (14 CCR §§ 478, 479) — Effective Date of Regulation

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California Fish & Game Commission
Re: Effective Date of Bobcat Trapping Ban Regulation
August 17, 2015

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> "(b) The effective dates in subdivision (a) shall not apply in all of the following: . . . (4)(A) A regulation adopted by the Fish and Game Commission pursuant to Article 1 (commencing with Section 200) of Chapter 2 of Division 1 of the Fish and Game Code. . . ." APA §11343.4(b).

The bobcat trapping ban regulation squarely falls into section 200 of the California Fish & Game Code, which broadly governs the Commission's rulemaking processes regarding the management of California's wildlife. Therefore, the quarterly effective date schedule under section 11343.4(a) of the APA need not apply to the bobcat trapping ban regulation, and the Commission has the authority (and under AB 1213, the obligation) to set an effective date prior to what would be the start of the 2015-2016 bobcat trapping season under the old regulations.

We understand and appreciate the hardworking efforts of Commission and Department staff to finalize the regulation and respond to public comments in accordance with the law. Nevertheless, it is imperative that these documents and the administrative process be completed early enough such that OAL has sufficient time to undertake administrative review and file the regulation with the Secretary of State so that the regulations are effective prior to what would otherwise be the 2015-2016 bobcat trapping season commencement date. We urge the Commission to direct the regulation process accordingly and ensure that the bobcat trapping ban regulation is effective prior to November 24, 2015.

Thank you for your consideration of these comments. If you have any questions, please feel free to contact me directly.

Sincerely,

Jean Su
Staff Attorney
Center for Biological Diversity
1212 Broadway Street, Suite 800
Oakland, California 94612
Phone: (510) 844-7139
jsu@biologicaldiversity.org

From: Eric Sklar
Sent: Wednesday, September 23, 2015 2:02 PM
To: Kanta Masters
Cc: Mastrup, Sonke@FGC; Miller-Henson, Melissa@FGC
Subject: RE: For Eric Sklar

Thanks Kanata,

I appreciate your comments and am forwarding to the staff to include in the record,

Best,

Eric

From: Kanta Masters
Sent: Wednesday, September 23, 2015 1:46 PM
To: Eric Sklar
Subject: For Eric Sklar

9/22/2015

Commissioner Sklar,

I deeply appreciate your receiving my call this afternoon.

Here is a brief recap:

You will be considering the bobcat hunting ban package at the Oct. 7th meeting. Thank you so much for voting for the ban in August. I am now requesting that **you request the expediting of this matter with the Office of Administrative Law Review.** As you may be aware, the bobcat trapping season begins in November and runs through January. If it takes the Office of Administrative Law Review the usual 30 WORKING days to complete the review we will have lost 6 weeks. Then it will go to the Secretary of State . I just spoke with that office and they also said **the Commission could make a request for this to be expedited into law instead of waiting another 30 to 45 days.** If the whole process took the maximum length it is quite possible that the whole trapping season will have transpired and all the bobcats, supposedly protected with this new regulation, will not be protected at all!

Thank you for listening, Commissioner Sklar. I deeply appreciate it and so hope my arguments and requests have merit with you.

Most Sincerely, kanta masters

CALIFORNIA'S MARINE PROTECTED AREA STATEWIDE LEADERSHIP TEAM

Work Plan FY 15/16 - 17/18: Executive Summary

The California legislature passed the Marine Life Protection Act (MLPA) in 1999, responding to the need to redesign California's marine protected areas (MPAs) and improve their effectiveness at supporting healthy and sustainable marine ecosystems. The fully redesigned network was completed in 2012. Through the science-based and stakeholder-driven process to implement the MLPA, state resource managers realized a key component to success was a focus on building strong, active partnerships.

The California Department of Fish & Wildlife (CDFW) and Fish & Game Commission are charged with management of the statewide MPA Network, while the Ocean Protection Council serves as the state's policy lead. The Department of Parks & Recreation and Commission are also designated as a managing agency for some types of MPAs. Regulatory agencies (e.g. California Coastal Commission, State Lands Commission, and State Water Resources Control Board) have jurisdictions that overlap with MPA management activities, as does the West Coast Regional Office of National Marine Sanctuaries. California Ocean Science Trust works in close partnership with these agencies to support a science-based approach to ocean and coastal management, and to design and implement MPA monitoring programs. Effective stewardship of the MPA network requires a coordinated approach among these agencies and organizations, as well as other partners.

In April 2014, the MPA Statewide Leadership Team (Leadership Team) was convened as a standing body to ensure active and engaged communication among MPA network management partners. The Leadership Team has developed a work plan to guide their partnership efforts as capacity allows over the next three years and is comprised of strategic priorities, actions, and outcomes within four focal areas, as summarized below:

Outreach and Education

The Leadership Team recognizes the fundamental importance of improved outreach and education efforts for promoting awareness of the MPA network among California visitors and residents and cultivating long-term public engagement. Members of the Leadership Team have identified three Strategic Priorities that capture a wide variety of initiatives that will be used to achieve success:

1. Build support and durability of the MPA network goals and performance through improved public awareness
2. Create a broad understanding of regulations and increase compliance
3. Develop consistent messaging with state, federal, and other partners

Diverse communications strategies, enhanced collaboration within and among agencies and partners, and leveraging existing outreach efforts by local community organizations are crucial components of this focal area.

Enforcement and Compliance

The ultimate success of the MPA network will depend in large part on the degree to which regulations are followed. This requires public understanding of and compliance with MPA regulations paired with consistent enforcement. While targeted outreach efforts to consumptive users play an important role in cultivating compliance, this focal area identifies actions nested under one strategic priority:

1. Increase the capacity and effectiveness of enforcement.

The use of new technology, cooperative relationships among CDFW wardens and other enforcement agencies, and ensuring appropriate consequences for MPA violations are some of key initiatives in this focal area.

Research and Monitoring

Research and monitoring are essential for understanding the ecological and socioeconomic conditions and trends within MPAs and for evaluating performance of the statewide MPA network. These activities will also enhance our understanding of the network's contribution to bolstering ecosystem health and resilience in the face of changing ocean conditions. The following strategic priorities address these goals:

1. Establish a benchmark of ecosystem and socioeconomic conditions in all MLPA coastal regions that informs the initial regional network management reviews

2. Design and implement a partnerships-based monitoring program that assesses MPA network performance and informs multiple mandates

3. Develop an approach to statewide MPA network assessment that builds upon the monitoring framework to inform decisions at a statewide scale

Agency, academic, tribal and citizen scientists, as well as other experts, will play important roles in implementing the strategic priorities of this focal area.

Policy and Permitting

The policy and permitting aspects of MPA management are both overarching and fundamental to success. Continued coordination among regulatory agencies is required to maintain a cohesive vision for the MPA network into the future. Related actions are nested under the following strategic priorities:

1. Improve governance of MPA network through adaptive management

2. Integrate MLPA and MPA network goals, objectives and partnership-based management approach into relevant management documents

3. Enhance protection for MPA resources is provided in relevant resource agency authorizations

4. Identify marine resource enhancement/mitigation opportunities and impact avoidance strategies within or associated with MPAs

This work requires investment of entities whose mandates are specifically tied to MPAs as well as those more indirectly linked.

For more information about the MPA Statewide Leadership Team, please contact:

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Marine Protected Area (MPA) Statewide Leadership Team Work Plan FY 15/16 – 17/18

The MPA Statewide Leadership Team

California's MPA Statewide Leadership Team (Leadership Team) was convened with the goal of increasing communication and collaboration among agencies and partners to ensure the state is effectively managing the statewide MPA network. The Leadership Team includes state and federal agencies and other partners that play a direct or key support role in management of the network. MPA management encompasses a wide range of partners and activities that require active collaboration and communication to implement successfully. The state has recognized that no one agency or group has the knowledge, capacity or resources to effectively manage the MPA network in isolation. The Leadership Team focuses on leveraging resources and breaking down traditional silos to collaboratively address MPA network management which cuts across jurisdictions and mandates.

Members of the MPA Statewide Leadership Team, led by the Ocean Protection Council **(OPC)**, include: the Department of Fish and Wildlife (**DFW**), DFW Law Enforcement Division **(LED)**, Fish and Game Commission (**FGC**), California Coastal Commission (**CCC**), California State Lands Commission (**CCSLC**), Department of Parks and Recreation (**DPR**), State Water Resources Control Board (**SWRCB**), California Ocean Science Trust (**OST**), MPA Collaborative Network **(CN)**, and West Coast Regional Office of National Marine Sanctuaries **(ONMS)**.

Approach to the Work Plan

The Leadership Team has identified the following focal areas as key to successful management of MPAs: Outreach and Education, Research and Monitoring, Enforcement and Compliance and Policy and Permitting. Active, sustained engagement in each of these focal areas is integral to achieve the goals of the Leadership Team. In practice, this means directing the work of the Leadership Team by identifying shared strategic priorities, key actions and outcomes. A key tool for this is the creation of a work plan that was identified as a key task in "The California Collaborative Approach: Marine Protected Areas Partnership Plan"[1]. The work plan covers a three year period beginning in 2015 and is a key tool in directing MPA management and holding members accountable for identified outcomes.

Work Plan Notations and Acronyms

* Indicates responsible agency will contract or award a grant to lead efforts to complete key action

"Agency" refers to federal, state, tribal, and local authorities.

Parks and Recreation Commission **(PRC)** Parks Online Resources for Teachers and Students **(PORTS)**

California Natural Resources Agency **(CNRA)**

Marine Life Protection Act **(MLPA)** Marine Managed Areas Improvement Act **(MMAIA)**

California Seafloor and Coastal Mapping Program (**CSCMP**)[2] California Environmental Quality Act **(CEQA)**

U.S. Integrated Ocean Observing System's Central and Northern California Ocean Observing System (**CeNCOOS**)[3]

U.S. Integrated Ocean Observing System's Southern California Ocean Observing System (**SCOOS**)[4]

Southern California Coastal Water Research Project (**SCCWRP**)[5]

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[1] http://www.opc.ca.gov/2010/03/mapping-californias-seafloor-2/

[2] http://www.opc.ca.gov/2010/03/mapping-californias-seafloor-2/

[3] http://www.cencoos.org/

[4] http://www.sccoos.org/

[5] http://www.sccwrp.org/Homepage.aspx

Focal Area: Outreach and Education (page 1-3)

Strategic Priority 1 - Build support and durability of the MPA network goals and performance through improved public awareness					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
1.1 Create statewide outreach and education plan	1.1.1 Engage MPA Partners (NGOs, tribes, agencies) in discussion of best practices in MPA messaging	MPA partners, including MPA Collaborative Network members, play an active role in ongoing development of messaging efforts and strategies	MPA Statewide Leadership Team	OPC, CN	2016
	1.1.2 Compile and maintain inventory of MPA messaging and materials created by agency and non-agency partners	MPA partners, including MPA Collaborative Network members, have online access to a comprehensive inventory of MPA messaging and available resources (e.g. brochures, sign templates, etc.) developed by state, federal and NGO partners and can easily contribute to the inventory	MPA Statewide Leadership Team	OPC*, CN	2016
	1.1.3 Identify priority audiences, audience-specific messages and outreach methods, and who will do the outreach	MPA partners, including MPA Collaborative Network members, contribute and have access to recommendations on how to maximize the effectiveness of their outreach to different audiences	MPA Statewide Leadership Team	OPC*, CN	2016
	1.1.4 Identify opportunities to insert messaging into related, non MPA-specific efforts	Existing programs increase avenues for MPA messaging to a broad constituency without requiring additional investment from MPA SLT members	MPA Statewide Leadership Team	OPC*	2016
	1.1.5 Implement outreach and education plan	Agencies and external partners work from a coordinated education and outreach strategy, improving the reach and effectiveness of MPA outreach and education	MPA Statewide Leadership Team	OPC*	2016
1.2 Create MPA-focused outreach materials and host or participate in events	1.2.1 Produce printed outreach materials	Agency partners work with the MPA Collaborative Network members to continue producing locally specific materials	MPA Statewide Leadership Team	OPC	2016
		Printed materials are readily available at key locations used by consumptive users (e.g. harbors, tackle shops, etc.)	MPA Statewide Leadership Team	DFW	2016 - 2018
		Printed materials are readily available at key locations used by non- consumptive users (e.g. aquaria, dive shops, etc.)	MPA Statewide Leadership Team	DFW	2016 - 2018
	1.2.2 Produce video/web/phone app-based materials	Web and video material produced by partners is promoted through Thank You Ocean and other venues	MPA non-agency partners	OPC	2016 - 2018
	1.2.3 Hold or take part in outreach and education events	Promote events through list-serves, Thank You Ocean and other partner websites	MPA non-agency partners	OPC	2016 - 2018

Strategic Priority 2 - Create a broad understanding of regulations and increase compliance					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
2.1 Develop, install and maintain regulatory and interpretive signage statewide	2.1.1. Signage is properly permitted and installed in priority locations	Verification from grantee and contract manager of proper installation of signs	OPC, DFW, DPR, CCC and other non-agency partners	OPC*	2015
	2.1.2 Develop and implement project to install signs at remaining high and medium priority locations	Verification from grantee and contract manager of proper installation of signs	OPC, DFW, DPR, CCC and other non-agency partners	OPC*	2016
2.2 Continue production of DFW outreach materials focused on regulation compliance	2.2.1 Regionally specific materials including maps and booklets with regulations are produced	Outreach materials reach both traditional and non-traditional audiences	DFW, FGC	DFW	2016 -2018
	2.2.2 Continue to support production of additional products on different media (waterproof paper, mobile devices, etc.) to maximize reach and effectiveness	Outreach materials reach both traditional and non-traditional audiences	DFW, FGC	DFW	2016 -2018
2.3 Coordinate with private companies that produce products which provide information to the public about MPA regulations	2.3.1 Regularly monitor products (e.g. GPS layers, phone applications, etc.) to ensure accurate information is being disseminated	Commonly used GPS systems accurately depict MPAs	DFW, CN, LED	DFW	2015-2018

Strategic Priority 3 - Develop consistent messaging with state, federal and other partners					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
3.1 Create and distribute DFW Partnership Guide	3.1.1 Expand on existing DFW MPA Outreach Quick Reference Guide for partners	DFW Partnership Guide is posted widely on the web and provides specific detail on review process, available resources and roles of various partners and agencies in review of outreach materials	DFW, OPC and other non-agency partners	DFW	2016
3.2 DPR effectively disseminates MPA messaging and actively engages in MPA management support activities	3.2.1 Update webpage on "state underwater parks"	DPR website explains the department's history in identifying special underwater areas and how the term "underwater park" is no longer applicable since the MMAIA. Also includes link to DFW MPA webpage	DPR, OPC	DPR	2014
	3.2.2 Provide MPA training to staff and docents using a "train the trainer" model	OPC provides trainer and training materials developed in partnership with MPA partners and Collaborative members to coastal districts as requested	DPR, OPC	DPR	2015

	3.2.3 Develop MPA-specific curriculum for Parks Online Resources for Teachers and Students (PORTS) by leveraging existing materials	Existing coastal PORTS programs use MPA curriculum which is currently under development	DPR, DFW, OPC	DPR	2015
	3.2.4 Engage with Division of Boating and Waterways staff to identify opportunities to insert MPA messaging into existing outreach campaigns	MPA messaging is inserted in at least one ongoing Boating and Waterways outreach campaign	DPR, OPC	OPC	2016 - 2018
3.3 Create and distribute a map of California waters that includes all protected areas (state and federal)	3.3.1 Collect map layers of MPAs, Areas of Special Biological Significance (ASBS), National Estuarine Research Reserve (NERRs), National Marine Sanctuaries (NMSs), etc.	Agencies and the public can view the distribution of all protected areas in California in one place for the first time	DFW, DPR, OPC, OST, SWRCB	OST	2016
	3.3.2 Determine and distribute map showing state waters that receive full protection (e.g., % coverage of SMRs) and some protection (i.e., % coverage of all other protected areas)	The state and public have a more complete understanding of the percentage of CA state waters and coastal areas that are protected	DFW, DPR, OPC, OST, SWRCB	OST	2017
3.4 ONMS effectively disseminates MPA messaging and actively engages in MPA management support activities	3.4.1 Communicate and depict Federal/State jurisdictions to clarify their complementary nature	Explanatory infographic or other messaging concept is broadly distributed to state and federal agencies as well as public audiences to ensure types of allowed use are clearly understood	MPA Statewide Leadership Team	OPC	2017
	3.4.2 Provide MPA training to staff and docents	OPC provides trainer and training materials as requested to ensure ONMS staff and docents have accurate and updated information about the state's MPA network	ONMS, OPC	OPC	2015
3.5 Effectively disseminate MPA messaging through OPC	3.5.1 Update content and structure of OPC website to better reflect current MPA programs and partnerships, ensuring consistency with partner web pages by using links where appropriate	OPC website hosts or links to relevant documents related to the design, designation, implementation and management of the MPA Network	MPA Statewide Leadership Team	OPC	2016
		OPC website describes OPC's current role in MPA management and highlights current and previous MPA projects	OPC	OPC	2016
		OPC website links to and describes partner agencies and organizations	OPC	OPC	2016
	3.52 Update content on CNRA website	CNRA website accurately describes current work of OPC and other key management agencies including DFW and DPR	OPC, DFW, DPR	OPC	2015
	3.5.3 Use Thank You Ocean Campaign to update constituents about MPA Collaboratives and significant MPA events	Thank You Ocean and MPA Collaboratives serve as conduits of information regarding MPA efforts	OPC	OPC	2015 - 2018
		Thank You Ocean website links to mpacollaboratives.org	OPC	OPC	2015
		Relevant MPA news is included in monthly Thank You Ocean newsletter and shared via Thank You Ocean social media platforms	OPC	OPC	2015 - 2018

Focal Area: Enforcement and Compliance (page 4)

Strategic Priority 1 - Increase capacity and effectiveness of enforcement					
Key Action	**Action Summary**	**Outcome Required/Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
1.1 Use technology and other tools to increase effectiveness and efficiency of enforcement resources in the field	1.1.1 Develop statewide Records Management System (RMS) to collect, organize and track citation data.	DFW implements an RMS to improve its ability to collect, store, and query law enforcement data in the field	DFW	LED	2016-2018
		DFW Submits AB 2402 report to the legislature on a feasibility study for electronic data management	DFW	DFW	2016
	1.1.2 Identify enforcement priority areas based on poaching hotspots, seasonal trends, potential for resource impact, level of use, and potential for violations	RMS allows accurate analysis of the enforcement efforts/needs for specific MPAs	DFW	LED	2016-2018
	1.1.3 Explore existing and emerging technologies and enforcement monitoring systems to enhance MPA enforcement	Regularly assess available technologies and deploy those with potential to enhance MPA enforcement	DFW	LED	2015-2018
1.2 Maintain and enhance cooperative enforcement efforts with local, state and federal agencies	1.2.1 Promote interagency cooperation and collaboration for more effective MPA enforcement	Develop and facilitate MPA Collaborative Network programs for statewide MPA enforcement	LED, CN	CN	2015-2018
1.3 Increase judicial system and law enforcement officer awareness of the value of MPAs and knowledge of MPA regulations	1.3.1 Develop educational tools specifically for judges and district attorneys	Develop MPA enforcement video and distribute widely to court and enforcement officers	LED, CN	LED, CN	2016-2018
		Design and facilitate MPA training to be provided to the judicial system within all CA coastal counties	LED, CN	LED, CN	2016-2018
		Encourage designation of at least one wildlife/marine specialist within each DA office	LED, CN	LED, CN	2016-2018
	1.3.2 Hold Enforcement Trainings for court officers	Hold at least one training in each county and conduct training effectiveness evaluations	LED, CN	LED, CN	2015-2016
1.4 Plan and conduct an LED Needs Assessment to determine if they have the resources to effectively enforce MPA regulations	1.4.1 Identify and address LED personnel needs for MPA enforcement	Identifying appropriate staffing levels and equipment requirements for existing and anticipated future needs, including recruiting officers from diverse communities	DFW	LED	2016 - 2018
	1.4.2 Identify and address LED equipment needs for MPA enforcement	Identify funding source(s) to purchase items needed for MPA enforcement	DFW, OPC	LED	2016 - 2018

Focal Area: Research and Monitoring (page 5 – 8)

Strategic Priority 1 - Establish a benchmark of ecosystem and socioeconomic condition in all MLPA coastal regions that informs the initial five-year regional MPA network management reviews (management reviews)					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
1.1 Identify and pursue opportunities to bring additional results to bear on establishing a benchmark of conditions in each region (i.e., projects and programs outside the official MPA monitoring programs)	1.1.1 Coordinate state and federal entities to incorporate relevant oceanographic and physical habitat data and results	CSCMP spatial data inform management reviews	OST	OST	2015
		CeNCOOS, SCOOS, and other partners' oceanographic data inform management reviews	OST	OST	2015
	1.1.2 Coordinate with SCCWRP and member agencies to incorporate relevant water quality data and results	SCCWRP's Bight Regional Monitoring Program data inform management reviews	OST, SCCWRP	OST	2015-2018
	1.1.3 Coordinate with agency, tribal, academic and citizen scientists to ensure relevant scientifically robust datasets are incorporated	Relevant datasets from agency, academic, tribal and citizen scientists are incorporated as appropriate into management	OST	OST	2015-2018
1.2 Develop State of the Region assessments to inform management reviews	1.2.1 Synthesize results and explain methodology of each baseline program and other monitoring efforts in the regions to build a snapshot of baseline conditions for each region	Ensure that the monitoring programs and results are cohesive, align with program purposes, and realize value beyond MPAs	DFW, OPC, OST	OST	2015-2018
		MPA monitoring results and reporting in the North Coast incorporate traditional ecological knowledge	DFW, OPC, OST	OST	2017
		Build a more comprehensive understanding of ecosystem condition and trends to support management decisions and inform the approach to long-term monitoring	DFW, OPC, OST, FGC	OST	2015-2018
		Information sharing among agencies and tribal governments results in a common understanding of ecosystem condition and trends	DFW, OPC, OST, FGC	OST	2015-2018
1.3 Engage with California's diverse ocean communities to share results from the baseline programs	1.3.1 Share results of baseline monitoring broadly through a variety of venues, including community meetings and the Western Society of Naturalists (WSN) Annual Meeting	Diverse constituencies, including scientists, fishing communities, tribes, and decision makers see baseline monitoring results as credible, accessible, and useful for management	DFW, OPC, OST, FGC	OST	2015-2016
	1.3.2 Maintain communication with California's ocean community and tribes, including through the MPA Collaboratives, and encourage contributions to oceanspaces.org	Build trust in MPA monitoring results before and after they are released	DFW, OPC, OST	OST	2015-2018
		Tribal governments are engaged in the monitoring program	DFW, OPC, OST	OST	2015-2018

Strategic Priority 2 - Design and implement a partnership-based monitoring program that assesses MPA network performance and informs multiple mandates					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
2.1 Align marine and water quality protected area (i.e., ASBSs, MPAs) monitoring programs to leverage resources, capacity and expertise across mandates and jurisdictions	2.1.1 Compare goals for ASBS and MPA monitoring programs and identify potential areas of overlap	Evaluation of whether the two programs aim to meet similar objectives or if there are discrepancies	OST, SWRCB	OST	2016
		Agencies involved in ASBS & MPA monitoring better understand goals of each other's programs	OST, SWRCB	OST	2016
	2.1.2 At a regional scale, review monitoring plans, reports and/or work plans to identify overlaps in program components	Map illustrates where ASBSs and MPAs are co-located and where data for each monitoring program has been collected	OST, SWRCB	OST	2015-2016
		Internal document identifies overlaps in requirements, methodology, funding sources, and personnel	OST, SWRCB	OST	2015-2016
		Highlight overlapping areas with potential for collaboration between the two programs	OST, SWRCB	OST	2015-2016
	2.1.3 Assess whether current structure of ASBS and MPA monitoring programs hinders or limits progress in achieving program goals	Deficiencies or problematic components in the two programs are identified	OST, SWRCB	SWRCB	2016
		Ways to address identified impediments are identified	OST, SWRCB	SWRCB	2016
	2.1.4 Develop and begin to implement interagency strategy to resolve any inconsistencies between monitoring programs that hinder accomplishment of program goals	Agencies involved in ASBS and MPA monitoring improve collaborative efforts	OST, SWRCB	OST	2016-2017
2.2 Align fisheries and MPA monitoring to leverage resources, capacity and expertise across mandates	2.2.1 Prioritize and align data collection and approaches that can inform both 1) essential fisheries information needed for stock assessments and fisheries management decisions, and 2) ecological information needed to assess the condition and trends of marine ecosystems	Key indicators, metrics, and datasets that can inform both fisheries and MPA management at multiple scales are identified	DFW, OST, OPC	DFW	2015-2016
		Focal MPAs where data collection could inform both MPA and fisheries management are identified	DFW, OST, OPC	DFW	2016-2017
2.3 Develop and adopt a comprehensive data and information management plan for MPA monitoring that leverages existing technology solutions and ensures long-term, public accessibility	2.3.1 Work with data management experts to identify opportunities and develop a written plan to leverage existing technology solutions	Adopted plan is cost-effective and feasible to implement	DFW, OST	OST	2015
		MPA monitoring data and results are easily accessible and curated for long-term, public accessibility	DFW, OST	OST	2015-2018
	2.3.2 Implement plan as part of long-term monitoring	Plan is added as appendix to regional long-term monitoring work plan	DFW, OPC, OST	OST	2015-2018

2.4 Develop an MPA Monitoring Plan for the North Coast region to be submitted to the Fish & Game Commission for consideration as an appendix to the MLPA Master Plan	2.4.1 Identify metrics that consider management and community priorities, and are informed by results from the North Coast MPA Baseline Program	Monitoring metrics are based on the best available science and reflect management and community priorities	DFW, OST	OST	2017
	2.4.2 Develop an inventory of short- and long-term evaluation questions	Monitoring program is designed to answer evaluation questions	DFW, OST	OST	2016-2017
	2.4.3 Conduct peer-review process of technical components of plan	Monitoring approaches identified by plan are scientifically rigorous and feasible	DFW, OST	OST	2017
2.5 Diversify monitoring collaborations and include multiple sources of knowledge (e.g. agency, academic, tribal, local) to broaden participation and deepen understanding of MPA network and relevant ocean conditions	2.5.1 Develop and begin to implement an approach for integrating multiple sources of knowledge (e.g., traditional ecological knowledge (TEK), ecological data, socioeconomic data)	Guiding document provides a framework for integrating traditional ecological knowledge with other sources of information into long-term monitoring statewide	OST	OST	2015-2016
		Data use guidelines for North Coast baseline monitoring results are complete and can be applied to long-term MPA monitoring activities	OST	OST	2015-2016
	2.5.2 Develop an inventory of relevant citizen science monitoring programs that exist statewide	Extent and capacity of existing citizen science monitoring programs informs approach to long-term monitoring in each region	OST	OST	2016-2018
Strategic Priority 3 - Develop an approach to statewide MPA network assessment (network assessment) that builds upon the monitoring framework to inform management decisions at a statewide scale					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
3.1 Increase alignment of research activities with state priorities, to increase usefulness for management decisions across agencies	3.1.1 Consider MPA network goals in state agency-contracted research on ocean issues and align research activities with these goals when feasible	Deliberate consideration of statewide MPA network goals in agency-contracted ocean/fisheries-related research	MPA Statewide Leadership Team	OST	2016-2018
3.2 Pursue MPA research and monitoring activities that have the potential to inform and/or align multiple management mandates and priorities	3.2.1 Identify and pursue opportunities for alignment of research activities with information needs for fisheries management	MPA network assessment informs fisheries management	DFW, OST	DFW	2016
	3.2.2 Incorporate monitoring approaches and strategies identified by the West Coast Ocean Acidification and Hypoxia (OAH) Science Panel	MPA and OAH monitoring activities are geographically and temporally aligned	OPC, OST	OPC	2016
		OAH research and modeling activities informs and are informed by MPA monitoring	DFW,OPC SAT	OST	2016-2018
	3.2.3 Engage regional experts to develop and recommend approaches for assessing impacts of climate change on ocean ecosystems and resources and evaluate how a changing climate may affect our ability to meet MPA management and policy goals	Long-term MPA monitoring produces data that contributes to our understanding of climate change impacts	DFW, OPC, OST	OST	2016-2018
		MPA monitoring and network assessment help determine climate change impacts to ecosystem structure and function	OPC, OST	OST	2016-2017

3.3 Develop and implement an ecological impact assessment tool to identify potential cumulative impacts to MPAs from research, monitoring and education activities to inform issuing Scientific Collecting Permits (SCP)	3.3.1 Develop a framework for an automated ecological impact assessment to help inform management decisions about issuing SCPs	OPC working group with DFW , DPR, FGC convened to clarify roles and responsibilities in SCP for marine areas adjacent to park units	DFW, DPR, OPC, FGC	OPC	2016
		Published manuscript that describes the assessment tool's purpose, function and components	DFW, OPC SAT	DFW	2015-2016
3.4 Develop a statewide monitoring approach document that is distinct from regional monitoring plans and work plans	3.4.1 Clarify respective roles and purposes for regional and statewide monitoring	Strengthened decision support for adaptive management	DFW, OPC, OST	OST	2016
	3.4.2 Develop guidelines for incorporating a broad range of data into statewide monitoring including information on management, outreach, education and other activities	Build efficiency into monitoring programs across state mandates	DFW, OST	OST	2015-2017
		MPA monitoring data (ecological, socioeconomic) are considered together with oceanographic monitoring and enforcement/compliance monitoring to build a more robust understanding of the state of the network	DFW, OST	OST	2015-2017
		Fisheries, coastal zone and water quality management both inform and are informed by MPA monitoring	DFW, OST	OST	2015-2017

Focal Area: Policy and Permitting (page 9 – 11)

Strategic Priority 1 - Improve governance of MPA network through adaptive management					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
1.1 FGC and PRC develop and convey process for receiving requests for changes to MPA network	1.1.1 Post guidance on relevant agency websites detailing appropriate process	Members of the public can easily access information that clearly articulates how, if, and when FGC and PRC will receive and evaluate proposals and hear discussion about potential changes to the MPA network, as well as the criteria used to determine if action by either commission is warranted	MPA Statewide Leadership Team	FGC, PRC	2017
1.2 Oversee and maintain effective MPA regulations	1.2.1 Adopt regulations that are clear accurate and enforceable	Regulatory ambiguities, inaccuracies, needs or enforcement challenges are addressed through the rulemaking process	MPA Statewide Leadership Team	FGC, DFW, DPR, PRC	2015 - 2018
1.3 Partner agencies identify emerging issues and develop recommendations to address them	1.3.1 MPA SLT serves as a forum for agency communication about emerging issues identified by staff or constituents that may require a response by more than one agency	Members of the MPA SLT raise emerging issues to staff at partner agencies and elevate them when appropriate, including at the biannual "MPA Milestones" meetings that all MPA SLT agency Directors attend	MPA Statewide Leadership Team	FGC, PRC	2015 - 2018
1.4 Assess pending agency regulations for potential impacts to MPAs	1.4.1 Partner agencies provide informal input to proposed regulations that may affect MPAs early in the process	Proposed new or revised regulations that could affect MPAs are brought to MPA SLT meetings for discussion prior to adoption	Coastal Regulatory Agencies (CCC, CSLC, FGC, DFW, DPR, PRC, SWRCB)	OPC	2015 - 2018
1.5 Clarify MPA network objectives	1.5.1 Conduct review of original intent regarding placement, design, and regulations of the MPA network	Coastal Regulatory Commissions have access to a comprehensive inventory that captures existing documentation regarding design considerations for each MPA in the network	FGC, CN, OPC, DFW	FGC, DFW	2018
	1.5.2 Assess whether stated goals and objectives of MPAs are compatible with the design considerations	FGC identifies any MPAs that may be out of alignment with the adopted design considerations	FGC, DFW	FGC, DFW	2018
1.6 Continue discussions with tribal governments about management	1.6.1 Respond to requests for information sharing and tribal consultations	Hold meetings with Tribal governments for the purpose of identifying areas of common ground and areas of disagreement that will help inform further discussion.	DFW, FGC, OPC	FGC, DFW	2015 - 2018

Strategic Priority 2 Integrate MLPA and MPA network goals, objectives and partnership-based management approach into relevant management documents					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
2.1 Update MLPA Master Plan (Master Plan)	2.1.1 Update language regarding MPA management review cycle	MLPA Master Plan update includes a clearly defined management review cycle that is explicitly connected to adaptive management of the MPA network	DFW, OPC, FGC	DFW	2015

	2.1.2 Align monitoring section with other relevant documents	Monitoring section of the MLPA Master Plan is aligned with the existing MPA monitoring framework and regional monitoring plans	DFW, OPC, OST, FGC	DFW	2015
2.2 Insert relevant content into MLMA Master Plan update	2.2.1 Describe role and value of partnerships	Relevant sections of the MLMA Master Plan update (such as development of FMPs, assessing impacts on non-consumptive users, and public involvement strategy) include language about partnerships	DFW, FGC, OPC	DFW	2016 - 2018
	2.2.2 Highlight value of MPA monitoring data	MLMA Master Plan update references MPA monitoring data in relevant contexts	DFW, FGC, OPC, OST	DFW	2016 - 2018
2.3 As SWRCB planning and policy documents are updated, insert relevant content	2.3.1 Integrate considerations of the MPA network during development of Once Through Cooling (OTC) policy amendment where relevant	Adopted amendment to SWRCB OTC Policy includes relevant references to MPA network goals, objectives, and partnership-based management	OPC, SWRCB	SWRCB	2016
2.4 Insert relevant content into agency Strategic Plan updates	2.4.1 CSLC Strategic Plan update reflects CSLC commitments regarding MPAs	Relevant portions of the CSLC Strategic Plan reference MPAs and CSLC's specific role with respect to MPA management	OPC, CSLC	CSLC	2015
	2.4.2 CCC Strategic Plan update reflects CCC commitments regarding MPAs	Relevant portions of the CCC Strategic Plan reference MPAs and CCC's specific role with respect to MPA management	OPC, CCC	CCC	2018
Strategic Priority 3 – Enhanced protection for MPA resources is provided in relevant resource agency authorizations					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
3.1 Create tools to improve and highlight inter-agency coordination	3.1.1 Conduct inventory of existing interagency MPA coordination procedures	White paper outlining and summarizing: legislative or policy foundations for special consideration of MPAs, current agency practices, and recommendations to improve communication and coordination is created and distributed to agency staff	CSLC, CCC, SWRCB, OPC	OPC	2015
		Public document discussing how agencies coordinate is broadly distributed to relevant stakeholders	OPC	OPC	2015
3.2 Improve consistency in approach to analyzing impacts of projects to MPAs	3.2.1 Develop internal interagency coordination guidance document for staff use	Interagency coordination document includes an identified MPA point of contact for each agency	OPC	OPC	2015 – 2016
	3.2.2 Guidance document for using CEQA for MPAs	Develop guidance document for state agencies that serve as lead for CEQA review which includes broadly applicable suggestions on avoiding and minimizing impacts to MPAs	MPA Statewide Leadership Team	OPC	2017
	3.2.3 Draft MPA-specific guidance for potential inclusion in next Office of Planning and Research CEQA guideline update	CEQA guidelines require lead agencies to consider factors such as sediment re-suspension, invasive species introduction, substrate disturbance, noise effects on living organisms, and water quality impacts when determining the significance of project impacts to MPAs	MPA Statewide Leadership Team	OPC/CNRA	2018

Strategic Priority 4 - Identify marine resource enhancement/mitigation opportunities and impact avoidance strategies within or associated with MPAs					
Key Action	**Action Summary**	**Outcome Required/ Performance Indicator**	**Responsibility**	**Lead Responsibility**	**Completion Date**
4.1 Develop knowledge base from existing data regarding marine resource enhancement, mitigation, and impact avoidance strategies pertinent to MPAs	4.1.1 Review MPA monitoring results to identify areas that may benefit from marine resource enhancement, mitigation, or impact avoidance strategies	Develop regional lists and/or maps that identify opportunities for marine resource enhancement, mitigation, or impact avoidance strategies in the MPA network	DFW, OST, OPC	OST	2016
	4.1.2 Consult with local MPA Collaboratives about opportunities for marine resource enhancement, mitigation, or impact avoidance	Regional lists and maps developed under 4.1.1 depict opportunities identified by local MPA Collaboratives	DFW, OST, OPC, CN	OPC and CN	2016
	4.1.3 Inventory projects related to marine resource enhancement, mitigation and impact avoidance strategies that could benefit the MPA network	Regional lists identify successful/unsuccessful projects as well as projects that require additional funding to reach completion	DFW, DPR, SWRCB, CSLC, OPC, OST, CCC	OPC	2016
4.2 Use regulatory/policy tools to carry out marine resource enhancement, mitigation, or impact avoidance strategies	4.2.1 Identify opportunities for marine resource enhancement, mitigation, or impact avoidance strategies in current regulatory/policy requirements at participating MPA SLT agencies	Create internal document summarizing relevant regulatory/policy requirements relevant to marine resource enhancement, mitigation, or impact avoidance strategies	DFW, CSLC, CCC, SWRCB, OPC	OPC	2017
4.3 Identify and support research projects on MPA mitigation	4.3.1. Utilize existing and promote new research to evaluate MPA mitigation projects	State agencies on the Resources Agency Sea Grant Advisory Panel (RASGAP) assert the importance of funding research proposals that assess potential MPA mitigation strategies	CSLC, CCC SWRCB, DFW, OPC	OPC	2016 - 2018

CALIFORNIA OCEAN PROTECTION COUNCIL

John Laird, Secretary for Natural Resources, Council Chair
Matt Rodriquez, Secretary for Environmental Protection
Gavin Newsom, Lieutenant Governor, State Lands Commission Chair
Fran Pavley, State Senator
Bill Quirk, State Assemblymember
Geraldine Knatz, Public Member
Michael Brown, Public Member

Resolution of the California Ocean Protection Council regarding the MPA Statewide Leadership Team and Work Plan FY 15/16 -17/18

Adopted on September 22, 2015

WHEREAS, California has implemented an effectively managed statewide network of marine protected areas (MPAs) as a key management tool for supporting the natural diversity and abundance of marine life and increasing the resilience of ecosystems against impacts, including changing ocean conditions associated with climate change; and

WHEREAS, California's network of MPAs spans over 1100 miles of coastline and crosses multiple jurisdictions of state and federal agencies; and

WHEREAS, California is transitioning from the planning and implementation to the management phase for the network of MPAs designated under the Marine Life Protection Act through a science-based stakeholder driven process; and

WHEREAS, the California Ocean Protection Council (OPC) as the policy lead for MPAs brought together leadership from state agencies and other partners to develop a collaborative approach to managing MPAs called the "The California Collaborative Approach: Marine Protected Areas Partnership Plan" (Partnership Plan); and

WHEREAS, the Partnership Plan was formally endorsed by both the OPC and the Fish and Game Commission (FGC); and

WHEREAS, the Secretary for Natural Resources has designated the MPA Statewide Leadership Team, comprised of OPC, FGC, Department of Fish and Wildlife, Ocean Science Trust and other partners, who have significant statewide authority affecting MPAs to ensure a coordinated and effective approach to MPA network management; and

WHEREAS, the MPA Statewide Leadership Team serves as a standing body to ensure active and effective coordination and communication related to MPA management and will receive notification from all team members when their agency is proposing regulatory or other action that may affect the MPA network; and

WHEREAS, the MPA Statewide Leadership Team has created a work plan that reflects shared priorities among the members in four focal areas that are required for successful MPA network management which include: outreach and education; enforcement and compliance; research and monitoring; and policy and permitting; and

WHEREAS, the “MPA Statewide Leadership Team Work Plan FY 15/16 – 17/18" emphasizes a continued partnership-based approach to MPA management, that includes leveraging resources, continued strong communication and collaboration with tribal and non-governmental partners and active engagement in all of the four focal areas; and

WHEREAS, the MPA Statewide Leadership Team is actively engaged with tribal and non-governmental partners throughout the state including the MPA Collaborative Network to ensure local priorities are reflected in the work plan and their activities;

NOW, THEREFORE, the California Ocean Protection Council hereby:

RESOLVES to endorse the “MPA Statewide Leadership Team Work Plan FY 15/16 – 17/18” (Work Plan) which identifies strategic priorities, key actions and outcomes for effective MPA network management; and

FURTHER RESOLVES that through the implementation of the Work Plan, California’s natural resource agencies and supporting partners are committed to effective communication and coordination guided by mutual benefit, trust, transparency and accountability to support the effective management of the MPA network; and

FURTHER RESOLVES that OPC staff will continue to lead the MPA Statewide Leadership Team including completing periodic updates of the Work Plan to ensure it reflects emerging issues, learning from previous actions and is resulting in the continued successful management of the MPA network.

State of California

M e m o r a n d u m

Department of Justice
1515 Clay Street, 20th Floor
P.O. Box 70550
Oakland, CA 94612-0550

To : Sonke Mastrup
Executive Director
California Fish & Game Commission

Date: September 15, 2015
Telephone: (510) 622-2125
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From : Daniel S. Harris
Deputy Attorney General
Natural Resources Law Section
Office of the Attorney General – Oakland

Subject : Miscellaneous Legal Questions from Commission & Staff

* * * * * *

During the August 4-5, 2015 Fish and Game Commission meeting in Fortuna, a number of questions were raised by Commissioners and staff. This memo sets forth those questions and our responses.

QUESTION 1:

Can a third commissioner come and participate in Commission work committee meetings (e.g., Wildlife Resource Committee), or does that transform the meeting into a Commission meeting, regardless of how noticed? Any flexibility?

ANSWER 1:

The participation of a third commissioner would convert the work committee meeting into a Commission "meeting" that would have to meet the requirements of the Bagley-Keene Open Meeting Act ("Bagley-Keene" or "Act"), which governs meetings of state bodies.

The Fish and Game Commission is a "state body" subject to the Act because the Commission is "required by law [Fish & Game Code § 206] to conduct official meetings." (Gov. Code § 11121, subd. (a).) The Marine Resources Committee ("MRC") was created by the enactment of Fish & Game Code section 105. The Wildlife Resources Committee ("WRC") was created by the enactment of Fish & Game Code section 106. The MRC and WRC are each therefore a "state body" subject to Bagley-Keene because they were "created by statute" (and also to the extent they "exercise[] any authority of a state body delegated to it by that state body"). (See Gov. C. §§ 11121, subds. (a) and (b).)

Government Code section 11122.5, subdivision (a), defines "meeting" to include "any congregation of a majority of the members of a state body at the same time and place to hear, discuss, or deliberate upon any item that is within the subject matter jurisdiction of the state body to which it pertains." Section 11122.5(b)(1) states that "a majority of the members of a

state body shall not, outside of a meeting authorized by this chapter, use a series of communications of any kind, directly or through intermediaries, to discuss, deliberate, or take action on any item of business that is within the subject matter jurisdiction of the state body." Since the Act defines "meeting" to include "any congregation of a majority of the members of a state body…," the participation of a third commissioner (three commissioners constituting a majority of the Commission) would transform a MRC or WRC proceeding into a "meeting" which must comply with the Act.

However, if a third commissioner attended a committee meeting but did not participate (only observed), the prohibitions of the Act do not apply pursuant to a statutorily created exception. Government Code section 11122.5, subdivision(c)(6), expressly exempts "[t]he attendance of a majority of the members of a state body at an open and noticed meeting of a standing committee of that body, if the members of the state body who are not members of the standing committee attend only as observers." Assuming the MRC and WRC are each a "standing committee" under this section, which it would appear to be, then this section would not prohibit a third commissioner from observing a WRC or MRC meeting.

QUESTION 2:

Would an advisory group, ad hoc committee or work group formed to assist the WRC have to meet the requirements of Bagley-Keene? Specifically, would a newly formed two-tier predator policy advisory group (the first tier to develop a draft policy and the second to review and comment on it), consisting solely of 3 or more private stakeholders formed to help WRC develop a predator management policy, have to comply with Bagley-Keene?

ANSWER 2:

The analysis of the above question first requires us to determine whether such an advisory group would constitute a "state body" subject to the Act. Under Government Code section 11121, a body is a "state body" under the Act if it falls with any one of four categories. The only pertinent category here is section 11121, subdivision (c): "An advisory board, advisory commission, advisory committee, advisory subcommittee, or similar multimember advisory body of a state body, if created by formal action of the state body or of any member of the state body, and if the advisory body so created consists of three or more persons."

The new advisory group's function and structure here was formally approved by the Commission at its August 2015 meeting. Since it will have 3 or more persons, it is therefore a "state body" subject to the Act. Since the WRC was created by statute, both the WRC and the Commission are state bodies, so it does not matter which group formally created the new advisory group.

If other facts or circumstances exist such that the new group has not been formally created, then the Act would not preclude private stakeholders themselves from undertaking to

create a group that would perform the intended function of the proposed predator policy group and simply present its work to the WRC.

QUESTION 3:

Can the Commission have all of its meetings in Sacramento?

ANSWER 3:

No. Fish & Game Code section 206, subdivision (b), provides in pertinent part: "Meeting locations shall be accessible to the public and located throughout the state." The phrase "throughout the state" was added by 2013 legislation. Previously, the statute contained language requiring meetings located "throughout the state, with no more than two regular meetings to be held in Sacramento per year" or, in a later amendment, not more than "three" regular meetings in Sacramento. These legislative changes reflect a decreasing proscription on meetings in Sacramento. However, while "throughout the state" is not defined, a reasonable common sense interpretation would suggest that at least some of the "no fewer than eight regular meetings per calendar year" must be held outside of Sacramento. (Fish & Game Code § 206, subd. (a).)

Note that section 206 only applies to regular meetings of the Commission.

An argument could possibly be made that meetings should not be held outside of Sacramento if there is insufficient funding for travel for the Commission, including funding for department travel. However, that funding provision appears in section 206, subsection (a), pertaining to the number of meetings, and not in subsection (b), which pertains to the dates and locations of regular meetings. Additional research and analysis would be required to explore this possible option further.

QUESTION 4:

What happens if the public record is closed and findings are later adopted -- are those findings part of the administrative record, or does the record have to remain open (or leave the record open only to adopt formal findings)?

ANSWER 4:

There are three inter-related concepts implicated by the above question: (1) the public hearing (public opportunity to submit evidence); (2) the administrative record (the information on which a decision is made), and (3) the "record of the proceedings" (upon which "appellate review (by the Commission or the Superior Court) is based (*see, e.g.,* Code of Civil Procedure section 1094.6, subdivision (c).)

Closing of the record simply means the opportunity for interested persons to submit evidence has expired (*see, e.g.*, Fish & Game Code § 2074.2, subds. (a) and (b)); it does not preclude Commission discussion or deliberation of the evidence in the administrative record, or the adoption of findings (see, e.g., Fish & Game Code § 2074.2, subd. (d)). Thus, while we are not aware of any judicial decision directly on point, the nature of these three concepts compel the conclusion that the public hearing and administrative record may be closed and any findings later adopted (without re-opening the record), and the findings would be part of the "record of proceedings" should the matter be appealed (either from an ALJ to the Commission or from the Commission to the Superior Court).

The difference between the "administrative record" and the broader "record of proceedings" is demonstrated in the Administrative Procedure Act ("APA")(Government Code section 11400 et seq.). The "complete record of the proceedings" under Government Code section 11523 includes the pleadings, all notices and orders issued by the agency, any proposed decision by an ALJ, the final decision, transcripts of all proceedings, the exhibits admitted or rejected, the written evidence, and any other papers in the case. That is, the "record of proceedings" includes the "administrative record" and the decision (findings).

Similarly, on review of agency decisions under Code of Civil Procedure section 1094.5, the complete record of the proceedings "shall include the transcript of the proceedings, all pleadings, all notices and orders, any proposed decision by a hearing officer, the final decision, all admitted exhibits, all rejected exhibits in the possession of the local (or state) agency or its commission, board, officer, or agent, all written evidence, and any other papers in the case." (Code Civ. Proc., § 1094.6, subd. (c).)

In sum, for the types of proceedings before the Commission, as a practical matter, the findings will be included as part of the "record of proceedings" if a Commission decision is challenged, even though the findings are not technically part of the "administrative record." A party wishing to challenge the decision has the burden of producing an adequate record to demonstrate error and will surely insist that findings be included in the record of proceedings if they are contested (and if not included, the Commission can add them). (See Cal. Administrative Mandamus (CEB 3d Ed.), §§ 10.1-10.5.) Therefore, the public hearing and the administrative record may be closed without concern that the findings will be excluded "from the record" in the event the findings are later challenged.

QUESTION 5:

For APA matters referred by the Commission to an ALJ, must the public have an opportunity to comment on the ALJ's decision?

ANSWER 5:

Government Code section 11517 provides for hearings of a contested case by an ALJ. Upon receipt of the ALJ's decision, the Commission may do any one of several specified actions with respect to the ALJ's decision. (Gov. C. § 11517, subd. (c)(2)(A)-(E).) Only one of these -- rejecting the ALJ's decision and conducting a new hearing by the Commission under subdivision (c)(2)(E) -- speaks of providing an opportunity for the submission of evidence to the Commission and, even then, only an opportunity for the parties (as opposed to the "public") to present evidence. (Gov. C. § 11517, subd. (c)(2)(E)(ii).)

No provision of the APA or Bagley-Keene specifically provides for an opportunity for the public to comment on the ALJ's decision. To the contrary, Government Code section 11126, subdivision (c)(3), exempts a state body from the closed session prohibition of Bagley-Keene and allows it "to deliberate on a decision to be reached in a proceeding required to be conducted pursuant to [Government Code 11500 et seq.] or similar provisions of law."

This provision would authorize closed session consideration of the ALJ's decision, pursuant to Government Code 11517, with results publicly announced thereafter as with any other closed session item. Implicitly, therefore, this provision does not require any public comment. However, the Commission would not be precluded from hearing public comment if it so chose.

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STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Section 1.92 and Amend Section 703
Title 14, California Code of Regulations

Re: Transgenic Definition; Application and Fee

I. Date of Initial Statement of Reasons: June 17, 2015

II. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing:	Date:	August 5, 2015
	Location:	Fortuna
(b) Adoption Hearing:	Date:	October 8, 2015
	Location:	Los Angeles

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

The Department of Fish and Wildlife (Department) is proposing to amend the current definition of "*transgenic*" as defined in Section 1.92, Title 14, California Code of Regulations (CCR). Transgenic currently is defined as:

Genetically altered by introducing DNA (1) from another species or (2) through engineered endogenous constructs by means such as but not limited to recombinant DNA and RNA techniques to produce, gene addition, deletion, and doubling, or changing the position of the gene. This definition excludes DNA vaccines, individuals produced by the techniques of whole genome ploidy manipulation, and hybridization between closely related species, as in traditional hybridization.

The Department's review of the current definition of transgenic in Section 1.92 has revealed several vulnerabilities that could prevent the Commission and the Department from adequately protecting native fish, wildlife, and plants from the threat of predation by, competition with, or hybridization with potentially threatening transgenic animals. First, the definition is structured around a finite list of prohibited methods of genetic manipulation coupled with a finite list of

exceptions to that prohibition. However, because the list of prohibitions is exclusive in nature, any process of genetic manipulation not expressly prohibited is necessarily allowed under this definition. In a dynamic field in which innovation and the development of new techniques is commonplace, this static definition is ill-equipped to address changed circumstances and new approaches to genetic modification. Second, the current definition arguably limits the scope of transgenic to those individual animals whose DNA was directly altered and thus could be interpreted to exclude the progeny of those modified animals from the definition. If this interpretation were to prevail, a producer of transgenic animals could evade the protections set forth in Title 14, sections 671 and 671.1 (relating to restricted species permits), which incorporate the transgenic definition in Section 1.92, merely by withholding the first generation of animals subject to direct genetic manipulation and by importing, distributing, and selling only the progeny of that first generation. This would render the entire regulatory program for transgenic animals ineffective. Finally, as currently written, the definition excludes "hybridization between closely related species" but does not expressly indicate that to qualify for the exemption such hybridization cannot involve transgenic animals. As with the issue of progeny, if this interpretation were to prevail it would undermine the entire regulatory program by allowing any producer of transgenic animals to evade regulatory control merely by importing, distributing, and selling only those transgenic animals that had been hybridized with other lines of transgenic animals. For these reasons, the Department has concluded that the current definition of transgenic in Section 1.92 does not provide native fish, wildlife, and plants with sufficient protection from the threats posed by transgenic or genetically modified animals.

The regulatory protections of the state from detrimental animals are set forth in Title 14, Section 671:

> *671(a): "It shall be unlawful to import, transport, or possess live animals restricted in subsection (c) below except under permit issued by the department."*
>
> *671(b): "...Those species listed because they pose a threat to native wildlife, the agriculture interests of the state or to public health or safety are termed "detrimental animals" and are designated by the letter "D"..."*
>
> *671(c)(11): "Transgenic Aquatic Animals.*
> *Includes freshwater and marine fishes, invertebrates, amphibians, and reptiles (D).*
> *Note: Unpermitted transgenic aquatic animals are determined to be detrimental to native wildlife, therefore the exemption provided for in Fish and Game Code Section 2150(e) is not applicable."*

Fish and Game Code, §2150(e) "Any university, college, governmental research agency, or other bona fide scientific institution, as defined in regulations adopted by the commission, engaging in scientific or public health research is exempt from any permit requirement pursuant to this chapter except for animals whose importation, transportation, or possession is determined by the department, in cooperation with the Department of Food and Agriculture, to be detrimental or cause damage to agriculture, native wildlife, or the public health or safety."

The Department's proposed revision to the definition of transgenic addresses each of these vulnerabilities and, in so doing, seeks to enhance the ability of the Commission and the Department to protect native fish, wildlife, and plants. In developing this revised definition, the Department surveyed the statutes and regulations relating to transgenic and genetically modified animals from all forty-nine other states as well as the federal government. The proposed revision of Section 1.92 begins by defining transgenic to include all animals "whose genome has been deliberately altered, modified, or engineered, through means not possible under natural conditions, by insertion of a foreign gene or genes using genetic engineering methods." This general definition is supplemented by four subsections further defining the scope of the definition.

- First, subsection (a)(1) clarifies that an animal is transgenic if it contains any artificially transferred genetic material, even if that material is not directly "from another species" as required by the current definition.
- Second, subsection (a)(2) sets forth a non-exclusive list of examples designed to address some of the most common methods for genetic manipulation. By combining a broad, open-ended definition of transgenic with a non-exclusive list of examples, the revised definition would automatically cover any new or novel technique for genetic manipulation unless the Commission later amends the definition to expressly exclude it.
- Third, subsection (a)(3) includes an explicit statement that the "progeny of a transgenic animal or any animal that is the result of breeding involving transgenic animals is transgenic within the meaning of this section."
- Finally, subsection (a)(4) reiterates and refines provisions in the existing definition that indicate that animals subject to standard breeding and hybridization practices commonly used by fish hatcheries (when no transgenic animals are involved), whole genome ploidy manipulation, and therapeutic treatment with a DNA vaccine are not transgenic.

In Section 1.92 and Section 703, the Department proposes to add a narrowly circumscribed exemption and application procedure to cover certain transgenic aquatic animals (aquarium fish) that will be maintained in closed systems and not placed in the waters of the state and which the Department has determined pose no risk to native fish, wildlife, and plants.

To qualify for this exemption, the person or entity seeking to import, possess, distribute and sell transgenic aquatic animals within California must submit both an application, based on credible science, that complies with the application requirements of subsection 703(a)(3) and an application fee to cover the Department's costs incurred in processing the application. As an integral component of the application, the applicant must provide:

> (1) a detailed description of the methods by which the genome of the species has been altered;
> (2) a detailed analysis of the known or anticipated effects of the modification and of the potential risk to native fish, wildlife, and plants; and
> (3) a detailed description of the applicant's proposed importation, possession, distribution, and sale of the transgenic aquatic animals within the state.

For the exemption to apply, the Department must make a written determination—based on the information provided and any other credible scientific information—that the transgenic aquatic animals in fact pose no reasonably foreseeable risk to native fish, wildlife, or plants. The Department has concluded that the narrow eligibility requirements coupled with meaningful scientific review of the potential for harm to native fish, wildlife, or plants make this proposed exemption a reasonable compromise between the paramount need to protect native species and the reasonable desire of the public to have access to popular and harmless aquarium fish.

Once an applicant receives a written determination from the Department that the transgenic aquatic animal poses no reasonably foreseeable risk to native fish, wildlife, or plants, the applicant may import, possess, distribute, and sell the animal within the State. Wholesalers and retailers may operate under the determination issued to the applicant, provided that they possess a copy of that determination and written documentation to demonstrate they purchased the animal from the applicant. A consumer who purchases a transgenic aquatic animal may possess it without also possessing a copy of the Department's determination provided the animal is kept in a closed system and not placed in the waters of the state.

Proposal

The Department is proposing to amend the current definition of *"transgenic"* in Section 1.92 as follows:

(a) An animal whose genome has been deliberately altered, modified, or engineered, through means not possible under natural conditions, by insertion of a foreign gene or genes using genetic engineering methods.
(1) An animal is transgenic if its chromosomes contain artificially transferred genetic material from any other organism or a laboratory construct, regardless of whether the original source's genetic material was modified prior to insertion, or whether the originally transferred genetic material was inherited through normal reproduction.
(2) Methods of producing transgenic animals may include, but are not limited to, recombinant DNA and RNA techniques, cell fusion, micro- and macro-encapsulation, introduction of a foreign gene, or gene knock-in.
(3) Any progeny of a transgenic animal or any animal that is the result of breeding involving transgenic animals is transgenic within the meaning of this section.
(4) Notwithstanding subsection (a) above, an animal is not transgenic within the meaning of this section if:
(A) It is an aquatic animal produced through breeding, conjugation, fermentation, hybridization, in vitro fertilization, or tissue culture and no transgenic organisms are involved;
(B) It is an aquatic animal produced through whole genome ploidy manipulation; or
(C) The foreign gene or genes in the animal is the result of therapeutic treatment with a DNA vaccine.
(b) Notwithstanding subsection 671(c)(11), a transgenic aquatic animal is not detrimental, and therefore not subject to regulation under Section 671 and subsection 671.1(a)(8), if all of the following apply:
(1) It is a live tropical marine or freshwater animal that will not be utilized for human consumption or bait purposes and will be maintained in a closed system and not placed in waters of the state;
(2) The person or entity seeking to import, possess, distribute, and sell the transgenic aquatic animal in California has submitted to the department the application and fee specified in Section 703; and
(3) The department has determined in writing, based on the information provided pursuant to subsection (b)(2), and any other relevant credible scientific information in the possession of the department or submitted to the department, that the presence of the transgenic aquatic animal, as modified, within California poses no reasonably foreseeable risk to native fish, wildlife, or plants.

In addition, the Department proposes to amend Section 703 by adding a new subsection (a)(3) Determination that a Transgenic Aquatic Animal is not Detrimental, which includes an application procedure and an application fee. The contents of an application are specified and the nonrefundable fee is proposed to be set at $4,790. The fee was determined to cover the Department's costs to review such applications as provided in FGC 1050.

The amendment in Section 703 also establishes the effect of the Department's determination:

1. Once it receives a determination from the department of 'not detrimental', the applicant may import, possess, distribute, and sell the animal within the state provided that it possesses a copy of the department's determination.

2. Any wholesaler or retailer purchasing a transgenic aquatic animal from the applicant must also possess both a copy of the department's determination and written documentation to demonstrate that the wholesaler or retailer purchased the animal from the applicant.

3. Individuals purchasing a transgenic aquatic animal from the applicant or authorized wholesalers or retailers may possess the animal, without a copy of the department's determination or any other documentation, provided that the animal is maintained in a closed system and not placed in the waters of the state.

(b) Authority and Reference Sections from Fish and Game Code for Regulation:

Section 1.92: Authority cited: Sections 200, 202, 205, 210, 220, and 1050 Fish and Game Code. Reference: 1050 and 2271, Fish and Game Code.

Section 703: Authority cited: Sections 713, 1002, 1050, 1053, 1745, 2118, 2120, 2122, 2150, 2150.2 and 2157, Fish and Game Code. Reference: Sections 395, 396, 398, 713, 1050, 1053, 1745, 2116, 2116.5, 2117, 2118, 2120, 2125, 2150, 2150.2, 2150.4, 2151, 2157, 2190, 2193, 2271, 3005.5, 3007, 3503, 3503.5, 3511, 3513, 3950, 10500, 12000 and 12002, Fish and Game Code; and Title 50, Code of Federal Regulations, Parts 21.29 and 21.30.

(c) Specific Technology or Equipment Required by Regulatory Change: None.

(d) Identification of Reports or Documents Supporting Regulation Change: None.

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

No public meetings are scheduled prior to the notice publication. The 45-day public notice comment period provides adequate time for review of the proposed changes.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

No alternatives were identified.

(b) No Change Alternative:

The no change alternative would leave existing regulations in place.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the proposed regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. The proposed regulation is likely to have a positive effect on hobby and pet aquarium businesses within the State.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment: None.

(c) Cost Impacts on a Representative Private Person or Business:

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State: None.

(e) Nondiscretionary Costs/Savings to Local Agencies: None.

(f) Programs Mandated on Local Agencies or School Districts: None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code: None.

(h) Effect on Housing Costs: None.

VII. Economic Impact Assessment

The Department is proposing a regulation amending the definition of *"transgenic,"* i.e., genetically altered. Generally, transgenic aquatic animals, including genetically altered fish for aquarium use, are prohibited for import into the state under provisions in sections 671 and 671.1, Title 14, CCR. The purpose of the current limitations is to prevent the introduction of non-native, detrimental species. The new definition incorporates new scientific understanding of transgenic animals. An amendment in Section 703 enables an application to the Department for a finding of 'not detrimental' so that certain transgenic aquatic animals could be imported for aquarium hobbyists.

Although the number of aquarium fish which might be allowed under the new amendment is undetermined, it is only a small fraction of the market for pets, aquarium fish, or other species in the California market. An applicant must submit to the Department credible scientific information which, along with any other available data, will be evaluated by the Department. The Department must make a determination that the presence of the transgenic aquatic animal, as modified, within California poses no reasonably foreseeable risk to native fish, wildlife, or plants in order to label the particular aquatic animal as "not detrimental" and therefore not subject to Section 671 and subsection 671.1(a)(8).

In accordance with Section 1050, Fish and Game Code, the Commission may establish a fee in an amount sufficient to recover all reasonable administrative and implementation costs of the Department and Commission. The following table

details the projected cost of a typical application in accordance with the proposed regulation changes.

Cost Description	Hours	Rate[1]	Total Costs
Fisheries Branch Costs			
Transgenic Application Review			
Senior Environmental Scientist (Supervisor)	16	$ 78.95	$ 1,263
Environmental Program Manager	8	$ 91.30	$ 730
CEA - Branch Chief	8	$ 100.90	$ 807
OGC - Senior Staff Counsel	8	$ 93.42	$ 747
Per Application Subtotal			$ 3,548
Overhead		35%	$ 1,242
Total Costs			$ 4,790

Notes: [1] Rate includes salary and benefits.
Sources: California Department of Human Resources, California Department of Fish and Wildlife Accounting Branch, Fisheries Branch.

Therefore, the Commission proposes to add a new, nonrefundable application fee to cover the administrative costs of a Department determination in the amount of $4,790, to Section 703, Title 14, CCR, Miscellaneous Applications, Tags, Seals, Licenses, Permits, and Fees.

Effects of the regulation on the creation or elimination of jobs within the State

The regulation is unlikely to affect the creation or elimination of jobs.

Effects of the regulation on the creation of new businesses or the elimination of existing businesses within the State

The regulation is unlikely to affect the creation or elimination of businesses.

Effects of the regulation on the expansion of businesses currently doing business within the State

Although the amendment will allow the importation, possession, distribution, and sale of aquatic animals determined “not detrimental” and therefore result in profits for participating businesses, the regulation is unlikely to affect the expansion of businesses because any potential increase is likely to be only a small fraction of the current market.

Benefits of the regulation to the health and welfare of California residents

The amendment is unlikely to affect the health and welfare of California residents.

Benefits of the regulation to worker safety

The regulation does not affect worker conditions or safety.

Benefits of the regulation to the State's environment

It is the policy of the State to encourage the conservation, maintenance, and utilization of the living resources under the jurisdiction and influence of the State for the benefit of all the citizens of the State. Current regulations protect these resources of the state by prohibiting the importation of non-native species which may be detrimental to native species. The proposed amendment allows for a scientific determination to be made by the Department that qualifying transgenic aquatic animals pose no reasonably foreseeable risk to native fish, wildlife, or plants.

Informative Digest/Policy Statement Overview

The Department's review of the current definition of *"transgenic"* in Section 1.92, Title 14, California Code of Regulations (CCR) has revealed several vulnerabilities that could prevent the Commission and the Department from adequately protecting native fish, wildlife, and plants from the threat of predation by, competition with, or hybridization with, potentially threatening transgenic species. The Department's proposed revision to the definition of transgenic addresses each of these vulnerabilities and, in doing so, seeks to enhance the ability of the Commission and the Department to protect native fish, wildlife, and plants.

It also includes an exemption process for a determination to be made by the Department to render a decision to label a particular transgenic aquatic animal (aquarium fish) as "not detrimental" and therefore not subject to Section 671 and subsection 671.1(a)(8), Title 14, CCR.

The Department is proposing the following regulatory changes:

- Delete the present definition of transgenic in Section 1.92.

- Add a new subsection (a) to Section 1.92 defining transgenic to include all animals "whose genome has been deliberately altered, modified, or engineered through means not possible under natural conditions, by insertion of a foreign gene or genes using genetic engineering methods." This definition is supplemented by four subsections further defining the scope of the definition, which include the following:

    - Subsection (a)(1) clarifies that an animal is transgenic if it contains any artificially transferred genetic material, even if that material is not directly "from another species."
    - Subsection (a)(2) includes a non-exclusive list of examples designed to address some of the most common methods for genetic manipulation.
    - Subsection (a)(3) includes an explicit statement that the "progeny of a transgenic animal or any animal that is the result of breeding involving transgenic animals is transgenic within the meaning of this section."
    - Subsection (a)(4) reiterates and refines provisions in the existing definition that indicate that animals subject to standard breeding and hybridization practices commonly used by fish hatcheries (when no transgenic animals are involved), whole genome ploidy manipulation, and therapeutic treatment with DNA vaccine are not transgenic.

- Add a new subsection (b) to Section 1.92 which includes a narrowly circumscribed exemption to cover certain transgenic aquarium animals subject to the following restrictions:

- The transgenic animals will be maintained in closed systems and not placed in the waters of the state; and
- the Department has determined the transgenic animals are “not detrimental” and pose no risk to native fish, wildlife, or plants; and
- to qualify for this exemption, the person or entity seeking to import, possess, distribute and sell transgenic aquatic animals within California must submit a letter of application, based on credible science; and
- to qualify for this exemption, the person or entity seeking to import, possess, distribute, and sell individual transgenic aquatic animals within California must pay a nonrefundable application fee.

- Amend Section 703 by adding a new subsection 703(a)(3) which describes the application process, requirements, and nonrefundable fee of $4,790 to cover the Department’s costs incurred in processing the application, and the Department’s findings.

Benefits of the Proposed Regulations

The proposed revisions to the definition of transgenic will improve the protection of the environment and the state’s fish, wildlife, and plant resources by providing a modern definition that accounts for future changes in genetic methods and eliminates potential loop holes associated with the progeny of transgenic animals or animals resulting from hybridization with transgenic animals. The new application and approval process for certain transgenic aquatic animals will allow the Department to thoroughly review relevant scientific data to determine there is no reasonably foreseeable risk to native fish, wildlife, or plants. If supported by credible scientific evidence, the Department may make a determination that the animal is not detrimental and therefore not subject to Section 671 and subsection 671.1(a)(8).

Evaluation of Incompatibility with Existing Regulations

The proposed regulations are neither inconsistent nor incompatible with existing State regulations. The Legislature has delegated authority to the Commission to adopt regulations for ornamental marine or freshwater plants and animals that are not utilized for human consumption or bait purposes and are maintained in closed systems for personal, pet industry, or hobby purposes (Fish and Game Code, Section 2271). The proposed regulations are consistent with current restricted species regulations in Section 671, Title 14, CCR. Commission staff has searched the California Code of Regulations and has found no other State regulations related to the use of transgenic species.

Regulatory Language

Section 1.92, Title 14, CCR is amended as follows:

§1.92. Transgenic.

~~Genetically altered by introducing DNA (1) from another species or (2) through engineered endogenous constructs by means such as but not limited to recombinant DNA and RNA techniques to produce, gene addition, deletion, and doubling, or changing the position of the gene. This definition excludes DNA vaccines, individuals produced by the techniques of whole genome ploidy manipulation, and hybridization between closely related species, as in traditional hybridization.~~

(a) An animal whose genome has been deliberately altered, modified, or engineered, through means not possible under natural conditions, by insertion of a foreign gene or genes using genetic engineering methods.

(1) An animal is transgenic if its chromosomes contain artificially transferred genetic material from any other organism or a laboratory construct, regardless of whether the original source's genetic material was modified prior to insertion, or whether the originally transferred genetic material was inherited through normal reproduction.

(2) Methods of producing transgenic animals may include, but are not limited to, recombinant DNA and RNA techniques, cell fusion, micro- and macro-encapsulation, introduction of a foreign gene, or gene knock-in.

(3) Any progeny of a transgenic animal or any animal that is the result of breeding involving transgenic animals is transgenic within the meaning of this section.

(4) Notwithstanding subsection (a) above, an animal is not transgenic within the meaning of this section if:

(A) It is an aquatic animal species produced through breeding, conjugation, fermentation, hybridization, in vitro fertilization, or tissue culture and no transgenic organisms are involved;

(B) It is an aquatic animal species produced through whole genome ploidy manipulation; or

(C) The foreign gene or genes in the animal is the result of therapeutic treatment with a DNA vaccine.

(b) Notwithstanding subsection 671(c)(11), a transgenic aquatic animal is not detrimental, and therefore not subject to regulation under Section 671 and subsection 671.1(a)(8), if all of the following apply:

(1) It is a live tropical marine or freshwater animal that will not be utilized for human consumption or bait purposes and will be maintained in a closed system and not placed in waters of the state;

(2) The person or entity seeking to import, distribute, possess, and sell the transgenic aquatic animal in California has submitted to the department the application and fee specified in Section 703.

(3) The department has determined in writing, based on the information provided pursuant to subsection (b)(2), and any other relevant credible scientific information in the possession of the department or submitted to the department, that the presence of

the transgenic aquatic animal, as modified, within California poses no reasonably foreseeable risk to native fish, wildlife, or plants.

Note: Authority cited: Sections 200, 202, 205, ~~210, and~~ 220, and 1050 Fish and Game Code. Reference: Sections ~~200-202, 205, 206, 210 and 220.~~ 1050 and 2271, Fish and Game Code.

Regulatory Text

Section 703, Title 14, CCR is amended as follows:

§703. Miscellaneous Applications, Tags, Seals, Licenses, Permits, and Fees.
(a). Applications, Forms and Fees for January 1 through December 31 (Calendar Year).

. . . [No changes to subsections 703(a)(1) through (2)]

(3) Determination that a Transgenic Aquatic Animal is not Detrimental
(A) The applicant shall apply in the form of a letter, on letterhead if an entity, for a department determination that a transgenic aquatic animal is not detrimental in accordance with Section 1.92 and shall include all of the following:
1. The name, mailing address, telephone number(s), and e-mail address of the person seeking to import, possess, distribute, and sell the transgenic aquatic animal or of the principal contact person if an entity seeks to import, possess, distribute, and sell the transgenic aquatic animal.
2. A detailed analysis based on credible science containing:
a. The common and scientific names of the species for which an exemption is sought.
b. A description of the life history of the species.
c. A description of the method(s) by which the genome of the species has been deliberately altered, modified, or engineered.
d. The known or anticipated effects of the genetic modification of the species.
e. An analysis of the potential risk to native fish, wildlife, or plants posed by the presence of the transgenic aquatic animal, as modified, within California.
f. A description of the applicant's proposed importation, possession, distribution, and sale of the transgenic aquatic animal within California.
3. Certification in the following language: I certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject the application to rejection, or the department determination to revocation, and to civil and criminal penalties under the laws of the State of California.
a. The original signature of the person, or principal contact person if an entity, seeking the determination.
4. The applicant shall submit a nonrefundable application fee of $4,790.
5. The applicant shall submit one paper copy, and an electronic copy (via email or other device as directed by department staff) containing all application materials, and the application fee, to the Fisheries Branch Chief at 830 S Street, Sacramento, CA 95811.
(B) Contents of the Department Determination
1. The department shall issue a determination in writing, based on the information provided by the applicant, and any other relevant credible scientific information in the possession of the department or submitted to the department.
2. The determination shall state whether:

a. The presence of the transgenic aquatic animal, as modified, within California is detrimental and subject to regulation under Section 671 and subsection 671.1(a)(8); or,
b. The presence of the transgenic aquatic animal, as modified, within California is not detrimental and poses no reasonably foreseeable risk to native fish, wildlife, or plants and is not subject to regulation under Section 671 and subsection 671.1(a)(8).
c. In making its determination, the department may impose reasonable conditions to ensure the proposed importation, possession, distribution, and sale of the transgenic aquatic animal within California is not detrimental.
d. The department may revoke or change its determination at any time upon newly-obtained information or circumstances involving said animal's detrimental impacts.
3. If the department identifies deficiencies in the application, requiring additional time or further review, the department shall reject the application and provide written notification of the identified deficiencies in the application to the applicant. No additional fee is required if the application, with required information, is resubmitted within one year of receipt of the original application.
(C) Effect of Department Determination
1. Once it receives a determination from the department that the transgenic aquatic animal poses no reasonably foreseeable risk to native fish, wildlife, or plants, the applicant may import, possess, distribute, and sell the animal within the state provided that it possesses on the premises or within the vehicle, if in transit, a copy of the department's determination.
2. Any wholesaler or retailer purchasing a transgenic aquatic animal from the applicant may possess, distribute, and sell the animal provided that it possesses on the premises or within the vehicle, if in transit, both a copy of the department's determination and written documentation to demonstrate that the wholesaler or retailer purchased the animal from the applicant.
3. Individuals purchasing a transgenic aquatic animal from the applicant or wholesalers or retailers authorized pursuant to subsection 2 of section 703(a)(3)(C) may possess the animal, without a copy of the department's determination or any other documentation, provided that the animal is maintained in a closed system and not placed in the waters of the state.

[No changes to subsections 703(b) and 703(c)]

Note: Authority cited: Sections 713, 1002, 1050, 1053, 1745, 2118, 2120, 2122, 2150, 2150.2 and 2157, Fish and Game Code. Reference: Sections 395, 396, 398, 713, 1050, 1053, 1745, 2116, 2116.5, 2117, 2118, 2120, 2125, 2150, 2150.2, 2150.4, 2151, 2157, 2190, 2193, 2271, 3005.5, 3007, 3503, 3503.5, 3511, 3513, 3950, 10500, 12000 and 12002, Fish and Game Code; and Title 50, Code of Federal Regulations, Parts 21.29 and 21.30.

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-Adoption Statement of Reasons)

Amend Section 1.93 and Amend Section 703
Title 14, California Code of Regulations

Re: Transgenic Definition; Application and Fee

I. Date of Initial Statement of Reasons: June 17, 2015

II. Date of Pre-Adoption Statement of Reasons: September 14, 2015

III. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: August 5, 2015
Location: Fortuna, California

(b) Adoption Hearing: Date: October 8, 2015
Location: Los Angeles, California

IV. Description of Modifications of Originally Proposed Language of Initial Statement of Purpose:

In accordance with Government Code §11346.8, the following changes to the regulatory language are sufficiently related to the original text that the public was adequately placed on notice that the changes could have resulted from the originally proposed regulatory action. The full text of the resulting amendments to Section 1.92 and Section 703 with the changes clearly indicated (attached) were made available to the public for at least 15 days before the adoption hearing. Any written comments received regarding the change must be responded to in the final statement of reasons.

Subsection 1.92(b)(1): The addition of the words “research purposes” clarifies that this is not a purpose for which an application can be made and is subject to regulation under Section 671.

Subsection 1.92(b)(2): The addition of the words “applicant, which may be a” clarifies that a person or entity may be an applicant.

Subsection 703(a)(3)(A)4.: The addition of the words “separate” and “per species of transgenic aquatic animal” clarifies that the application and nonrefundable fee apply to each ‘species’ inclusive of its progeny (lineage) for which a non-detrimental determination is being sought.

Subsection 703(a)(3)(B)2.c.: The addition of the words “to native fish, wildlife, or plants” clarifies what shall not be harmed.

Subsections 703(a)(3)(C): The addition of the words “its authorized agent” clarifies that an agent of the applicant may also import, possess, distribute, and sell the transgenic aquatic animal within the state.

Subsections 703(a)(3)(C)1.: The deletion of the words “it possesses on the premises or within the vehicle, if in transit” and the addition of the words “both the applicant and its authorized agent possess and provide within three business days, upon request by the department” removes the requirement that the applicant and it’s authorized agent must have the documentation in their immediate possession and allows for the documentation to be provided within a reasonable amount of time.

Subsection 703(a)(3)(C)2.: The addition of the word “import” clarifies that a wholesaler or retailer may legally import the approved transgenic aquatic animal in addition to possess, distribute, and sell the animal. The deletion of the words “it possesses on the premises or within the vehicle, if in transit” and the addition of the words “the wholesaler or retailer possesses and provides within three business days, upon request by the department” removes the requirement that the wholesaler or retailer must have the department’s determination and written documentation in their immediate possession and allows for the documentation to be provided within a reasonable amount of time. This provision (and the following subparagraph 3.) is also changed to clarify that the subject animal has actually been “originated” from the applicant.

Subsection 703(a)(3)(C)3.: For editorial purpose the lengthy reference to the subsection numbering is deleted and changed to simply “this section” as all requirements must be met by the applicant and its agents, etc., as set forth in the regulation.

V. Reasons for Modification of Originally Proposed Language of Initial Statement of Purpose:

These sufficiently related changes are based on further review of the regulatory text by the department, and the pre-notice recommendations of one potential applicant, which identified the need to further clarify the application process and the possession of documentation.

VI. Summary of Primary Considerations Raised in Opposition and in Support:

To this date, during the notice period the Commission has not received any communications.

REGULATORY TEXT

Section 1.92, Title 14, CCR is amended as follows:

§1.92. Transgenic.

~~Genetically altered by introducing DNA (1) from another species or (2) through engineered endogenous constructs by means such as but not limited to recombinant DNA and RNA techniques to produce, gene addition, deletion, and doubling, or changing the position of the gene. This definition excludes DNA vaccines, individuals produced by the techniques of whole genome ploidy manipulation, and hybridization between closely related species, as in traditional hybridization.~~

(a) An animal whose genome has been deliberately altered, modified, or engineered, through means not possible under natural conditions, by insertion of a foreign gene or genes using genetic engineering methods.

(1) An animal is transgenic if its chromosomes contain artificially transferred genetic material from any other organism or a laboratory construct, regardless of whether the original source's genetic material was modified prior to insertion, or whether the originally transferred genetic material was inherited through normal reproduction.

(2) Methods of producing transgenic animals may include, but are not limited to, recombinant DNA and RNA techniques, cell fusion, micro- and macro-encapsulation, introduction of a foreign gene, or gene knock-in.

(3) Any progeny of a transgenic animal or any animal that is the result of breeding involving transgenic animals is transgenic within the meaning of this section.

(4) Notwithstanding subsection (a) above, an animal is not transgenic within the meaning of this section if:

(A) It is an aquatic animal species produced through breeding, conjugation, fermentation, hybridization, in vitro fertilization, or tissue culture and no transgenic organisms are involved;

(B) It is an aquatic animal species produced through whole genome ploidy manipulation; or

(C) The foreign gene or genes in the animal is the result of therapeutic treatment with a DNA vaccine.

(b) Notwithstanding subsection 671(c)(11), a transgenic aquatic animal is not detrimental, and therefore not subject to regulation under Section 671 and subsection 671.1(a)(8), if all of the following apply:

(1) It is a live tropical marine or freshwater animal that will not be utilized for research purposes, human consumption, or bait purposes and will be maintained in a closed system and not placed in waters of the state;

(2) The applicant, which may be a person or entity, seeking to import, distribute, possess, and sell the transgenic aquatic animal in California has submitted to the department the application and fee specified in Section 703.

(3) The department has determined in writing, based on the information provided pursuant to subsection (b)(2), and any other relevant credible scientific information in the possession of the department or submitted to the department, that the presence of the transgenic aquatic animal, as modified, within California poses no reasonably foreseeable risk to native fish, wildlife, or plants.

Note: Authority cited: Sections 200, 202, 205, ~~210, and~~ 220, and 1050 Fish and Game Code. Reference: Sections ~~200-202, 205, 206, 210 and 220.~~ 1050 and 2271, Fish and Game Code.

REGULATORY TEXT

Section 703, Title 14, CCR is amended as follows:

§703. Miscellaneous Applications, Tags, Seals, Licenses, Permits, and Fees.
(a). Applications, Forms and Fees for January 1 through December 31 (Calendar Year).

. . . [No changes to subsections 703(a)(1) through (2)]

(3) Determination that a Transgenic Aquatic Animal is not Detrimental
(A) The applicant shall apply in the form of a letter, on letterhead if an entity, for a department determination that a transgenic aquatic animal is not detrimental in accordance with Section 1.92 and shall include all of the following:
1. The name, mailing address, telephone number(s), and e-mail address of the person seeking to import, possess, distribute, and sell the transgenic aquatic animal or of the principal contact person if an entity seeks to import, possess, distribute, and sell the transgenic aquatic animal.
2. A detailed analysis based on credible science containing:
a. The common and scientific names of the species for which an exemption is sought.
b. A description of the life history of the species.
c. A description of the method(s) by which the genome of the species has been deliberately altered, modified, or engineered.
d. The known or anticipated effects of the genetic modification of the species.
e. An analysis of the potential risk to native fish, wildlife, or plants posed by the presence of the transgenic aquatic animal, as modified, within California.
f. A description of the applicant's proposed importation, possession, distribution, and sale of the transgenic aquatic animal within California.
3. Certification in the following language: I certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject the application to rejection, or the department determination to revocation, and to civil and criminal penalties under the laws of the State of California.
a. The original signature of the person, or principal contact person if an entity, seeking the determination.
4. The applicant shall submit a separate ~~nonrefundable~~ application and nonrefundable fee of $4,790 per species of transgenic aquatic animal.
5. The applicant shall submit one paper copy, and an electronic copy (via email or other device as directed by department staff) containing all application materials, and the application fee, to the Fisheries Branch Chief at 830 S Street, Sacramento, CA 95811.
(B) Contents of the Department Determination
1. The department shall issue a determination in writing, based on the information provided by the applicant, and any other relevant credible scientific information in the possession of the department or submitted to the department.
2. The determination shall state whether:

a. The presence of the transgenic aquatic animal, as modified, within California is detrimental and subject to regulation under Section 671 and subsection 671.1(a)(8); or,
b. The presence of the transgenic aquatic animal, as modified, within California is not detrimental and poses no reasonably foreseeable risk to native fish, wildlife, or plants and is not subject to regulation under Section 671 and subsection 671.1(a)(8).
c. In making its determination, the department may impose reasonable conditions to ensure the proposed importation, possession, distribution, and sale of the transgenic aquatic animal within California is not detrimental to native fish, wildlife, or plants.
d. The department may revoke or change its determination at any time upon newly-obtained information or circumstances involving said animal's detrimental impacts.
3. If the department identifies deficiencies in the application, requiring additional time or further review, the department shall reject the application and provide written notification of the identified deficiencies in the application to the applicant. No additional fee is required if the application, with required information, is resubmitted within one year of receipt of the original application.
(C) Effect of Department Determination
1. Once it receives a determination from the department that the transgenic aquatic animal poses no reasonably foreseeable risk to native fish, wildlife, or plants, the applicant or its authorized agent may import, possess, distribute, and sell the animal within the state provided that ~~it possesses on the premises or within the vehicle, if in transit,~~ both the applicant and its authorized agent possess and provide within three business days, upon request by the department, a copy of the department's determination.
2. Any wholesaler or retailer purchasing a transgenic aquatic animal from the applicant or its authorized agent may import, possess, distribute, and sell the animal provided that ~~it possesses on the premises or within the vehicle, if in transit,~~ the wholesaler or retailer possesses and provides within three business days, upon request by the department, both a copy of the department's determination and written documentation to demonstrate that the animal that the wholesaler or retailer purchased ~~the animal~~ originated from the applicant or its authorized agent.
3. Individuals purchasing a transgenic aquatic animal that originated from the applicant, its authorized agent, or wholesalers or retailers as authorized by this section ~~pursuant to subsection 2 of section 703(a)(3)(C)~~ may possess the animal, without a copy of the department's determination or any other documentation, provided that the animal is maintained in a closed system and not placed in the waters of the state.

[No changes to subsections 703(b) and 703(c)]

Note: Authority cited: Sections 713, 1002, 1050, 1053, 1745, 2118, 2120, 2122, 2150, 2150.2 and 2157, Fish and Game Code. Reference: Sections 395, 396, 398, 713, 1050, 1053, 1745, 2116, 2116.5, 2117, 2118, 2120, 2125, 2150, 2150.2, 2150.4, 2151, 2157, 2190, 2193, 2271, 3005.5, 3007, 3503, 3503.5, 3511, 3513, 3950, 10500, 12000 and 12002, Fish and Game Code; and Title 50, Code of Federal Regulations, Parts 21.29 and 21.30.

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Sections 1.05, 1.53, 1.86, 7.00, 27.00, Subsections 2.00(b) and 2.00(c), 5.60(b), 7.50(b)(156.5) and 230(b)(1)(A); Add Sections 1.57 and 5.41, Subsections 5.80(j), and 7.50(b)(180.6); and Remove Subsection 5.81(d),
Title 14, California Code of Regulations
Re: Freshwater Sport Fishing Regulations

I. Date of Initial Statement of Reasons: May 20, 2015

II. Dates and Locations of Scheduled Hearings:

(a)	Notice Hearing:	Date:	August 5, 2015
		Location:	Fortuna
(b)	Discussion Hearing:	Date:	October 8, 2015
		Location:	Los Angeles
(c)	Adoption Hearing:	Date:	December 10, 2015
		Location:	San Diego

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

This Department proposal combines Department and public requests for changes to Title 14, California Code of Regulations (CCR), for the 2015 Sport Fishing Regulations Review Cycle. This proposal will clarify regulations for snagging, landlocked salmon, San Francisco and San Pablo Bays, Solano Lake, and reptiles. The proposed regulatory changes are needed to reduce public confusion and improve regulatory enforcement. Additionally, this proposal will add a new fishing restriction to protect sturgeon, and increase fishing opportunities on the Sacramento River.

The Department is proposing the following changes to current regulations:

Snagging Definition
Subsection 2.00(b) would be amended to further define snagging. The current snagging definition states that it is illegal to impale a fish in any part of its body **other than the mouth**. This makes it legal for anyone to keep a fish that has been hooked on the outside of the mouth, such as a hook that enters from the

lower jaw into the mouth or nose into the mouth. The proposal is to reword the definition to say **other than inside the mouth**. Subsections 2.00(b) and (c), and Section 1.05 will need to be amended for consistency.

Proposal: Amend Section 1.05, Angling, and subsections 2.00(b) and (c), Fishing Methods - General

Amend the regulations to clarify that it is illegal to take a fish not hooked on the inside of the mouth.

Landlocked Salmon Definition

Current regulations are inconsistent in their treatment of landlocked salmon. Kokanee salmon (*Oncorhynchus nerka*) are included in the definition of "Trout," while stocked, landlocked Chinook salmon are included in the definition of "Salmon," which also includes anadromous forms of salmon. Scientific evidence, including life history variation and behavioral differences, suggests the need for differing management strategies for these species. They should be separately defined and addressed in the freshwater sport fishing regulations. In addition, these new species definitions need to have associated bag and possession limits.

Proposal: Amend Section 1.86, Trout, and Section 7.00, District General Regulations; Add sections 1.57 and 5.41, Landlocked Salmon

This proposal creates a new definition for landlocked salmon which will include kokanee and landlocked Chinook salmon. The daily bag limit will be 5 fish and the possession limit will be 10 fish in a new Section 5.41 and not contained in Section 7.00.

Amend the District General Regulations to revise the references to "trout and salmon" to just "trout." Amend the daily bag and possession limits to reference the total number of trout or landlocked salmon in combination. This change is proposed to reduce public confusion with landlocked salmon versus anadromous salmon that are allowed only in the Section 7.50 Special Regulations since the General District Regulations has the take of anadromous salmon closed statewide.

Reptile Regulation Correction

A numbering error has been identified in Section 5.60, specifically subsections (b)(10) through (b)(14). The regulation incorrectly reads, "Species No. 9-13 have a limit of twenty-five (25) in the aggregate." It should read, "Species in subsections (10) through (14) have a limit of twenty-five (25) in the aggregate." Correcting the numbering mistake will alleviate confusion amongst sport fisherman and wildlife officers.

Proposal: Amend subsection (b) of Section 5.60, Reptiles

Correct the numbering errors in this section to reduce public confusion and enforcement issues.

Sturgeon Fishing Closure and Snagging Revision

Green sturgeon and white sturgeon (subadults and adults) are often stranded for long periods in the Yolo Bypass as well as the Toe Drain and Tule Canal upstream of Lisbon Weir. Some of those fish escape when environmental conditions change but others are rescued or succumb. Through catch-and-release, legal harvest, and poaching, anglers could take both species when stranded. The legal fishery on stranded fish is not sporting, reduces the benefit of rescue efforts, and reduces population spawning potential. Because green sturgeon is a threatened species and white sturgeon is a substantial management concern, addressing this issue is relatively urgent. Therefore, the Department is proposing to prohibit the take and possession of sturgeon in the Yolo Bypass as well as the Toe Drain and Tule Canal upstream of Lisbon Weir at any time.

Current regulations in subsection (d) of Section 5.80 state that a sturgeon must voluntarily take the bait or lure *in* its mouth. This language is proposed to be revised to read *inside* its mouth, to be consistent with proposed revisions to the snagging definition in Section 2.00.

Proposal: Add subsection (j) to Section 5.80, White Sturgeon and amend subsection (d) Methods of take.

Prohibit fishing for sturgeon in the Yolo Bypass Flood Control System to protect green and white sturgeon; Amend the regulations to clarify that it is illegal to take a fish not hooked on the inside of the mouth for alignment with the proposed snagging definition changes to Section 2.00.

Green Sturgeon Revision for Brevity

Take and possession of green sturgeon is prohibited by law. Section 5.81, Green Sturgeon, subsection (d) designates a special fishing closure for sturgeon in the Sierra and Valley District. This special fishing closure is also provided under Section 5.80, White Sturgeon. Because fishing for green sturgeon is prohibited statewide, this regulation is not needed in the regulations for Green Sturgeon.

Proposal: Amend Section 5.81, Green Sturgeon, to remove subsection (d).

Improves clarity and eliminates unnecessary regulatory language regarding the special sturgeon closure for sturgeon in the Sierra and Valley District.

Red Bluff Diversion Dam
Current regulations restrict fishing from 500 feet upstream to 150 feet below Red Bluff Diversion Dam (RBDD). RBDD is no longer operated as an irrigation diversion so the current restrictions about fishing near a dam are no longer needed. Boaters, recreationists, and fish are free to pass up and downstream of the area at will. The angling public is very interested in fishing in the immediate vicinity of the RBDD now that it is no longer in operation and the Sacramento River is not impounded by its gates. The proposal is to allow shore and boat angling above and below RBDD on the Sacramento River.

<u>Proposal: Amend Special Fishing Regulations subsection 7.50(b)(156.5), Sacramento River</u>

Remove the current fishing restriction above and below RBDD on the Sacramento River to increase angling opportunities in Tehama County.

Solano Lake
The proposal is to add Solano Lake to Section 7.50, *Alphabetical List of Waters with Special Fishing Regulations*. The original intent was for Solano Lake to be included in the Putah Creek special fishing regulations. That regulation applies to the stream reach from Solano Lake to Monticello Dam and does not include Solano Lake. Therefore, a new subsection needs to be added to Section 7.50.

<u>Proposal: Add subsection (b)(180.6), Solano Lake, to Section 7.50 Special Fishing Regulations</u>

Add a new regulation for Solano Lake to the Special Fishing Regulations. The daily bag and possession limit will be 0 (zero).

San Francisco and San Pablo Bays Clarification
Currently there are three sections dealing with the Ocean and San Francisco Bay District which describe regulations in different manners causing confusion for anglers and making enforcement of the regulations more difficult:

- Section 27.00 defines the Ocean and San Francisco Bay District as waters of the open coast and includes San Francisco and San Pablo Bays *"plus all their tidal bays, tidal portions of their rivers and streams, sloughs and estuaries"* between the Golden Gate Bridge and the Carquinez Bridge.

- Section 1.53 defines inland waters as all fresh, brackish and inland saline waters of the state, including lagoons and tidewaters upstream from the mouths of coastal rivers and streams. *Inland waters exclude the waters of San Francisco and San Pablo Bays downstream from the Carquinez*

Bridge, the tidal portions of rivers and streams flowing into San Francisco and San Pablo Bays, and the waters of Elkhorn Slough, west of Elkhorn Road between Castroville and Watsonville.

- Subsection 28.65(a) (which describes gear restrictions for fin fish) defines the area as San Francisco and San Pablo Bays between the Golden Gate Bridge and the west Carquinez Bridge, where only one line with not more than three hooks may be used.

The different definitions of the same geographic area cause confusion as to applicable method of take as well as which set of regulations apply to the waters being fished.

An angler is allowed to use any number of hooks and lines in ocean waters (Section 28.65). In Inland waters only one closely attended line with no more than three hooks may be used (Section 2.00). Under the current regulations, a person could argue that tidal portions of the Napa River were not Inland Waters and since subsection 28.65(a) did not include the tidal portions of river flowing into San Francisco and San Pablo Bays. Under this interpretation, they could use any number of lines and hooks to fish in the Napa River. This would restrict waters of San Francisco and San Pablo Bays to one line, then allow unlimited lines in the Napa River waters which were tidally influenced even though all inland waters are restricted to one line.

In addition, fishing regulations for Ocean Waters defined in Section 27.00 are different from Inland Waters as defined in Section 1.53. Since tidal influence cannot easily be determined, it is almost impossible to know which set of regulations apply in the tidally influenced waters. For instance is an undersized sturgeon caught in the Napa River a violation of Section 5.80 or Section 27.90?

To simplify the regulations and make these sections consistent, all three sections must use the same reference.

The proposal is to amend sections 27.00 and 1.53 to align with subsection 28.65(a) and remove the reference to tidal bays and tidal portions of rivers and streams from these two sections. As a result, inland waters will now include the tidal portions of rivers and streams flowing into San Francisco and San Pablo Bays which will be subject to the gear restrictions for inland waters where only one closely attended rod and line with no more than three hooks may be used.

<u>Proposal: Amend Section 1.53, Inland Waters, and Section 27.00, Ocean and San Francisco Bay Definition</u>

Amend the two regulations that define the San Francisco and San Pablo Bays to be consistent, reducing public confusion and enforcement issues. Remove

capitalized text before the note which is a printing error.

Fishing Contest Draw Dates
The current wording of subsection 230(b)(1)(A) designates specific dates for a drawing that is conducted annually by Department personnel to allocate Type A fishing contest permits in a fair manner. Dates are the second Friday of July for bodies of water north of the Tehachapi Mountains and the third Friday of July for waters south of the Tehachapi Mountains.

Specific designation of these dates can conflict with major fishing-related events that contest sponsors often need to attend (e.g., International Convention of Allied Sport fishing Trade – ICAST). Sponsors who must attend the ICAST show—an international conference of fishing gear manufacturers, media, and many others—cannot simultaneously attend the contest drawing, hindering the conflict resolution process for which the drawing is held.

The Department is proposing to amend the regulations to state that the contest drawings will be conducted in July and the dates will be determined by Department staff.

<u>Proposal: Amend subsection (b)(1)(A) of Section 230, Issuance of Permits for Contests Offering Prizes for the Taking of Game Fish</u>

Amend the regulations to change the current contest drawing dates to unspecified dates in July which will be determined by Department staff.

Minor Editorial Corrections for Clarity
In addition to the above proposals, minor editorial corrections are proposed to correct typographical errors and to improve regulation clarity.

Benefits of the Proposed Regulations
It is the policy of this state to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the state for the benefit of all the citizens of the State. In addition, it is the policy of this state to promote the development of local California fisheries in harmony with federal law respecting fishing and the conservation of the living resources of the ocean and inland waters under the jurisdiction and influence of the State. The objectives of this policy include, but are not limited to, the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use. Adoption of scientifically-based trout and salmon seasons, size limits, and bag and possession limits provides for the maintenance of sufficient populations of trout and salmon to ensure their continued existence.

The benefits of the proposed regulations are concurrence with Federal law, sustainable management of California's trout and salmon resources, and promotion of businesses that rely on recreational sport fishing in California.

(b) Authority and Reference Sections from Fish and Game Code for Regulation:

Authority: Sections 200, 202, 205, 215, 220, 240, 315, 316.5, and 2003, Fish and Game Code.

Reference: Sections 200, 205, 206, 215, 220 and 316.5, Fish and Game Code.

(c) Specific Technology or Equipment Required by Regulatory Change:

None.

(d) Identification of Reports or Documents Supporting Regulation Change:

None.

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

No public meetings are scheduled prior to the notice publication. The 45-day public notice comment period provides adequate time for review of the proposed changes.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

No alternatives were identified.

(b) No Change Alternative:

The no change alternative would leave existing regulations in place.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the proposed regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action is not anticipated to have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states because the expected impact of the proposed regulations on the amount of fishing activity is anticipated to be minimal relative to recreational angling effort statewide.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The expected impact of the proposed regulations on the amount of fishing activity is anticipated to be minimal relative to recreational angling effort statewide. Therefore the Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new business, the elimination of existing business or the expansion of businesses in California.

The Commission anticipates benefits to the health and welfare of California residents. Providing opportunities for a salmon and trout sport fishery encourages consumption of a nutritious food.

The Commission does not anticipate any non-monetary benefits to worker safety.

The Commission anticipates benefits to the environment by the sustainable management of California's sport fishing resources.

(c) Cost Impacts on a Representative Private Person or Business:

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

(e) Nondiscretionary Costs/Savings to Local Agencies:

None.

(f) Programs Mandated on Local Agencies or School Districts:

None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs:

None.

VII. Economic Impact Assessment:

The proposed regulations will revise and update inland sport fishing regulations starting in 2016. Currently, the seasons, size limits, and bag and possession limits for sport fishing are periodically reviewed by the Department of Fish and Wildlife and the Commission. This set of amendments will clarify regulations for snagging, landlocked salmon, San Francisco and San Pablo Bay, Solano Lake, and reptiles, to reduce public confusion and improve regulatory enforcement. Additionally, this proposal will add a new fishing restriction to protect sturgeon, and increase fishing opportunities on the Sacramento River.

Inland sport fishing regulation's affected parties include recreational anglers, commercial passenger fishing vessels and a variety of businesses that support anglers. The economic impact of regulatory changes for sport fisheries are estimated by tracking resulting changes in fishing effort, angler trips and length of stay in the fishery areas. Distance traveled affects gas and other travel

expenditures. Day trips and overnight trips involve different levels of spending for gas, food and accommodations at area businesses as well as different levels of sales tax impacts. Direct expenditures ripple through the economy, as receiving businesses buy intermediate goods from suppliers that then spend that revenue again. Business spending on wages is received by workers who then spend that income, some of which goes to local businesses. Recreational fisheries spending, thus multiplies throughout the economy with the indirect and induced effects of the initial direct expenditure.

The adoption of scientifically-based regulations provides for the maintenance of sufficient populations of inland sport fish to ensure their continued existence and future sport fishing opportunities that in turn support businesses related to the fishery economy.

The most recent 2011 U.S. Fish and Wildlife national survey of fishing, hunting, and wildlife associated recreation for California reports about 1.35 million resident and nonresident inland sport fish anglers contributed about $1.2 billion in trip and equipment expenditures to the State's economy. Adding the indirect and induced effects of this $1.2 billion direct revenue contribution the total economic benefit to California's economy is estimated to be about $2.03 billion. This corresponds with about $960 million in total wages to Californians and about 16,000 jobs in the State annually.

This regulatory action may impact businesses that provide services to sport fishermen but these effects are anticipated to range from none to small positive impacts, depending on the regulations ultimately adopted by the Commission. Sport fishing business owners, boat owners, tackle store owners, boat manufacturers, vendors of food, bait, fuel and lodging, and others that provide goods or services to those that sport fish in California may be positively affected to some degree from increases to business that may result under the range of proposed regulations. These anticipated impacts may vary by geographic location. Additionally, economic impacts to these same businesses may result from a number of factors unrelated to the proposed changes to inland sport fishing regulations, including weather, fuel prices, and success rates in other recreational fisheries that compete for angler trips.

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State:

The cumulative effects of the changes statewide are estimated to be neutral to job elimination and potentially positive to job creation in California. No significant changes in fishing effort and sport fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State:

The cumulative effects of the changes statewide are expected to be neutral to business elimination and have potentially positive impacts to the creation of businesses in California. No significant changes in fishing effort and sport fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State:

The cumulative effects of the changes statewide are expected to be neutral to positive to the expansion of businesses currently doing business in California. No significant changes in fishing effort and inland sport fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

(d) Benefits of the Regulation to the Health and Welfare of California Residents:

The Commission anticipates benefits to the health and welfare of California residents. Trout and salmon are a nutritious food source and increasing inland sport fishery opportunities encourages consumption of this nutritious food. Sport fishing also contributes to increased mental health of its practitioners as fishing is a hobby and form of relaxation for many. Sport fishing also provides opportunities for multi-generational family activities and promotes respect for California's environment by younger generations, the future stewards of California's natural resources.

(e) Benefits of the Regulation to Worker Safety:

The proposed regulations are not anticipated to impact worker safety conditions.

(f) Benefits of the Regulation to the State's Environment:

It is the policy of the state to encourage the conservation, maintenance, and utilization of the living resources of the inland waters under the jurisdiction and influence of the state for the benefit of all its citizens and to promote the development of local California fisheries. The objectives of this policy include, but are not limited to, the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use, taking into consideration the necessity of regulating

individual sport fishery bag limits in the quantity that is sufficient to provide a satisfying sport. Adoption of scientifically-based inland trout and salmon seasons, size limits, and bag and possession limits provides for the maintenance of sufficient populations of trout and salmon to ensure their continued existence.

Informative Digest/Policy Statement Overview

This Department proposal combines Department and public requests for changes to Title 14, California Code of Regulations (CCR), for the 2015 Freshwater Sport Fishing Regulations Review Cycle. This proposal will clarify regulations for snagging, landlocked salmon, San Francisco and San Pablo Bays, Solano Lake, and reptiles, to reduce public confusion and improve regulatory enforcement. Additionally, this proposal will add a new fishing restriction to protect sturgeon, and increase fishing opportunities on the Sacramento River.

The Department is proposing the following changes to current regulations:

Snagging Definition
Subsection 2.00(b) would be amended to further define snagging. Currently, the snagging definition states that it is illegal to impale a fish in any part of its body **other than the mouth**. This makes it legal for anyone to keep a fish that has been hooked on the outside of the mouth, such as a hook that enters from the lower jaw into the mouth or nose into the mouth. The proposal is to reword the definition to say **other than inside the mouth**. Subsections 2.00(b) and (c), and Section 1.05 will need to be amended for consistency.

<u>Proposal: Amend Section 1.05, Angling, and subsections (b) and (c) of Section 2.00, Fishing Methods - General</u>

Amend the regulations to clarify that it is illegal to take a fish not hooked on the inside of the mouth.

Landlocked Salmon Definition
Current regulations incorporate kokanee (*Oncorhynchus nerka*) into the definition of "Trout," and stocked, landlocked Chinook salmon into the definition of "Salmon," which includes anadromous forms of salmon. Scientific evidence, including life history variation and behavioral differences, suggests the need for differing management strategies for these species. They should be separately defined and addressed in the freshwater sport fishing regulations. In addition, these new species definitions need to have associated bag and possession limits.

<u>Proposal: Amend Section 1.86, Trout; Section 7.00, District General Regulations; add, sections 1.57 and 5.41, Landlocked Salmon</u>

Create a new definition for landlocked salmon which will include kokanee and landlocked Chinook salmon. New daily bag and possession limits for landlocked salmon are proposed in a new Section 5.41. The new bag limit will be 5 fish and the possession limit will be 10 fish.

Amend the District General Regulations in Section 7.00 to revise the references to trout and salmon to just trout except for daily bag and possession limits which means the total number of trout or landlocked salmon in combination. This change is proposed to reduce public confusion with landlocked salmon versus anadromous salmon that are allowed only in the Section 7.50 Special Regulations since the General District Regulations has the take of anadromous salmon closed statewide.

Reptile Regulation Correction

A numbering error has been identified in Section 5.60, specifically subsections (b)10 through (b)14. The regulation incorrectly reads, “Species No. 9-13 have a limit of twenty-five (25) in the aggregate.” It should read, “Species No. 10-14 have a limit of twenty-five (25) in the aggregate.” Correcting the numbering mistake will alleviate confusion amongst sport fisherman and wildlife officers.

Proposal: Amend subsection (b) of Section 5.60, Reptiles

Correct the numbering errors in this section to reduce public confusion and enforcement issues.

Sturgeon Fishing Closure

Green sturgeon and white sturgeon (subadults and adults) are often stranded for long periods in the Yolo Bypass as well as the Toe Drain and Tule Canal upstream of Lisbon Weir. Some of those fish escape when environmental conditions change but others are rescued or succumb. Through catch-and-release, legal harvest, and poaching, anglers could take both species when stranded. The legal fishery on stranded fish is not sporting, reduces the benefit of rescue efforts, and reduces population spawning potential. Because green sturgeon is a threatened species and white sturgeon is a substantial management concern, addressing this issue is relatively urgent. Therefore, the Department is proposing to prohibit the take and possession of sturgeon in the Yolo Bypass as well as the Toe Drain and Tule Canal upstream of Lisbon Weir at any time.

Current regulations in subsection (d) of Section 5.80 state that a sturgeon must voluntarily take the bait or lure *in* its mouth. This language is proposed to be revised to read *inside* its mouth, to be consistent with proposed revisions to the snagging definition in Section 2.00.

Proposal: Add subsection (j) to Section 5.80 and amend subsection (d), White Sturgeon, Methods of take.

Prohibit fishing for sturgeon in the Yolo Bypass Flood Control System to protect green and white sturgeon.

Amend the regulations to clarify that it is illegal to take a fish not hooked on the inside of the mouth for alignment with the proposed snagging definition changes to Section 2.00.

Green Sturgeon Revision for Brevity
Take and possession of green sturgeon is prohibited by law. Section 5.81, Green Sturgeon, subsection (d) designates a special fishing closure for sturgeon in the Sierra and Valley District. This special fishing closure is also provided under Section 5.80, White Sturgeon. Because fishing for green sturgeon is prohibited, this regulation is not needed in the regulations for Green Sturgeon.

Proposal: Remove subsection (d) from Section 5.81, Green Sturgeon.

Fishing for green sturgeon is prohibited. Therefore, the special fishing closure regulation for sturgeon is not need in Section 5.81.

Red Bluff Diversion Dam
Current regulations restrict fishing from 500 feet upstream to 150 feet below Red Bluff Diversion Dam (RBDD). RBDD is no longer operated as an irrigation diversion so the current restrictions about fishing near a dam are no longer needed. Boaters, and recreationists, and fish are free to pass up and downstream of the area at will. The angling public is very interested in angling in the immediate vicinity of the RBDD now that it is no longer in operation and the Sacramento River is not impounded by its gates. The proposal is to allow shore and boat angling above and below RBDD on the Sacramento River.

Proposal: Amend Special Fishing Regulations subsection (b)(156.5), Sacramento River

Remove the current fishing restriction above and below RBDD on the Sacramento River to increase angling opportunities in Tehama County.

Solano Lake
The proposal is to add Solano Lake to Section 7.50, *Alphabetical List of Waters with Special Fishing Regulations*. The original intent was for Solano Lake to be included in the Putah Creek special fishing regulations. That regulation applies to the stream reach from Solano Lake to Monticello Dam and does not include Solano Lake. Therefore, a new subsection needs to be added to Section 7.50.

Proposal: Add subsection (b)(180.6), Solano Lake, to the Special Fishing Regulations

Add a new regulation for Solano Lake to the Special Fishing Regulations. The daily bag and possession limit will be 0 (zero).

San Francisco and San Pablo Bays Clarification
Currently there are three sections dealing with the Ocean and San Francisco Bay District which describe regulations in different manners causing confusion for anglers and making enforcement of the regulations more difficult:

- Section 27.00 defines the Ocean and San Francisco Bay District as waters of the

open coast and includes San Francisco and San Pablo Bays *"plus all their tidal bays, tidal portions of their rivers and streams, sloughs and estuaries"* between the Golden Gate Bridge and the Carquinez Bridge.

- Section 1.53 defines inland waters as all fresh, brackish and inland saline waters of the state, including lagoons and tidewaters upstream from the mouths of coastal rivers and streams. Inland waters exclude the waters of San Francisco and San Pablo Bays downstream from the Carquinez Bridge, the tidal portions of rivers and streams flowing into San Francisco and San Pablo Bays, and the waters of Elkhorn Slough, west of Elkhorn Road between Castroville and Watsonville.

- Section 28.65(a) (which describes gear restrictions for fin fish). Defines the area as San Francisco and San Pablo Bays between the Golden Gate Bridge and the west Carquinez Bridge, where only one line with not more than three hooks may be used.

The different definitions of the same geographic area cause confusion as to applicable method of take as well as which set of regulations apply to the waters being fished.

An angler is allowed to use any number of hooks and lines in the ocean waters (Section 28.65). In Inland waters only one closely attended line with no more than three hooks may be used (Section 2.00). Under current regulations, a person could argue that tidal portions of the Napa River were not Inland Waters and since Section 28.65(a) did not include the tidal portions of river flowing into San Francisco and San Pablo Bays. Under this interpretation, they could use any number of lines and hooks to fish in the Napa River. This would restrict waters of San Francisco and San Pablo Bay to one line, then allow unlimited lines in the Napa River waters which were tidally influenced even though all inland waters are restricted to one line.

In addition, fishing regulations for Ocean Waters defined in Section 27.00 are different from Inland Waters as defined in Section 1.53. Since tidal influence cannot easily be determined, it is almost impossible to know which set of regulations apply in the tidally influenced waters. For instance is an undersized sturgeon caught in the Napa River a violation of section 5.80 or Section 27.90?

To simplify the regulations and make all of the regulations consistent, all three sections must use the same reference.

The proposal is to amend sections 27.00 and 1.53 to align with Section 28.65(a) and remove the reference to tidal bays and tidal portions of rivers and streams from these two sections. As a result, inland waters will now include the tidal portions of rivers and streams flowing into San Francisco and San Pablo Bays which will be subject to the

gear restrictions for inland waters where only one closely attended rod and line with no more than three hooks may be used.

Proposal: Amend Section 1.53, Inland Waters, and Section 27.00, Ocean and San Francisco Bay Definition

Amend the two regulations that define the San Francisco and San Pablo Bays to be consistent, reducing public confusion and enforcement issues. Remove capitalized text before the note which is a printing error.

Fishing Contest Draw Dates
The current wording of subsection 230(b)(1)(A) designates specific dates for a drawing that is conducted annually by Department personnel to allocate Type A fishing contest permits in a fair manner. Dates are the second Friday of July for bodies of water north of the Tehachapi Mountains and the third Friday of July for waters south of the Tehachapi Mountains.

Specific designation of these dates can conflict with major fishing-related events that contest sponsors often need to attend (e.g., International Convention of Allied Sport fishing Trade – ICAST). Sponsors who must attend the ICAST show—an international conference of fishing gear manufacturers, media, and many others—cannot simultaneously attend the contest drawing, hindering the conflict resolution process for which the drawing is held.

The Department is proposing to amend the regulations to state that the contest drawings will be conducted in July and the dates will be determined by Department staff.

Proposal: Amend subsection (b)(1)(A) of Section 230, Issuance of Permits for Contests Offering Prizes for the Taking of Game Fish

Amend the regulations to change the current contest drawing dates to unspecified dates in July which will be determined by Department staff.

Minor Editorial Corrections for Clarity
Additional editorial corrections are proposed to correct typographical errors and to improve regulation clarity.

Benefits of the Proposed Regulations
It is the policy of this state to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the state for the benefit of all the citizens of the State. In addition, it is the policy of this state to promote the development of local California fisheries in harmony with federal law respecting fishing and the conservation of the living resources of the ocean and inland waters under the jurisdiction and influence of the State. The

objectives of this policy include, but are not limited to, the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use. Adoption of scientifically-based trout and salmon seasons, size limits, and bag and possession limits provides for the maintenance of sufficient populations of trout and salmon to ensure their continued existence.

The benefits of the proposed regulations are concurrence with Federal law, sustainable management of California's trout and salmon resources, and promotion of businesses that rely on recreational sport fishing in California.

Regulatory Language

Section 1.05, Title 14, CCR, is amended as follows:

§ 1.05. Angling.
~~To~~ Angling means take of fish by hook and line with the line held in the hand, or with the line attached to a pole or rod held in the hand or closely attended in such manner that the fish voluntarily takes the bait or lure ~~in~~inside its mouth.

Note: Authority cited: Sections 200, 202, 205, 210, 219 and 220, Fish and Game Code. Reference: Sections 2, 15, ~~200-202, 203.1, 205-210 and 215-222~~200, 202, 205, 206, 215 and 220, Fish and Game Code

Section 1.53, Title 14, CCR, is amended as follows:

§ 1.53. Inland Waters.
Inland waters are all the fresh, brackish and inland saline waters of the state, including lagoons and tidewaters upstream from the mouths of coastal rivers and streams. Inland waters exclude the waters of San Francisco and San Pablo bays downstream from the west Carquinez Bridge, ~~the tidal portions of rivers and streams flowing into San Francisco and San Pablo Bays,~~ and the waters of Elkhorn Slough, west of Elkhorn Road between Castroville and Watsonville. Also see Section 27.00.

Note: Authority cited: Sections 200, 202, 205, 215 and 220, Fish and Game Code. Reference: Sections 200, 202, 205, 206, 215 and 220, Fish and Game Code.

Section 1.57, Title 14, CCR, is added as follows:

§ 1.57. Landlocked Salmon.
Landlocked salmon includes kokanee and landlocked Chinook salmon.

Note: Authority cited: Sections 200, 202, 205, 210, 219 and 220, Fish and Game Code. Reference: Sections 200, 202, 205, 210, 215, and 220, Fish and Game Code.

Section 1.86, Title 14, CCR, is amended as follows:

§ 1.86. Trout.
~~Includes~~Trout includes all trouts, chars, steelhead, ~~kokanee salmon~~ and grayling.

Note: Authority cited: Sections 200, 202, 205, 210, 219 and 220, Fish and Game Code. Reference: Sections ~~200-202, 203.1, 205-210, 215-222 and 1725-1728~~200, 202, 205, 210, 215,220, 1725, 1726, 1726.4, 1727, and 1728, Fish and Game Code.

Section 2.00, Title 14, CCR, is amended as follows:

§ 2.00. Fishing Methods - General.
(a) Except as otherwise authorized, all fish may be taken only by angling with one closely attended rod and line or one hand line with not more than three hooks nor more than three artificial lures (each lure may have three hooks attached) attached thereto. Anglers in possession of a valid two-rod stamp and anglers under 16 years of age may use up to two rods in inland waters which regulations provide for the taking of fish by angling, except those waters in which only artificial lures or barbless hooks may be used. See District Trout, Salmon and Special regulations for exceptions.
(b) Snagging is prohibited. Snagging is defined as impaling or attempting to impale a fish in any part of its body other than inside the mouth by use of a hook, hooks, gaff, or other mechanical implement. This definition does not include activities otherwise authorized under these regulations for the lawful use of a gaff, bow and arrow, or spear.
(c) It is unlawful to kill, or retain in possession any fish which has not voluntarily taken the bait or artificial lure ~~in~~inside its mouth. Any fish not taken pursuant to these regulations, shall be released immediately back into the water.

Note: Authority cited: Sections 200, 202, 205, 219, 220 and 7194.4, Fish and Game Code. Reference: Sections 200, 202, 206, 220 and 7149.4, Fish and Game Code.

Section 5.41, Title 14, CCR, is added as follows:

§ 5.41. Landlocked Salmon.
(a) Open season: All year.
(b) Daily bag limit: Five.
(c) Possession limit: Ten.
(d) Size limit: None.

Note: Authority cited: Sections 200, 202, 205, 210, 219 and 220, Fish and Game Code. Reference: Sections 200, 202, 205, 210, 215, and 220, Fish and Game Code.

Section 5.60, Title 14, CCR, is amended as follows:

§ 5.60. Reptiles.
(a) Only the following reptiles may be taken under the authority of a sportfishing license, subject to the restrictions in this section. No sportfishing license is required for the sport take of any rattlesnake, but bag and possession limits do apply. No reptiles shall be taken from ecological reserves designated by the commission in Section 630 or from state parks, or national parks or monuments.
(b) Limit: The limit for each of the species listed below is two, unless otherwise provided. Limit, as used in this section, means daily bag and possession limit.
(1) Painted turtle (*Chrysemys picta*): Limit: No limit.
(2) Slider Turtle (*Pseudemys (Trachemys) scripta*): Limit: No limit.
(3) Spiny softshell turtle (*Trionyx (Apalone) spiniferus (spinifera)*): Limit: No limit.

(4) Western banded gecko (*Coleonyx variegatus*), except San Diego banded gecko (*Coleonyx variegatus abbotti*): See Special Closure (f)(1)
(5) Desert iguana (*Dipsosaurus dorsalis*)
(6) Chuckwalla (*Sauromalus obesus (ater)*)
(7) Zebra-tailed lizard (*Callisaurus draconoides*)
(8) Desert spiny lizard (*Sceloporus magister*)
(9) Granite spiny lizard (*Sceloporus orcutti*)
(10) Western fence lizard (*Sceloporus occidentalis*): Limit: Species No. ~~9-13~~10-14 have a limit of twenty-five (25) in the aggregate
(11) Sagebrush lizard (*Sceloporus graciosus*): Limit: Species No. ~~9-13~~10-14 have a limit of twenty-five (25) in the aggregate
(12) Side-blotched lizard (*Uta stansburiana*): Limit: Species No. ~~9-13~~10-14 have a limit of twenty-five (25) in the aggregate
(13) Western skink (*Eumeces skiltonianus*): Limit: Species No. ~~9-13~~10-14 have a limit of twenty-five (25) in the aggregate
(14) Desert night lizard (*Xantusia vigilis*), except *Xantusia vigilis sierrae*: See Special Closure (f)(2): Limit: Species ~~No. 9-13~~in subsections (10) through (14) have a limit of twenty-five (25) in the aggregate
(15) Long-tailed brush lizard (*Urosaurus graciosus*)
(16) Tree lizard (*Urosaurus ornatus*)
(17) Small-scaled lizard (*Urosaurus microscutatus*)
(18) Desert horned lizard (*Phrynosoma platyrhinos*)
(19) Short-horned lizard (*Phrynosoma douglassii*)
(20) Great basin collared lizard (*Crotaphytus bicintores*)
(21) Banded rock lizard (*Petrosaurus mearnsi*)
(22) Baja California collared lizard (*Crotaphytus vestigum*)
(23) Long-nosed leopard lizard (*Gambelia wislizenii*)
(24) Gilbert's skink (*Eumeces (Plestion) gilberti*)
(25) Western whiptail (*Cnemidophorus (Apidoscelis) tigris*)
(26) Southern alligator lizard (*Elgaria multicarinata*)
(27) Northern alligator lizard (*Elgaria coerulea*)
(28) Rubber boa (*Charina bottae*), **except** southern rubber boa (*Charina bottae umbratica*): See Special Closure (f)(3)
(29) Rosy boa (*Lichanura trivirgata*)
(30) Ringneck snake (*Diadophis punctatus*), except *Diadophis punctatus regalis*: See Special Closure (f)(4)
(31) Sharp-tailed snakes (*Contia* spp.)
(32) Spotted leaf-nosed snake (*Phyllorhynchus decurtatus*)
(33) Racer (*Coluber constrictor*)
(34) Coachwhip (*Masticophis (Coluber) flagellum*), **except** San Joaquin Coachwhip (*Masticophis flagellum ruddocki*): See Special Closure (f)(5)
(35) Striped whipsnake (*Masticophis (Coluber) taeniatus*)
(36) California whipsnake (striped racer) (*Masticophis (Coluber) lateralis*), *except* Alameda whipsnake (*Masticophis lateralis euryxanthus*): See Special Closure (f)(6)
(37) Western (Desert) patch-nosed snake (*Salvadora hexalepis*), except *Salvadora*

hexalepis virgultea: See Special Closure (f)(7)
(38) Glossy snake (*Arizona elegans*), except *Arizona elegans occidentalis*: See Special Closure (f)(8)
(39) Gopher snake (*Pituophis melanoleucus*): Limit: Four (4)
(40) Common kingsnake (*Lampropeltis getula*): Limit: Four (4)
(41) California mountain kingsnake (*Lampropeltis zonata*), **except** San Diego mountain kingsnake *(Lampropeltis zonata pulchra*) and San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*): Limit: One (1). See Special Closure: (f)(9)
(42) Long-nosed snake (*Rhinocheilus lecontei*)
(43) Common garter snake (*Thamnophis sirtalis*), **except** San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) and South Coast garter snake (*Thamnophis sirtalis* sp.): See Special Closure (f)(10)
(44) Terrestrial garter snake (*Thamnophis elegans*)
(45) Western aquatic (Sierra) garter snake (*Thamnophis couchii*)
(46) Pacific coast aquatic garter snake (*Thamnophis atratus*)
(47) Northwestern garter snake (*Thamnophis ordinoides*)
(48) Checkered garter snake (*Thamnophis marcianus*)
(49) Variable ground snake (*Sonora semiannulata*)
(50) Western shovel-nosed snake (*Chionactis occipitalis*)
(51) California (Western) black-headed snake (*Tantilla planiceps*)
(52) Southwestern (Smith's) black-headed snake (*Tantilla hobartsmithi*)
(53) Lyre snakes (*Trimorphodon biscutatus*)
(54) Night snakes (*Hypsiglena* spp.)
(55) Western blind snake (Southwestern threadsnake) (*Leptotyphlops (Rena) humilis*)
(56) Western diamondback rattlesnake (*Crotalus atrox*)
(57) Mojave rattlesnake (*Crotalus scutulatus*)
(58) Western rattlesnakes (*Crotalus viridus (oreganus)* spp.)
(59) Speckled rattlesnake (*Crotalus mitchelli*)
(60) Sidewinders (*Crotalus cerastes* spp.)
(61) Panamint rattlesnake (*Crotalus stephensi*)
(62) Red diamond rattlesnake (*Crotalus ruber*): Limit: Zero (0)
(c) Open season: All year.
(d) Hours: Reptiles may be taken at any time of day or night.
(e) Methods of take:
(1) Reptiles may be taken only by hand, except as provided in subsections (e)(2) and (3) below, or by the following hand-operated devices:
(A) Lizard nooses.
(B) Snake tongs.
(C) Snake hooks.
(2) Rattlesnakes may be taken by any method.
(3) Turtles may be taken by hook and line. Fishing methods described in Section 2.00 apply to the take of spiny softshell turtles, slider turtles and painted turtles.
(4) It is unlawful to use any method or means of collecting that involves breaking apart of rocks, granite flakes, logs or other shelters in or under which reptiles may be found.
(f) Special Closures:

(1) No geckos (*Coleonyx variegatus*) may be taken in San Diego County south and west of Highway 79 to its junction with County Road S-2, and south and west of County Road S-2 to the eastern San Diego County border.
(2) No rubber boas (*Charina bottae* or *Charina umbratica*) may be taken in Kern, Los Angeles, Riverside and San Bernardino counties.
(3) No night lizards (*Xantusia vigilis*) may be taken in Kern County.
(4) No ringneck snakes (*Diadophis punctatus*) may be taken in San Bernardino or Inyo counties.
(5) No coachwhips (*Masticophis (Coluber) flagellum*) may be taken in the following counties: Alameda, Contra Costa, Fresno, Kern, Kings, Merced, Monterey, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, Stanislaus, Tulare.
(6) No California whipsnakes (striped racer) (*Masticophis (Coluber) lateralis*) may be taken in Alameda and Contra Costa counties.
(7) No Western (desert) patch-nosed snakes (*Salvadora hexalepis*) may be taken in the following counties: Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara and Ventura.
(8) No glossy snakes (*Arizona elegans*) may be taken in the following counties: Alameda, Fresno, Imperial (west of Hwy 111), Kern, Los Angeles, Riverside (southwest of Hwy 111 and I-10), San Benito, San Bernardino (West of I-215 and Hwy 138), San Diego, San Joaquin, San Luis Obispo, Santa Barbara, Santa Clara and Tulare.
(9) No California mountain kingsnakes (*Lampropeltis zonata*) may be taken in Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties.
(10) No common garter snakes (*Thamnophis sirtalis*) may be taken in Los Angeles. Orange, Riverside, San Diego, and Ventura counties.

Note: Authority cited: Sections 200, 202, 205, 210, 219 and 220, Fish and Game Code. Reference: Sections 200, 201, 202, 203.1, 205 and 220, Fish and Game Code.

Section 5.80, Title 14, CCR, is amended as follows:

§ 5.80. White Sturgeon.
(a) Open season: All year, except for closures listed under special regulations.
(b) Daily and annual bag limit: One fish per day. Three fish per year statewide.
(c) Size limit: No fish less than 40 inches fork length or greater than 60 inches fork length may be taken or possessed.
(d) Methods of take: Only one single point, single shank, barbless hook may be used on a line when taking sturgeon. The sturgeon must voluntarily take the bait or lure ~~in~~inside its mouth. No sturgeon may be taken by trolling, snagging or by the use of firearms. Sturgeon may not be gaffed, nor shall any person use any type of firearm or snare to take any sturgeon.
For the purposes of this section, a snare is a flexible loop made from any material that can be tightened like a noose around any part of the fish.
(e) Removal from water. Any sturgeon greater than 68 inches fork length may not be removed from the water and shall be released immediately.
(f) Report card required: Any person fishing for or taking sturgeon shall have in their

possession a nontransferable Sturgeon Fishing Report Card issued by the department and shall adhere to all reporting and tagging requirements for sturgeon defined in Sections 1.74 and 5.79, Title 14, CCR.
(g) Special North Coast District Sturgeon Closure (Humboldt, Del Norte, Trinity and Siskiyou cos.). It is unlawful to take any sturgeon in the North Coast District at any time.
(h) For regulations on take and possession of sturgeon in ocean waters as defined in Section 27.00, see Sections 27.90, 27.91, and 27.95.
(i) Special Sierra and Valley District Sturgeon Closure from January 1 to December 31 (Shasta, Tehama, Butte and Glenn cos.).
(1) Sacramento River from Keswick Dam to the Highway 162 Bridge.
(A) It is unlawful to take any sturgeon.
(B) It is unlawful to use wire leaders.
(C) It is unlawful to use lamprey or any type of shrimp as bait.
(j) Special Yolo Bypass Flood Control System Sturgeon Closure. It is unlawful to take any sturgeon in the Yolo Bypass, Toe Drain Canal, and Tule Canal upstream of Lisbon Weir at any time.

Note: Authority cited: Sections 200, 202, 205 and 220, Fish and Game Code. Reference: Sections 200, 205 and 206, Fish and Game Code.

Section 5.81, Title 14, CCR, is amended as follows:

§ 5.81. Green Sturgeon.
(a) Green sturgeon may not be taken or possessed.
(b) Green sturgeon may not be removed from the water and shall be released immediately.
(c) Green sturgeon taken and released incidentally to white sturgeon fishing shall be reported on a Sturgeon Fishing Report Card issued by the department, in accordance with procedures defined in Sections 1.74 and 5.79, Title 14, CCR.
~~(d) Special Sierra and Valley District Sturgeon Closure from January 1 to December 31 (Shasta, Tehama and Glenn cos.).~~
~~(1) Sacramento River from Keswick Dam to the Highway 162 Bridge.~~
~~(A) It is unlawful to take any sturgeon.~~
~~(B) It is unlawful to use wire leaders.~~
~~(C) It is unlawful to use lamprey or any type of shrimp as bait.~~

Note: Authority cited: Sections 200, 202, 205 and 220, Fish and Game Code. Reference: Sections 200, 205 and 206, Fish and Game Code.

Section 7.00, Title 14, CCR, is amended as follows:

§ 7.00. District General Regulations.
Unless otherwise provided, waters shown as open to trout ~~and salmon~~ fishing in subsections (a) through (g) below, are open to fishing for other species. Gear restrictions listed in this section apply to the take of all species of fish unless otherwise

noted. Every body of water listed in subsections (a) through (g) of Section 7.00 (below) is closed to all fishing, except during the open season as shown. Unless otherwise provided, waters closed to trout ~~and salmon~~ fishing are closed to fishing for all other species, except that these closures do not apply to fishing for amphibians (see Section 5.05), freshwater clams (see Section 5.20), crayfish (see Section 5.35), and lamprey (see Section 5.40), using legal fishing methods other than hook-and-line fishing, and saltwater clams, crabs, ghost shrimp, and blue mud shrimp (see Ocean Regulations Booklet Sections 29.20 to 29.87). Crabs may only be taken using hoop nets or by hand, and Dungeness crab may only be taken within the North Coast District and Sonoma and Mendocino counties.

Daily bag and possession limits, unless otherwise provided, mean the total number of trout ~~and~~or landlocked salmon in combination. Unless otherwise provided, no more than one daily bag limit may be possessed. Coho (silver) salmon may not be taken in any of the waters of the State, except in Lake Oroville and Oroville-Thermalito Complex (Diversion Pool, Forebay, and Afterbay) and the Feather River from the Diversion Pool Dam to the Fish Barrier Dam. Incidentally hooked Coho (silver) salmon, except those in Lake Oroville and Oroville-Thermalito Complex (Diversion Pool, Forebay, and Afterbay) and the Feather River from the Diversion Pool Dam to the Fish Barrier Dam, must be immediately released unharmed to the waters where they are hooked. In waters where the bag limit for trout ~~or salmon~~ is zero, fish for which the bag limit is zero must be released unharmed, and should not be removed from the water.

These waters may also be subject to restrictions on fishing methods and gear (sections 2.00 through 2.45), fishing hours (section 3.00), and the use of bait (sections 4.00 through 4.30).

[Subsections (a) through (g) remain unchanged]

*Hatchery trout or steelhead have a healed adipose fin clip (adipose fin is absent). Unless otherwise provided, all other trout and steelhead must be immediately released. Wild trout or steelhead are those not showing a healed adipose fin clip (adipose fin present).

Note: Authority cited: Sections 200, 202, 205, 220 and 240, Fish and Game Code. Reference: Sections 200, 205 and 206, Fish and Game Code.

§7.50. Alphabetical List of Waters with Special Fishing Regulations.

Subsection (b)(156.5) of Section 7.50, Title 14, CCR, is amended as follows:

Body of Water	***Open Season and Special Regulations***	***Daily Bag and Possession Limit***

(156.5) **Sacramento River** and tributaries below Keswick Dam (Butte, Colusa, Contra Costa, Glenn, Sacramento, Solano, Sutter, Tehama and Yolo Cos.).	Also see Sierra District General Regulations (See Section 7.00(b)).	
(A) Sacramento River from Keswick Dam to 650 feet below Keswick Dam.	Closed to all fishing all year.	
(B) Sacramento River: 1. from 650 feet below Keswick Dam to the Highway 44 bridge.	Closed to all fishing from April 24 through July 31.	
	August 1 through December 31. Only barbless hooks may be used.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
2. from the Highway 44 bridge to the Deschutes Road bridge.	All year. Only barbless hooks may be used.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
(C) Sacramento River from the Deschutes Road bridge to ~~500 feet upstream from~~ the Red Bluff Diversion Dam.	Jan. 1 through July 31.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
	Aug. 1 through Dec. 16.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession 2 Chinook salmon 4 Chinook salmon in possession

	Dec. 17 through Dec. 31.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
~~(D) Sacramento River from 500 feet upstream from Red Bluff Diversion Dam to 150 feet below the Lower Red Bluff (Sycamore) Boat Ramp.~~	~~Closed to all fishing all year.~~	
(~~E~~D) Sacramento River from ~~150 feet below the Lower Red Bluff (Sycamore) Boat Ramp~~ the Red Bluff Diversion Dam to the Hwy 113 bridge near Knights Landing. Note: It is unlawful to take fish 0-250 feet downstream from the overflow side of the Moulton, Colusa and Tisdale Weirs.	Jan. 1 through July 15.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
	July 16 through Dec. 16.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession 2 Chinook salmon 4 Chinook salmon in possession
	Dec. 17 through Dec. 31.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession

(~~F~~E) Sacramento River from the Hwy 113 bridge near Knights Landing to the Carquinez Bridge (includes Suisun Bay, Grizzly Bay and all tributary sloughs west of Highway 160). Note: It is unlawful to take fish 0-250 feet downstream from the overflow side of the Fremont and Sacramento Weirs.	Jan. 1 through July 15.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
	July 16 through Dec. 16.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession 2 Chinook salmon 4 Chinook salmon in possession
	Dec. 17 through Dec. 31.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession

Subsection (b)(180.6) is added to Section 7.50, Title 14, CCR, as follows:

Body of Water	***Open Season and Special Regulations***	***Daily Bag and Possession Limit***
(180.6) Solano Lake (Solano County).	All year. Only artificial lures and barbless hooks may be used.	0

* Wild Chinook salmon are those not showing a healed adipose fin clip and not showing a healed left ventral fin clip.

**Hatchery trout or steelhead are those showing a healed adipose fin clip (adipose fin is absent). Unless otherwise provided, all other trout and steelhead must be immediately released. Wild trout or steelhead are those not showing a healed adipose fin clip (adipose fin is present).

Note: Authority cited: Sections 200, 202, 205, 215, 220, 240, 315 and 316.5, Fish and Game Code. Reference: Sections 200, 202, 205, 206, 215 and 316.5, Fish and Game Code.

Section 27.00, Title 14, CCR, is amended as follows:

§ 27.00. Definition.
The Ocean and San Francisco Bay District consists of the open seas adjacent to the coast and islands or in the waters of those open or enclosed bays contiguous to the ocean, and including San Francisco and San Pablo bays ~~plus all their tidal bays, tidal portions of their rivers and streams, sloughs and estuaries~~ between Golden Gate Bridge and the west Carquinez Bridge~~, and the waters of Elkhorn Slough, west of Elkhorn Road between Castroville and Watsonville~~. Also see Section 1.53.
~~FIN FISH -MINIMUM SIZE LIMITS, BAG AND POSSESSION LIMITS AND SEASONS~~
Note: Authority cited: Sections 200, 202, 205, 215 and 220, Fish and Game Code. Reference: Sections 200, 202, 205, 206, 215 and 220, Fish and Game Code.

Section 230, Title 14, CCR, is amended as follows:

§ 230. Issuance of Permits for Contests Offering Prizes for the Taking of Game Fish.

[No changes to subsection (a)]

(b) Issuance of Permits.
(1) Revocable permits to conduct fishing contests (including tournaments, derbies or tagged fish contests) may be issued by the department to any person (as defined by section 67, Fish and Game Code) authorizing the permittee to offer prizes or other inducements for the taking of game fish. The department shall issue such permits if it determines the proposed contest(s) would not be detrimental to the resource. For the purposes of this section, game fish are defined as the following: white sturgeon and green sturgeon; American shad; salmon and trout -all species; goldfish; common carp; hardhead; Sacramento squawfish; western sucker; catfish and bullheads -all species; striped bass; white bass; black bass and sunfish -all species; tilapia -all species; sargo; bairdiella; and orangemouth corvina. Procedures for issuing event permits for black bass fishing contests are specified in subsections (A) through (D), below:
(A) A random drawing will be conducted by department personnel to issue Type A permits for black bass fishing contests during July of the year preceding the contest date. ~~Drawings will be conducted the second Friday of July for bodies of water north of the Tehachapi Mountains and the third Friday of July for waters south of the Tehachapi Mountains.~~ Dates will be determined by departmental staff. Applications will not be accepted prior to July 1 of the year preceding the calendar year in which a contest is proposed.
(B) Applicants may submit a completed application(s) (including appropriate fees) to the appropriate department office (see Section 230(b)(2)) or attend the random drawings in person. Applications received prior to the random drawings must be prioritized by the applicant and if not, will be drawn in chronological order based on the contest date. Prior to the drawing, a random number will be assigned to each applicant in attendance and to each group of applications submitted by an individual not in attendance. A series

of random drawings of the assigned numbers will be conducted by department personnel and one application accepted for each number drawn. Only one application shall be accepted from each applicant during each consecutive round of the drawing process. Rounds of drawings will be conducted until all applications have been accepted, or there are no more available dates for a given body of water, whichever occurs first.
(C) Immediately following the drawing(s), the fees for all successful applications not already submitted must be paid to the department.
(D) Permits for applications received after the drawings will be issued in chronological order of receipt, subject to availability.
(2) Application shall be made on a standard form provided by the department (APPLICATION FOR PERMIT TO OFFER PRIZES FOR TAKING GAME FISH, FG 775 (Rev. 11/98)), which is incorporated by reference herein), and shall include the name of the sponsor, if any, and the name and address of the applicant, the telephone number where the applicant can be reached, and for each contest: the location and date of the event, total value of the prizes, and expected number of participants. The application must be signed by the applicant. Applications for Type B contests should be submitted to the regional office (see map and addresses of Regional offices attached to application form FG 775 (Rev. 11/98)) nearest to the applicant. Applications for Type A permits must be submitted to the department regional office for the region where the contest(s) is proposed.
(3) The application shall be submitted to the department at least 30 days prior to the proposed contest(s).
(4) Applications will not be accepted prior to July 1 of the year preceding the calendar year in which any contest is proposed.
(5) The department will consider requests for adjustments to approved Type A contest dates, if such requests are received by the issuing regional office not later than 30 days prior to the contest date to be changed.
(6) Permits are not transferable.
(7) Event and Annual Permits.
(A) An Event Permit will be issued for each Type A contest (see subsection 230(a)(1)).
(B) An Annual Permit will be issued on a calendar year basis to cover all Type B Contests (see subsection 230(a)(2)) proposed for that year.
(8) Cost of permit: See subsection 699(b) of these regulations for the fee for this permit.

[No changes to subsections (c) through (h)]

Note: Authority: Sections 1050 and 2003, Fish and Game Code.
Reference: Sections 711, 713, 1050 and 2003, Fish and Game Code.

Draft Regulatory Language

September 25, 2015

Section 665, Title 14, CCR, is amended to read:

665. Meeting Procedures

~~(a) Time limits for speakers at commission meetings.~~

~~(1) The time allotted for each speaker wishing to address an agenda item shall be set by the presiding commissioner.~~

(a) Commission quorum, agendas, and meeting procedures.

(1) Quorum. Commission and committee meetings may not be conducted without a quorum present.

(A) Commission meetings require a quorum of at least three commissioners be present to conduct a meeting. A commission meeting must be immediately adjourned if at least three commissioners are no longer present.

(B) Committee meetings require a quorum of at least one of the appointed members be present to conduct a meeting. A committee meeting must be immediately adjourned if at least one appointed member is no longer present.

1. Commissioners who are not appointed to the committee may attend only as observers.

(2) Meeting agendas.

(A) Public requests for items to be added to an agenda must be received no later than the commission meeting immediately prior to the desired meeting.

(B) Contents of meeting agendas.

1. Contents of commission and committee meeting agendas are established by a majority vote of the commission.
2. Committee agendas may not contain items that have been placed on commission meeting agendas, unless otherwise directed by a majority vote of the commission.
3. Notwithstanding subsection (2)(B)1., the president, vice president, or designee of the president or vice president may amend an agenda.

(C) Commission and committee meeting agendas shall be distributed and posted to the commission website at least 10 days prior to the first day of the meeting.

(3) Committee recommendations. Pursuant to Sections 105 and 106 of the Fish and Game Code, the marine resources committee and wildlife resources committee shall report and make recommendations on resource matters before the commission.

(A) Committees may meet to make recommendations no later than 15 days prior to the first day of the commission meeting at which the commission may consider taking action on the subject of the recommendation.

(B) Committee recommendations shall be posted to the commission website at least five days prior to the first day of the meeting.

(b) **Public participation**. Except for the department, every person or agency participating in commission and/or committee meetings is subject to the provisions in this subsection.

(1) Public comment on agenda items. The public may comment on an agenda item at the time the commission members discuss that item, but before any decision is made regarding the agenda topic.

(A) Public requests to provide comments on an agenda item must be submitted to commission staff prior to when the agenda item is announced.

1. A person may voluntarily complete a speaker card furnished by commission staff.
2. A person not completing a speaker card must inform commission staff, orally or in writing, of their desire to comment on the item

(2) Public forum. During the public forum agenda item, any member of the public may address the commission regarding its policies or any other matter within its jurisdiction so long as the subject is not related to any other item on the current agenda.

(3) Allotted time for comments and presentations at commission meetings.

(A) The time allotted for each person wishing to address an agenda item shall be set by the presiding commissioner at between one and three minutes per person per agenda item, except as provided in subsections (b)(3)(A)1. and (b)(3)(A)2.

1. Ceding time. The presiding commissioner may allot up to five minutes for a person to comment on an agenda item if at least three other persons are present when the agenda item is called and forgo their opportunity to speak to that agenda item.
2. Advanced approval for extended time. The public may request extended time to comment longer than three minutes. The president or designee of the president shall approve or deny the requested time based on relevance to the agenda topic and time available.

a. Requests for extended time must be received in writing no later than 12:00 noon five days prior to the first day of the meeting and must be sent by email to fgc@fgc.ca.gov or by mail/courier to California Fish and Game Commission, 1416 Ninth Street, Suite 1320, Sacramento, CA 95814. Only one method of delivery is necessary.

b. The president or designee shall approve or deny the request no later than 5:00 p.m. two days prior to the first day of the meeting.

(B) The total amount of time allocated for public comments on a particular issue may be limited by publishing the time limit on the meeting agenda.

(4) Allotted time for comments at committee meetings. The time allotted for each person wishing to address an agenda item shall be at the discretion of the committee chair(s).

(5) Written comments. All written comments are available to commissioners upon request.

(A) Written comments intended for a commission or committee meeting must be delivered to the commission office via email or mail/courier no later than 12:00 noon five days prior to the first day of the meeting, or in person at the meeting.

1. Written comments received by 5:00 p.m. 13 days prior to the first day of the meeting may be posted to the commission website and may be included in the meeting materials provided to commissioners prior to the first day of the meeting.
2. Written comments received after 5:00 p.m. 13 days prior to the first day of the meeting and before 12:00 noon 5 days prior to the first day of the meeting may be made available to commissioners at the meeting, but are not posted to the commission's website for that meeting.
3. Written comments received in the commission office after 12:00 noon five days prior to the first day of the meeting are only delivered to the meeting if required by the Administrative Procedure Act, Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code, and are not posted to the commission's website for that meeting.
4. Written comments received in the commission office after 12:00 noon five days prior to the first day of the meeting that are not required to be delivered to the meeting pursuant to the Administrative Procedure Act are held for a future meeting if related to a future agenda item.
5. Ten copies of written comments are requested if delivered in person at the commission or committee meeting.
6. Any writings, when distributed to all, or a majority of all, commissioners in connection with a matter subject to discussion or consideration at a meeting shall be made available to the public upon request without delay. However, this subsection shall not include any writing exempt from public disclosure under Section 6253.5, 6254, or 6254.7 of the Government Code.
7. Writings that are public records under subsection (b)(5)(A)6, and that are distributed to members of the commission prior to or during a meeting, pertaining to any item to be

considered during the meeting, shall be made available for public inspection at the meeting.

(B) In the event multiple written comments expressing similar views are received, an example or a summary of the comments may be posted to the commission website and/or included in the meeting materials for commissioners.

(C) Written comments delivered to the commission office must be submitted via email to fgc@fgc.ca.gov or mail/courier to California Fish and Game Commission, 1416 Ninth Street, Suite 1320, Sacramento, CA 95814. Only one method of delivery is necessary.

(D) Written comments are not accepted if sent to the meeting facility.

(6) Audio or visual materials for commission and committee presentations must be approved by the executive director. Consideration for approval requires that materials be submitted no later than 12:00 noon five days prior to the first day of the meeting.

(A) A request for an audio or visual presentation for a commission or committee meeting may be denied if the material is deemed not relevant to the agenda item, contains inappropriate material, or contains unauthorized copyrighted materials.

(B) A request for an audio or visual presentation for Commission meetings may be denied if the material cannot be presented in three minutes or less.

(C) Audio or visual materials for presentations must be submitted via email to fgc@fgc.ca.gov or on a USB flash drive via mail/courier to California Fish and Game Commission, 1416 Ninth Street, Suite 1320, Sacramento, CA 95814.Only one method of delivery is necessary.

(D) All electronic formats must be Windows PC compatible.

(7) Prohibited behavior. The effective conduct of commission business requires civil participation by the public. Disruptive behavior will not be tolerated and eviction from the meeting may result.

(c) Concurrence with Government Code Sections 6707 and 6800. The deadlines and due dates in this Section shall conform to Sections 6707 and 6708 of the Government Code pertaining to deadlines that fall on Saturdays or holidays.

Note: Authority cited: Section 108, Fish and Game Code. Reference: Section 108, Fish and Game Code; Section 11125.7 Government Code.

Summary of Public Recommendations for Commission and Committee Procedures

09/25/2015

Source	Recommendation	Staff Response	Notes
Commission Votes			
6/30/15 Eric Mills	If only three of the five commissioners are present, any issue on the agenda should be required to receive a 3:0 vote for passage. [Majority of the entire membership]	Reject: Unnecessarily restrictive. The Bagley-Keene Open Meeting Act only requires that a majority of the members of a state body meet to establish a quorum for a meeting; it does not require a majority vote of the membership for a vote to pass.	
Public Forum			
6/30/15 Eric Mills	There should be public forum at the beginning and end of each day of each meeting.	Reject: The Commission has already determined that it will include public forum at the beginning or end of each meeting day, but not both; to date public comment has supported public forum at the beginning of the day and the Commission has chosen to accommodate that preference.	The Bagley-Keene Open Meeting Act provides that at any meeting the body can elect to consider comments from the public on any matter under the body's jurisdiction. (§11125.7, Government Code)
Committees are Subject to the Bagley-Keene Open Meeting Act			
4/14/14 Michel & Associates	Because the Wildlife Resources Committee (WRC) was created by statute and because it includes more than one member, it is subject to the Bagley-Keene Open Meeting Act.	Accept: The proposed regulation recognizes that Commission committees are subject to the Bagley-Keene Open Meeting Act.	

Source	Recommendation	Staff Response	Notes
7/18/14 Bell, McAndrews & Hiltachk	The WRC is created by statute, and therefore is subject to the Bagley-Keene Open Meeting Act, regardless of whether it is a decision-making or advisory body.	Accept: The proposed regulation recognizes that Commission committees are subject to the Bagley-Keene Open Meeting Act.	
7/14/14 Safari Club International	The WRC must publish its plan to meet.	Accept: The proposed regulation provides that committee meeting agendas are published at least 10 days prior to the meeting.	The Commission must announce its meetings for the year by January 1 of that year, or sixty days prior to the first meeting, whichever is sooner. (§206, Fish and Game Code)
7/14/14 Safari Club International	Upon obtaining suggested presentations from the public, the WRC should publish its proposed agenda.	Reject: The proposed regulation provides that committee meeting agendas will be approved at the Commission meeting immediately prior to the committee meeting and may be amended by the president or vice president, or their designee. Consistent with the Bagley-Keene Open Meeting Act, the proposed regulation provides that Commission and committee meeting agendas will be distributed and posted to the Commission website at least ten days prior to the first day of a meeting.	

Source	Recommendation	Staff Response	Notes
7/14/14 Safari Club International	The WRC should give the public adequate opportunity to prepare responses to agenda items and to submit requests to be heard on agenda items.	Accept: Consistent with current practice, the proposed regulation provides rules for submitting written comments and presentations on an agenda item, and rules for making oral comments or presentations at a meeting.	The Bagley-Keene Open Meeting Act provides that a member of the public must be expressly afforded an opportunity to speak at meetings of a body either before or during the consideration of any agenda item (§11125.7, Government Code).
7/28/14 Michel & Associates	A committee meeting is subject to the Bagley-Keene Open Meeting Act if (a) any portion of the meeting relates to one or more matters within the Commission's jurisdiction, and (b) the meeting is attended (whether in person or otherwise) by all of the following: at least one WRC member, and least one Department employee, and at least one person who is neither a member of the Department nor affiliated with the Commission (e.g., non-committee member Commissioners or Commission staff)	Reject	The Bagley-Keene Open Meeting Act defines a meeting as any congregation of a majority of the members of a state body at the same time and place to hear, discuss, or deliberate upon any item that is within the subject matter jurisdiction of the state body to which it pertains. (§11122.5, Government Code)
Appointments to WRC			
4/14/14 Michel & Associates	The WRC should have at least two members.	Reject	WRC is required to have only one member (§106, Fish and Game Code)
7/14/14 Safari Club International	The membership of the WRC should be two Commissioners	Reject	IBID
4/14/14 Michel & Associates	When the Commission makes its yearly appointment to the WRC, it should, to the extent practicable, appoint two WRC members who	Reject: Committee appointments are dependent upon the background and interest of commissioners.	Commissioners are appointed by the Governor (Article 4, Section 20, California Constitution) and IBID.

Source	Recommendation	Staff Response	Notes
	have different backgrounds (e.g., a hunter and a member with non-hunting interests).		
7/28/14 Michel & Associates	To the extent feasible, the Commission shall place at least one Commissioner with substantial hunting experience on the WRC.	Reject: Committee appointments are dependent upon the background and interest of commissioners.	Commissioners are appointed by the Governor (Article 4, Section 20, California Constitution)
7/28/14 Michel & Associates	If the WRC has a designee, the name of that designee should be announced at a Commission meeting prior to that designee acting as the designee of the WRC.	Reject: It is impracticable to have a regulation requiring that the name of a designee be announced at a Commission meeting prior to a meeting that may not yet have been scheduled. Generally, the designee would be the wildlife advisor or executive director.	The WRC or its designee shall, to the extent practicable, attend meetings of the department staff, including meetings of the department staff with interested parties, in which significant wildlife resource management documents are being developed. (§106, Fish and Game Code)
Committee Quorum			
7/11/14 Michel & Associates	By law, the WRC is only required to have one member, so the claim that two members are needed for WRC meetings is inaccurate.	Accept: The proposed regulation provides that a committee quorum is one appointed member.	
7/28/14 Michel & Associates	WRC meetings will be run by at least one of the WRC members or the designee	Accept in part: The proposed regulation provides that a quorum is one appointed member.	Statute does not provide that a designee may run a WRC meeting (§106, Fish and Game Code).
Non-committee Members' Participation in Committee Meetings			
4/14/14 Michel & Associates	Three Commissioners should never participate in any WRC meeting.	Accept in Part: The proposed regulation provides that Commissioners who are not members of a Committee may attend Committee meetings only as observers.	The prohibitions of the Bagley-Keene Open Meeting Act do not apply to the attendance of a majority of the members of a state body at an open and noticed meeting of a standing committee

Source	Recommendation	Staff Response	Notes
			of that body, provided that the members of the state body who are not members of the standing committee attend only as observers. (§11122.5 (c)(6), Government Code)
7/14/14 Safari Club International	Non-committee Commissioners should resist the temptation of attending WRC meetings in any capacity.	Reject: The proposed regulation provides that Commissioners who are not members of a Committee may attend Committee meetings only as observers.	
7/28/14 Michel & Associates	Non-committee Commissioners may attend a WRC meeting but should be expressly prohibited from participating in anything other than an observational capacity. Non-member commissioners should not make any comment, either directly or indirectly, during a WRC meeting.	Accept: The proposed regulation provides that Commissioners who are not members of a Committee may attend Committee meetings only as observers.	
Committee Recommendations			
4/14/14 Michel & Associates	Because WRC is required to make recommendations, final decisions will need to be made, which could be problematic if there are two Commissioners sitting on the WRC (e.g., a tie). The regulations should address how any disputes between WRC members shall be resolved.	Reject: Committees are not decision making bodies. They are required to make recommendations on matters before the Commission. In addition, the public has an opportunity per the Bagley-Keene Open Meeting Act to request that the Commission consider actions not recommended by a Committee.	
7/28/14 Michel & Associates	If the WRC has two members, any finding or recommendation it makes must be unanimous.	Reject: Committees are not required to have agreement between the members and may forward to the Commission differing recommendations.	

Source	Recommendation	Staff Response	Notes
7/18/14 Bell, McAndrews & Hiltachk	If the WRC members are to operate within their statutory authority as a strictly advisory body, the Commission must provide significant intervening substantive review for all recommendations made by the WRC, and must do so where the deliberations and determinations are open to the public – the Commission cannot simply rubberstamp a recommendation made by WRC. Furthermore, in considering recommendations from the WRC, the Commission must adhere to the Administrative Procedure Act and Bagley-Keene Open Meeting Act.	Accept: The proposed regulation provides that the Marine Resources Committee (MRC) and WRC may meet to make recommendations no later than 15 days prior to the Commission meeting at which the Commission may consider taking action on the subject of the recommendation; Committee recommendations shall be posted to the Commission website at least five days prior to the first day of the meeting; and the public may comment on an agenda item at the time the Commissioners discuss that item, but before any decision is made regarding the agenda topic.	
Public Participation in Committee Meetings – Written Comments and Presentations			
7/11/14 Michel & Associates	If the purpose of the WRC is to have the most enlightened discussion possible…then stakeholders and the public should not be surprised by new information presented for the first time at WRC meetings when there is no opportunity to prepare a rebuttal. If the Executive Director receives a copy of presentation materials a few weeks prior to the WRC meeting, why can't that information be circulated publicly beforehand?	Accept in Part: The proposed regulation provides that written comments received at least 13 days prior to the meeting may be posted to the Commission's website at the same time Commissioners receive them. All writings are made available to the public when distributed to all or a majority of Commissioners. Members of the public who plan to submit information at a meeting are not required to share that	The Bagley-Keene Open Meeting Act provides that "…writings, when distributed to all, or a majority of all, of the members of a state body…shall be made available upon request without delay" (§11125.1, Government Code). The act also provides that a member of the public must be expressly afforded an opportunity to speak at meetings of a body either before or during the consideration of any agenda item (§11125.7, Government Code), which necessarily suggests that

Source	Recommendation	Staff Response	Notes
		information prior to a meeting; the exception in this regulation is for audio or visual presentations, which must be submitted to the executive director by noon five days prior to the day of the meeting.	new information may be provided at a meeting without advance notice.
7/11/14 Michel & Associates	If a deadline is applicable to all, it should be publicized.	Accept: The proposed regulation includes deadlines for receipt of written comments and audio/visual presentations.	
7/14/14 Safari Club International	The WRC must solicit proposed presentations for a meeting from the public generally, and not just from a limited group.	Reject: The proposed regulation provides rules for submitting written comments and presentations on Commission and committee meeting agenda items, with no limitations on who may submit such materials. However, the Commission and committees may ask a certain individual(s) or group(s) to provide information relevant to an agenda item or to work together to develop a collaborative proposal; this would not preclude others from participating in Commission and committee processes. The proposed regulation also provides that members of the public may comment on an agenda item at the time Commissioners discuss that item, but before any decision is made regarding the agenda topic.	

Source	Recommendation	Staff Response	Notes
7/14/14 Safari Club International	The WRC should require presentations to be submitted well in advance of the meeting and should share those presentation materials with the public to give the public the opportunity to prepare comments on those presentations.	Accept in Part: The proposed regulation includes a deadline of noon five days prior to the first day of a meeting for receipt of written comments and audio/visual presentations. All writings and presentations are available to the public when distributed to all, or a majority of all, Commissioners.	
7/18/14 Bell, McAndrews & Hiltachk	All members of the public must be given the opportunity to comment and participate in meetings of the WRC.	Accept: The proposed regulation provides that Commission committees are subject to the Bagley-Keene Open Meeting Act and provides rules for written and verbal participation.	
Public Participation in Committee Meetings Should not Preclude Public Participation during Commission Meetings			
7/11/14 Michel & Associates	Clarification is needed whether the WRC is going to be the only opportunity for public comment on issues raised at WRC meetings, or if the public will have an opportunity to comment on all issues agendized for Commission meetings, even if that issue was already discussed (or not) at a WRC meeting.	Accept: The proposed regulation provides that the public may comment on an agenda item at the time Commissioners discuss that item, but before any decision is made regarding the agenda topic.	The Bagley-Keene Open Meeting Act includes an allowance to not take testimony on items discussed in committee, but it is not included in our proposed regulation. "…the state body shall provide an opportunity for members of the public to directly address the state body on each agenda item before or during the state body's discussion or consideration of the item. This section is not applicable if the agenda item has already been considered by a committee composed exclusively of members of the state body at a public meeting where interested
7/14/14 Safari Club International	Need to clarify how the Commission and WRC will work together and, in particular, whether a discussion on the WRC agenda will provide the only opportunity for the public to comment on matters that result in WRC recommendations to the	Accept: The proposed regulation provides that the public may comment on an agenda item at the time Commissioners discuss that item, but before any decision is made regarding the agenda topic.	

Source	Recommendation	Staff Response	Notes
	Commission.		members of the public were afforded the opportunity to address the committee on the item, before or during the committee's consideration of the item, unless the item has been substantially changed since the committee heard the item, as determined by the state body." (§11125.7, Government Code)
7/28/14 Michel & Associates	The ability to speak at a WRC meeting on a particular item should not preclude a member of the public from attending a later Commission meeting and commenting on that item, or a related item, during the Commission meeting but prior to the Commission taking action.	Accept: The proposed regulation provides that the public may comment on an agenda item at the time Commissioners discuss that item, but before any decision is made regarding the agenda topic.	
Subcommittees			
4/14/14 Michel & Associates	WRC needs rules to explain exactly how and when subcommittees will be formed.	Reject: If the Commission desires to move forward with this proposal, staff recommends doing so in a separate rulemaking.	
7/28/14 Michel & Associates	WRC should not create any sub-committee or other entity without express approval by the full Commission after the Commission has taken public comment on the issue.	Reject: If the Commission desires to move forward with this proposal, staff recommends doing so in a separate rulemaking.	
7/28/14 Michel & Associates	Any subcommittee or other entity created by the WRC should only meet as part of a WRC meeting.	Reject: It is impracticable to have a regulation requiring that meetings of a subcommittee only take place as part of a committee meeting, which defeats the purpose of creating such a group.	
7/28/14 Michel & Associates	All communications between members of any subcommittee or other entity created by WRC should be treated as public records.	Reject: The Public Records Act dictates the extent to which communications between members of any entity created by WRC are treated as public records.	
Webcasting and Video Recording Committee Meetings			

Source	Recommendation	Staff Response	Notes
4/14/14 Michel & Associates	WRC meetings should be video recorded and posted on the internet.	Reject: Though it may be desirable to video record and/or webcast committee meetings, for the foreseeable future the Commission does not have the necessary resources, making a regulation impracticable. WRC meetings are currently audio-recorded and posted on the Commission website.	This recommendation exceeds the requirements of the Bagley-Keene Open Meeting Act.
7/28/14 Michel & Associates	WRC meetings should be audio recorded. WRC meetings should be video recorded and broadcast on the internet unless the Commission makes a finding that as to a specific year, funding is not reasonably available for video recording.		
Purpose/Function of Committee Meetings			
7/11/14 Michel & Associates	If the WRC meeting will provide for a longer format pre-discussion of a discussion that will take place again before the full Commission, then no binding action (other than perhaps a recommendation to the Commission action) takes place at a WRC meeting. If that is the case, then the Commission should say so unequivocally.	Reject: WRC is established by statute that does not authorize WRC to take binding action on behalf of the Commission.	"The commission shall form a wildlife resources committee from its membership consisting of at least one commissioner. The committee shall report to the commission from time to time on its activities and shall make recommendations on all nonmarine resource matters considered by the commission. The committee or its designee shall, to the extent practicable, attend meetings of the department staff, including meetings of the department staff with interested parties, in which significant wildlife resource management documents are being developed." (§106, Fish and Game Code)
7/14/14 Safari Club International	Asks for clarification regarding statements made that suggested	Reject: Membership and meetings of committees and the	

Source	Recommendation	Staff Response	Notes
	that WRC meetings can operate as official Commission meetings.	Commission are not interchangeable pursuant to the various requirements of the Bagley-Keene Open Meeting Act.	
7/28/14 Michel & Associates	Unless specific situations dictate otherwise, WRC meetings should be structured to provide participants opportunities to engage in detailed discussions with Commission staff, Department staff, the presenter (if applicable), and stakeholders. The WRC should strive to provide an informal setting at its meetings where all participants will have an opportunity to provide input into the conversation. However, if required, WRC should retain the option to apply a more structured setting.	Reject: It is not necessary to codify this in regulation. The proposed regulation requires sufficiently less structure and rules for committee meetings than Commission meetings to allow for greater flexibility and less formality.	
Miscellaneous WRC Procedures/Practices			
4/14/14 Michel & Associates	Fish and Game Code §106 does not actually authorize or suggest the WRC is to perform its own meetings; the Commission should explain to the public why the Commission is going beyond its statutory mandate.	Reject: It is not necessary to codify this in regulation. WRC is required to report from time to time on its activities and shall make recommendations on all non-marine resource matters before the Commission (§106, Fish and Game Code); the only logical mechanism for these to occur, per the Bagley-Keene Open Meeting Act, is through public meetings.	
4/14/14 Michel &	The WRC is, to the extent	Reject: The recommendation	

Source	Recommendation	Staff Response	Notes
Associates	practicable, to attend meetings of DFW staff, including meetings of DFW staff with interested parties, in which significant wildlife resource management documents are being developed. Are these meetings all going to be open to the public and publicly noticed? Is there going to be a public record of these meetings occurring?	would be duplicative. The Bagley-Keene Open Meeting Act defines public meetings.	
7/28/14 Michel & Associates	The WRC should strive to adhere to an “equal time” model to the extent practicable, to prevent an unreasonable disparity of non-public WRC meetings being granted to specific parties holding disparate viewpoints.	Reject: This recommendation does not pertain to meeting procedures but to one-on-one meetings between a WRC member and a member of the public.	
7/28/14 Michel & Associates	A log should be kept of all WRC-related meetings attended by WRC members or the WRC-designee.	Reject: This recommendation is excessive. If questions arise about a specific meeting or document, members of the public have recourse through the Public Records Act.	

Source	Recommendation	Staff Response	Notes
Communication Should be Made on Government-Issued Devices			
6/5/15 Michel & Associates	The Commission should mandate that all electronic correspondence concerning official Commission matters be conducted through government issued e-mail accounts that are stored on government owned servers or other electronic data storage mechanism. The use of personal email accounts for transmitting communications relating to any government business should be prohibited. The use of text messaging and other technologies that don't create a record should be prohibited or discouraged.	Reject: Inappropriate for meeting procedures. If the Commission desires to move forward with a regulation regarding communication methods, staff recommends doing so in a separate rulemaking.	
7/8/15 National Shooting Sports Foundation	The use of personal email, personal cell phones, or any other personal device used for sending or receiving official government communications or business should be strictly prohibited or highly discouraged. The Commission should require all business communications be conducted via government issued technology and stored on government servers/databases,	Reject: Inappropriate for meeting procedures. If the Commission desires to move forward with a regulation regarding communication methods, staff recommends doing so in a separate rulemaking.	

Source	Recommendation	Staff Response	Notes
	etc.		

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April 14, 2014

VIA EMAIL, U.S. POST
& HAND DELIVERY

Sonke Mastrup
Executive Director
CALIFORNIA FISH & GAME COMMISSION
P.O. Box 944209, Sacramento, CA
smastrup@dfg.ca.gov

Re: Comments on Proposed Regulations and Notice of Improper Wildlife Resources Committee Procedures

Dear Mr. Mastrup:

We write on behalf of our client, the National Rifle Association of America, to comment on proposed policies and to notify you of apparent improprieties in the proposed adoption of policy and procedures related to the Wildlife and Marine Resources Committee (respectively "WRC" and "MRC").

The agenda for the Fish & Game Commission ("Commission") meeting of February 5, 2014, includes the following agenda item: "DISCUSSION OF DRAFT POLICY AND PROCEDURES FOR WILDLIFE AND MARINE RESOURCES COMMITTEES" (the "Draft") A copy of the Draft is available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

The Draft, as written, is a "regulation[1]" under state law. So the Commission appears to be

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[1] Government Code section 11342.600 states, in its entirety,

> '[r]egulation' means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure.

Further, as used in section 11342.600, the term "state agency" includes every state commission. Gov't

improperly attempting to create "underground regulations[,]" i.e., regulations that are not valid because they were not adopted in accordance with the proper procedural guidelines.

I. The Proposed Procedures Must Be Properly Enacted Before They Can Be Implemented

California law is clear about the prohibition on the issuance or use of underground regulations:

> No state agency shall issue, utilize, enforce, or attempt to enforce any guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule, which is a regulation as defined in Section 11342.600, unless the guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule has been adopted as a regulation and filed with the Secretary of State pursuant to this chapter.

Gov't Code § 11340.5(a).

Case law confirms that the proposed rules in the Draft would be improper "underground regulations" if they arose as part of the implementation of the duties created by Fish and Game Code section 105 and 106, which, respectively, created the MRC and WRC. *See Engelmann v. State Bd. of Educ.*, 2 Cal. App. 4th 47, 62 (1991) (holding Board of Education was required to go through rule making process found in the Administrative Procedures Act when creating the guidelines and manuals for the mutli-level review process used for selecting the textbooks that could be used in public schools).

Accordingly, the Commission should follow normal regulatory standards (e.g., a series of three properly noticed Commission meetings used to introduce, discuss, and vote on a proposed regulation that was noticed via publication in the state's Regulatory Notice Register) to move forward with the creation of the proposed policies/regulations. Once the proper process has been complied with and the regulations have been filed with the Secretary of State, only then can the regulations be relied upon by the WRC.

II. Substantive Comments Regarding the Proposed Regulations

1. Based on the lack of notice regarding the formation and dissolution of the Predatory Policy subcommittee, it is clear the WRC needs rules to explain exactly how and when subcommittees will be formed. The Draft should be revised accordingly.

2. Fish & Game Code section 106 does not actually authorize or suggest the WRC is to perform its *own* meetings; the Commission should explain to the public why the Commission is going beyond its statutory mandate.

3. The WRC should have at least two members; there appears to be no difference between

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Code § 11000. Thus, the Commission is clearly a state agency for the purposes of section 11342.600.

a Commissioner's own abilities and a one-person WRC, and having two members will decrease the possibility of hasty or unfairly biased decision making.

4. The Draft should include a provision that, when the Commission makes its yearly appointment to the Committee, it should, to the extent practicable, appoint two WRC members who have differing backgrounds (e.g., a hunter and a member with non-hunting interests) to help ensure that recommendations have been "vetted" as much as possible before they get to the Commission.

5. Because the WRC is required to make recommendations (i.e., take "action[,]" as that term is defined in Government Code section 11122), that means final decisions will need to be made, which could be problematic if there are two Commissioners sitting on the WRC (e.g., a "tie"). The proposed regulations should address how any disputes between WRC members shall be resolved.

6. The WRC is, "to the extent practicable," to "attend meetings of the department staff, including meetings of the department staff with interested parties, in which significant wildlife resource management documents are being developed." Fish & Game Code § 106. Are these meetings all going to be open to the public and publicly noticed? Is there going to be a public record of these meetings occurring? If they are not, and further assuming the department has discretion as to who it meets with in private concerning the development of "significant wildlife resource management documents[,]" there are real transparency and equal access problems here.

7. Because the WRC was created by statute and because it includes more than one member, it is subject to the requirements of the Bagley-Keene Act. Gov't Code §§ 11121, 11123. Regardless, if it is the Commission's position is that the WRC, or any "subcommittees" it produces, will not be treated as if subject to the Bagley-Keene Act, the Commission should explain to the public the considerations that the Commission has found to outweigh the public's interest in open government.

8. Three Commissioners should never participate in any WRC meeting. The Draft obscures, at the least, the limits of Government Code section 11122.5(c)(2)(6). That section states:

> [a] majority of the members of a state body [e.g., the Commission] shall not, outside of a meeting authorized by this chapter, use a series of communications of any kind, directly or through intermediaries, to discuss, deliberate, or take action on any item of business that is within the subject matter of the state body . . . . The prohibitions of this article do not apply to . . . attendance of a majority of the members of a state body at an open and noticed meeting of a standing committee of that body, ***if*** the members of the state body who are not members of the standing committee attend only as observers.

(Emphasis added).

It seems, however, that someone within the Commission or related staff wants to blur the lines about non-committee member Commissioners attending committee meetings. This can be seen via a comparison of the Draft and the prior "approved" MRC rules previously posted on the Commission's website.

Compare the following.

- In the event that another Commissioner wishes to attend a meeting of the MRC, and there are two members of the MRC present at the meeting, that Commissioner may attend the meeting but must recuse himself or herself from any discussions related to Commission business. [[2]]

- Non-chair Commissioner [sic] may attend committee meetings.[[3]]

There is no legitimate reason to make this language *less* clear than it was in the prior draft. Further, it is debatable if the passage, as originally stated, is an accurate representation of the limitation stated in section 11122.5(c)(2)(6). Having three Commissioners on the dias during a committee meeting is inappropriate. If the Commission is going to have a meeting, it should be clearly noticed as a *Commission* meeting. History has show that non-committee Commissioners are likely going to speak at committee meetings even though doing so is patently inappropriate, and the rules should be absolutely clear to everyone, *including Commissioners and staff*, that non-committee Commissioners cannot legally speak at committee meetings.

9. WRC meetings should not be video recorded and posted on the internet. It was mentioned at the last WRC meeting that the cost of such service would be a problem. Though no actual cost information was provided, with the availability of YouTube and inexpensive digital cameras (perhaps even state-owned cellular phones), that statement is difficult to accept. Indeed, if the Commissioners and staff are all having travel costs reimbursed, it seems that the cost of video, which would *guarantee public access*, is likely much less than that which is already expended.

During the meeting of February 5, 2014, the Commission discussed the possibility of live-streaming WRC meetings. During that discussion, you mentioned that live-streaming meetings costs approximately six to eight thousand dollars per meeting, and the it was unclear if the Department of Fish and Wildlife had the money in its budget needed to live-stream the meetings. Because of the importance of public participation,

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[2] http://www.fgc.ca.gov/meetings/committees/MRCrulesandprocedures052213.pdf.

[3] http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

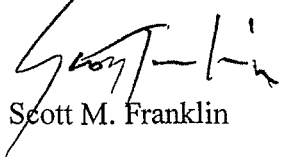
live streaming and later web access should be considered a priority.

10. To the extent that the Draft states committee meetings "may be taped and broadcast on the internet at the discretion of the Commission[,]" this provision should be clarified, as it can reasonably be interpreted as a prohibition on the public recording committee meetings, subject only to express permission of the Commission. *See* Gov't Code § 11124.1 (members of the public have the right to use a video recording device to record meetings of state bodies).

III. Conclusion

In summary, the Commission should incorporate all of the above comments into a new draft set of regulations that can be considered and adopted through the appropriate procedural mechanisms.

Sincerely,
Michel & Associates, P.C.



Scott M. Franklin

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July 11, 2014

VIA EMAIL & U.S. POST
President G. Michael Sutton
Vice President Jack Baylis
Commissioner Jim Kellogg
Commissioner Richard B. Rogers
Commissioner Jacque Hostler-Carmesin
California Fish & Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

Re: Request Wildlife Resources Committee Procedure and Meeting Protocols Be Put In Place *Before* That Committee Makes Any Recommendations to the Fish & Game Commission

Honorable Commissioners:

We write on behalf of our client the National Rifle Association.

Recently while conducting meetings, the Commission and the WRC have blurred the lines between a true Commission hearing, where policy decisions can legally be made and official actions can be taken, and WRC meetings where apparently the only action possible is the WRC making a recommendation for the Commission to consider. This letter is a formal request that the Fish & Game Commission (Commission) require the Wildlife Resources Committee (WRC) to establish and publicize rules and procedures under which it will operate before the WRC takes any further substantive action, and that such procedural rules be vetted through the normal regulatory approval process before they become effective.

1. The Commission is Sending Mixed Signals About the Authority of the WRC

There is confusion about the role and authority of the WRC because at Commission and WRC meetings, the Executive Director, as well as Commissioners Sutton and Baylis, have inaccurately stated that WRC meetings are a form of, or can operate as, official Commission meetings. The Commissioners and Commission staff have also made numerous other confusing and conflicting comments about the role, limitations, and procedural rules of the WRC. Commissioner Sutton said that the WRC meetings are of an "informal nature." But there has been no clarification about whether

the WRC is going to be the only opportunity for public comment on issues raised at WRC meetings, or if the public will have opportunity to comment on all issues agendized for Commission meetings, even if that issue was already discussed (or not) at a WRC meeting. This is compounded by the fact that WRC meeting videos are not available online, notwithstanding multiple requests from various segments of the stakeholder community for that type of access.

If the WRC meeting will provide for a longer format pre-discussion of a discussion that will take place again before the full Commission, then no binding action (other than perhaps a recommendation to the Commission action) takes place at a WRC meeting. If that is the case, then the Commission should say so unequivocally. This clarification would drastically reduce the amount of confusion being created by the uncertain state of the WRC's procedures and its authority.

2. *The Commission Must Establish Procedural Rules for the WRC Before It Allows the WRC to Address Substantive Issues*

Based on the recently released agenda for the July 28, 2014, WRC meeting, it appears that the Commission is moving forward with potentially substantive decision making at the upcoming next WRC meeting, even though the procedures for how the WRC will operate, and significantly, how the public can participate in WRC meetings, have not been publicized and apparently do not exist. Because there is no system or procedures in place, our clients, other stakeholders, and the interested public are unable to effectively participate in the rule and policy making process.

This office sent the Executive Director of the Commission a letter on April 14, 2014, raising concerns that the previously proposed WRC rules would be improper as "underground regulations." That letter also outlined nine other specific issues that are confusing or otherwise unclear as to plans for the future operation of the WRC. A copy of the letter is attached.

Our office recently followed up with the Executive Director about that letter. We were informed that the Commission has addressed the concerns raised our letter of April 14, 2014. We respectfully disagree. No new proposed procedural rules have been published, nor have we received a response letter addressing the issues noted in the letter of April 14, 2014.

So we now ask the Commission to please tell us; how have our client's concerns as recited in our April 14, 2014 letter, been addressed?

3. *The Commission Seems Biased, Favoring Participation by Anti-Hunting Groups Over Pro-Hunting Groups*

Holding WRC meetings without established procedures facilitates the impression that different rules apply to different stakeholders. Certain stakeholders appear to have more access and to information about WRC activities and plans. This not only creates an appearance of impropriety and fosters an antagonistic situation, it will result in increased investigations by watchdog associations suspecting bias in the way the Department and Commission are conducting their affairs.

If published rules are put in place, it would not only provide some clarity, it would also help limit unfair treatment, reduce the appearance of bias or conflicts of interest, alleviate concerns of bias,

and facilitate a more productive regulatory process.

4. Stakeholder Presentation Materials Should Be Made Publicly Available Well Before WRC Meetings

Furthermore, it was only because this office asked the Executive Director that we found out that the deadline for making a request to make a presentation at the July 28, 2014, WRC meeting was July 7, 2014. Assuming this was a deadline that was applicable to all who wanted to make a presentation to the WRC, shouldn't it have been publicized? And if that deadline did not apply to every group that wanted to make a presentation, our clients object to any content-based scheduling advantage that is being granted to other stakeholders.

If the purpose of the WRC is to have the most enlightened discussion possible concerning issues headed to the full Commission for consideration, then stakeholders and the public should not be surprised by new information presented for the first time at WRC meetings when there is no opportunity to prepare a rebuttal.

It is our understanding that there is a currently unwritten rule that presenters at WRC meetings are required to give the Executive Director a copy of presentation materials a few weeks prior to the WRC meeting. Though our clients don't necessarily agree with such a rule, if it is going to be enforced, why couldn't that information be circulated publicly beforehand?

5. The Commission's Attempt to Create an "Alternate" WRC Member Is Disconcerting

Another unsettled and troubling issue related to the WRC is the attempt (foiled by a loss of quorum at the June 4, 2014, meeting of the Commission) to create an "alternate" WRC "member" position. By law, the WRC is only required to have one member, so the claim that two members are need for meetings is inaccurate. Fish & Game Code § 106 ("The commission shall form a wildlife resources committee from its membership consisting of at least one commissioner.").

The WRC has *two* committee "members," Commissioners Kellogg and Baylis. If only one of committee "members" is unable to attend a WRC meeting, there is still no quorum or other procedural limitation that prevents a single WRC committee member from going forward with a WRC meeting.

The fact that some Commissioners are pushing very hard to have a third Commissioner appointed as a "member" to the WRC, even though there is no need to do so, raises concerns that by having three Commissioners at WRC meetings, those Commissioners would then attempt to act as the Commission and take a binding vote on Commission business.

At the January 15, 2014, WRC meeting, both the Executive Director and Commissioner Baylis indicated that had the three Commissioners present at that meeting wanted to, they could have acted as the Commission (an assertion we vigorously disagree with). Though the January 15, 2014, meeting was technically a Commission meeting, it was also an illegal meeting because it was not properly noticed as a Commission meeting.

If the Commission tries to use a noticed WRC meeting as an opportunity to take a Commission

vote on a controversial topic, that will result in litigation.

The Commission should consider the implications of the WRC's current methods of operation, and should draft a new set of proposed procedures for the WRC. In doing so, the "alternate" issue should be resolved.

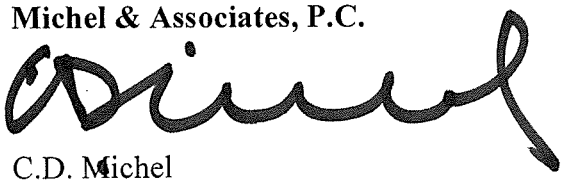
6. Reservation of Rights

Because it is not clear to us what the limitations are about making comments at the upcoming WRC and at later, related Commission meetings, our clients expressly reserve all rights to make a comment/presentation and at the July 28, 2014, WRC meeting and the August 6, 2014 Commission meeting, regardless of whether our client participates in one or both of these meetings.

7. Conclusion

The next WRC meeting should be used to formalize a set of proposed procedural rules that can be reviewed and approved by the Commission through its normal regulatory process. Otherwise the WRC's actions will continue to cause stakeholders and the public to believe that the Commission has lost its objectivity, and that it is now a biased politicized body. This directly conflicts with the reason the Commission was created in the first place. See *Young v. Dep't of Fish & Game*, 124 Cal. App. 3d 257, 273 (1981) (noting that the constitutional amendment that resulted in the Commission being a constitutional body "was to remove the old Fish and Game Commission from political influence").

Sincerely,
Michel & Associates, P.C.



C.D. Michel

CDM/smf

Enc.: April 14, 2014 Letter

cc: Sonke Mastrup
Executive Director
CALIFORNIA FISH & GAME COMMISSION
P.O. Box 944209, Sacramento, CA
smastrup@dfg.ca.gov

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July 18, 2014

VIA HAND DELIVERY

Commissioner Michael Sutton, President,
Commissioner Jack Baylis, Vice President.
Commissioner Jim Kellogg
Commissioner Richard B. Rogers
Commissioner Jacque Hostler-Carmesin
Executive Director Sonke Mastrup

Fish and Game Commission
1416 Ninth Street, Room 1320
Sacramento, CA 95814

RE: Wildlife Resources Committee

Dear Commissioners and Mr. Mastrup:

Our firm represents the National Shooting Sports Foundation ("NSSF"). NSSF is the trade association for America's firearms, ammunition, hunting and recreational shooting sports industry. NSSF's more than 10,000 members are comprised of manufacturers, distributors, retailers, shooting ranges, sportsmen's organizations and publishers, including many based in California. NSSF's mission is to promote, protect and preserve hunting and shooting sports.

The purpose of this letter is to address concerns of the NSSF regarding the transparency of the Wildlife Resources Committee ("WRC"). The policies and decisions of the California Fish and Game Commission ("Commission"), and the actions of the WRC have a direct and substantial, material impact on businesses of a significant number of our members, including those based in California.

Effective January 1, 2014, the California Fish and Game Code was amended by the Legislature to require the Commission to form a wildlife resources committee to make recommendations on all nonmarine resource matters considered by the Commission. (Fish and Game Code §106.) However, the Commission has not adopted rules of order and procedures for the WRC, and does not appear to adhere to existing statutory requirements.

Although the Commission apparently views the WRC as an "informal" committee, the Bagley-Keene Open Meeting Act ("the Bagley-Keene Act") covers all state bodies. (Gov. Code §§ 11120-111321.) If a body is created by statute, such as by a statute added to the Fish and Game Code, it is subject to the Bagley-Keene Act regardless of whether it is decision-making or advisory. (Gov. Code §11121(a); see also subdivision (c) which explicitly applies to certain advisory committees.) This requires the WRC to adhere to basic requirements involving notice, access to records, and the opportunity for public comment. This is to ensure transparency and accountability in the governmental process.

Pursuant to the Bagley-Keene Act, at least ten days prior to the WRC meetings, the WRC must prepare an agenda of all items to be discussed or acted upon at the meeting. (Gov. Code § 11125(b).) The notice must also state the time and the place of the meeting and give the name, phone number and address of a contact person who can answer questions about the meeting and the agenda. (Gov. Code § 11125(a).) Not only agendas, but also all other materials distributed to a majority of the WRC members, must be made available to the public without delay. (Gov. Code § 11125.1.) This includes all members of the public, and not just those that support the WRC's views on a recommendation. Further, all members of the public must be given the opportunity to comment and participate in the meetings of the WRC. (Gov. Code §11125.7.) NSSF respectfully requests that these requirements be strictly followed by the WRC.

As a separate issue, the WRC must ensure that it is working within the confines of its statutory authority. The Fish and Game Code provides that the WRC is only to make recommendations to the Commission. (Fish and Game Code §106.) A committee does not possess decision-making authority and is considered strictly advisory in nature if it is formed for the sole purpose of researching a topic and preparing a recommendation for submission to another governmental body that has final decision-making authority. (2 CCR § 18701.)

However, a committee is no longer considered to be strictly advisory if the committee members advise or make recommendations to the decionmaker either directly or without significant intervening substantive review by: (1) conducting research or making any investigation which requires the exercise of judgment on the part of the committee member for the purpose of influencing a governmental decision; or, (2) preparing or presenting any report, analysis, or opinion, orally, or in writing, which requires the exercise of judgment on the part of the committee member for the purpose of influencing a governmental decision. (2 CCR § 18702.2.) If the WRC members are to operate within their statutory authority as a strictly advisory body, the Commission must provide significant intervening substantive review for all recommendations made by the WRC, and must do so where the deliberations and determinations are open to the public – the Commission cannot simply rubberstamp a recommendation made by the WRC. Furthermore, in considering recommendations from the WRC, the Commission must adhere to the Administrative Procedures Act and Bagley-Keene Act.

NSSF has recently raised a series of concerns related to the impartiality and transparency of the Commission. The operation of the Wildlife Resources Committee reinforces NSSF's concerns about the ability of the current Commission to fairly and openly manage California's treasured wildlife. NSSF exhorts the Commission to examine its operational policies and its accessibility to all stakeholders.

Very truly yours,

Ashlee Titus
Attorney for National Shooting Sports Foundation

ANT/cfd

cc: Governor Jerry Brown, via Hand Delivery
Christopher Ames, Senior Assistant Attorney General (Ret.)
via email Christopher.Ames@doj.ca.gov

Safari Club International

A NON-PROFIT ORGANIZATION • DEDICATED TO CONSERVING WILDLIFE AND PRESERVING HUNTING

July 14, 2014

VIA E-Mail, FAX and U.S. Post
Mr. Michael Sutton, President,
Mr. Jack Baylis, Vice President.
Mr. Jim Kellogg
Mr. Richard B. Rogers
Ms. Jacque Hostler-Carmesin
Mr. Sonke Mastrup, Executive Director
California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

Re: Request for Transparency, Structure and Fairness in the Operations of the California Wildlife Resources Committee

Dear Sirs and Madam:

On behalf of the California chapters of Safari Club International (SCI California), we are submitting this letter to request major changes in the manner in which the California Wildlife Resources Committee (WRC) conducts its business. In the past several months and continuing into the present, the WRC has operated without formal procedural constraints. As a result, the WRC and by implication the entire Fish and Game Commission (Commission) have created the appearance that they are bodies that make decisions without fairness and based on the agendas of certain interest groups who have special access to the WRC and the Commission. Without procedural rules that require that all interest groups be given equal access to the WRC's decision-making processes, all recommendations made by the WRC and all determinations that the Commission makes based on WRC recommendations violate the law and potentially harm the resources that the Commission is obligated to protect.

Safari Club International Chapters in California

There are thirteen California Chapters of Safari Club International, collectively representing over 5,000 members and 30,000 California affiliates who hunt and participate in sustainable wildlife conservation. SCI chapters and their members participate in numerous conservation projects throughout the state. SCI California Chapters attend WRC and Commission meetings and make every effort to play active roles in the state's decision-making concerning

wildlife conservation and management. The activities of the WRC have deprived SCI California Chapters and their members of fair and equal access to these important decisions.

The WRC and Commission Have Created the Impression That Only Certain Interest Groups Have Access to Their Decision-Making Processes

The July 28, 2014 meeting agenda for the WRC includes "Discussion of Options to Implement Non-lead Ammunition Requirements" and identifies a presentation on this topic by Audubon California, Defenders of California and the Humane Society of the United States. To SCI California's knowledge, no organization or individual representing the hunting community was offered the opportunity to make a presentation on this issue. Similarly, on the agenda for the January 15, 2014 meeting included a "Discussion and Update of Predator Management Subcommittee's Recommendations for Changes to Predator Management Policies/Regulations." The recommendations reviewed by the WRC for this discussion were submitted by only two entities, HSUS and Project Coyote. To SCI California's knowledge, no organization or individual representing the hunting community was asked to participate on the Predator Management Subcommittee or to engage in the development of the recommendations for changes to the Predator Management Policies/Regulations.

The WRC is patently offering access to only certain interest groups for development of its recommendations and presentations. If the WRC, and by implication the Commission, wants to avoid the appearance, taint and potential invalidity of its decisions due to inappropriate bias, it should take immediate action to create procedures and regulations that impose measures to prevent such bias.

The Commission Must Establish and Publish Procedural Rules for the WRC Before the WRC Makes Any Further Recommendations or Takes Any Further Actions

Currently, the WRC is operating without formally adopted or publicized procedures for its decision-making process. Nevertheless, the WRC has already held a meeting on January 15, 2014 and plans another meeting for July 28, 2014. Without such established procedures, all WRC recommendations are potentially invalid and will have a similar impact on the decisions that the Commission makes that are based upon these recommendations. In the absence of such procedures, the public, and in particular members of SCI California Chapters, cannot actively participate in the WRC meetings and recommendations in a meaningful and significant way.

In a July 8, 2014 e-mail from Executive Director Sonke Mastrup to Kathy Lynch, Mr. Mastrup admitted that the WRC has no formal procedures established for their meetings and referred to the WRC meeting scheduled for July 28, 2014 as a "workshop." Unfortunately, the labeling of the meeting as a "workshop" offers little to the public in terms of how to offer meaningful participation in the WRC's work. The "workshop" label does nothing to remedy the imbalances in the access gained by certain interest groups and does not appear to have any impact on the Commission's use of and reaction to the WRC's recommendations. Informality does not excuse bias or illegality. Consequently, SCI California Chapters strongly recommend that the WRC July 28, 2014 "workshop" be cancelled (as was the May

2014 WRC meeting) and that no future meetings be scheduled until fair and predictable procedures can be adopted. In addition, the public should be permitted to play a role in establishing such procedures, to make certain that the WRC's agenda and its subcommittees are fairly represented by all or at least a balanced share of the constituencies interested in the WRC's and Commission's responsibilities.

The Commission Must Clarify Its Relationship With the WRC As Well as The Extent of the WRC's Authority

SCI California Chapters are very concerned that the lines between the WRC and the Commission have been blurred. According to the information on the Commission's own website, the WRC cannot operate instead or on behalf of the Commission. "It is important to note that the committee chairs cannot take action independent of the full Commission. Instead, the chairs make recommendations to the full Commission at regularly scheduled meetings." Consequently, SCI California Chapters are concerned about statements made by Executive Director Mastrup and Commissioners Sutton and Baylis that have suggested that WRC meetings can operate as official Commission meetings. SCI California Chapters need better clarification about how the Commission and WRC will work together, and in particular whether a discussion on the WRC agenda will provide the only opportunity for the public to comment on matters that result in WRC recommendations to the Commission.

The WRC's Membership Should Not Be Increased With an "Alternate" WRC Member

SCI California Chapters are aware of recommendations that the Commission appoint a third "alternate" Commissioner to the WRC. If a third Commissioner was added to the WRC's Membership as an alternate, the WRC would run the risk of turning all of its meetings into unpublicized Commission meetings. Such attempt to bypass the statutory limitations and requirements for Commission meetings could taint the recommendations of the WRC meetings, as well as the decisions made by the Commission at such meetings, or based on the recommendations made at these meetings. SCI strongly recommends that the membership of the WRC remain at two Commissioners only and that the remaining Commissioners resist the temptation of attending WRC meetings in any capacity.

WRC Meeting Must Give the Public a Meaningful Opportunity to Participate

As indicated above, the actions of the WRC up until this date have given the appearance that only certain interest groups have access to the WRC agenda, to offer presentations at WRC meetings and to influence the WRC decision-making processes. These practices must be immediately reversed. At the outset, the WRC must publish notice of its plan to meet and must solicit proposed presentations for the meeting from the public generally, and not just from a limited group. Upon obtaining suggested presentations, the WRC should publish its proposed agenda and give the public adequate opportunity to prepare responses and to submit requests to be heard on agenda items. The WRC should require presentations to be submitted well in advance of the meeting and should share those presentation materials with the public to give the public the opportunity to prepare comments on those presentations.

The only way that the WRC can make meaningful recommendations to the Commission is to make certain that it solicits data from all perspectives. Unless the WRC immediately develops a process to give the public an opportunity to participate in its decision-making, the

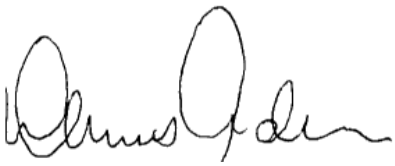
WRC's recommendations will be useless and will make the Commission's decisions vulnerable to challenge.

Participation in the July 28, 2014 WRC Meeting

In the absence of any established procedures for the upcoming WRC meeting, and future meetings, SCI California Chapters expressly reserve all rights to make comments/ presentations at these meetings and at the August 6, 2014 Commission meeting.

Thank you for the opportunity to present these concerns. Should you have any question concerning this letter or concerning the intent of the SCI California Chapters to participate in the July 28, 2014 WRC Meeting and/or the August 6, 2014 Commission meeting, please contact Anna M. Seidman, Director of Litigation, Safari Club International, 202-543-8733 or aseidman@safariclub.org.

Sincerely yours,



Dennis Anderson
Safari Club International, California Legislative Coordinator

cc: Governor Edmund G. Brown
Safari Club International California Chapters
Ms. Kathryn Lynch, Legislative Advocate

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DAVID T. HARDY
TUCSON, AZ

July 28, 2014

SENT VIA E-MAIL
& HAND DELIVERED

California Fish and Game Commission
c/o Executive Director Sonke Mastrup
P.O. Box 944209
Sacramento, CA 94244-2090

sonke.mastrup@fgc.ca.gov

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Re: Petition for Rule Making by the Fish & Game Commission Regarding the Need for Formal Procedures and Rules for the Proper and Fair Operation of the Wildlife Resources Committee

Dear Mr. Mastrup:

This Petition, submitted by the National Rifle Association of America ("NRA") pursuant to Government Code sections 11340.6 and 11340.7, requests that the California Fish & Game Commission (the "Commission") enact regulations to ensure public participation and fair debate vis-à-vis the Wildlife Resource Committee (the "WRC").

I. STANDING OF PETITIONERS

Petitioner NRA is an Internal Revenue Code § 501(c)(4) nonprofit corporation, incorporated in the State of New York in 1871, with principal offices and place of business in Fairfax, Virginia. NRA has approximately five million members, and hundreds of thousands of members in California.

The founders of NRA desired to create an organization dedicated to marksmanship, or, in the parlance of the time, to "promote and encourage rifle shooting on a scientific basis." NRA's bylaws, at Article II, Section 5, state that one of the purposes of NRA is "[t]o promote hunter safety, and to promote and to defend hunting as a shooting sport and as a viable and necessary method of fostering the propagation, growth, conservation, and wise use of our renewable wildlife resources."

NRA has been a party to or supported multiple lawsuits throughout the nation supporting and

defending the right to keep and bear firearms for hunting, sport shooting, and self-defense. Indeed, one of NRA's key functions is to preserve the tradition of hunting, by protecting it from unreasonable and unnecessary restrictions.

NRA has an established record of advocating against restrictions on hunting based on scientifically unsupported claims of alleged environmental harm.

Petitioner David Halbrook resides in Victorville, California, and has been a hunter for basically his entire life. Mr. Halbrook has hunted various big and small game in California in the past, and he intends to hunt in California in the future. Mr. Halbrook is a member of NRA and is the executive director of the Hunt For Truth Association.

Based on the foregoing, the petitioners have standing to make the requested regulatory changes.

II. REQUESTED REGULATORY CHANGES

Petitioners hereby seek the amendment of California Code of Regulations ("CCR"), title 14, via the addition of a new section dedicated to the procedural aspects of the operation of the WRC, including, but not limited to, public meetings held by the WRC.

The following provisions, based on draft language created by the Commission, should be included in the new section.

(A) Section 108 of the Fish and Game Code requires the commission to adopt rules to govern the business practices and processes of the Commission. Section~~s 105 and~~[1] 106 of the Fish and Game Code require the commission to establish ~~a minimum of two committees, the Marine Resources Committee and~~[2] the Wildlife Resources Committee~~, respectively~~.

(B) A minimum of one, but no more than two members of the Commission will be appointed to the Wildlife Resources C~~c~~ommittee~~s~~ at the first Commission meeting of each calendar year. To the extent feasible, the Commission shall place at least one Commissioner with substantial hunting experience on the Wildlife Resources Committee.

(C) All public are welcome to attend and participate meetings as defined in subsection (a).

(D) The Commission will establish the meeting schedule for the WRC ~~committees~~ each year

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[1] ~~Strikeout~~ and underline are used herein to reflect deletions and additions, respectively, that Petitioner proposes be made regarding language previously put forth by the Commission in the Draft.

[2] Petitioner is not taking any position on what regulations should or should not be adopted for the operation of the Marine Resources Committee, but reference thereto is omitted herein because this Petition does not concern the operation of the Marine Resources Committee.

as part of the annual rulemaking calendar the prior November and may schedule additional meetings as needed.

(E) Agenda will be approved at the Commission meeting before the committee meeting. Agendas will be developed by staff and will be comprised of standing items and topics requested by: ~~referred by~~ the Commission, ~~topics requested by~~ the Department, ~~and/or~~ state agencies, and federal agencies~~, and standing items~~. Public requests for agenda items must be made to the Commission and subsequently referred to the ~~appropriate committee~~ Wildlife Resources Committee.

Agenda items to be considered for the year will be adjusted based on urgency, need, and interest as determined by the Commission. Findings and recommendations will be made to the Commission for possible action by the ~~two chairs~~ Wildlife Resources Committee. If the Wildlife Resources Committee has two members, any finding or recommendation it makes must be unanimous.

(F) All Wildlife Resources Committee meetings ~~of committees~~ shall be noticed at least 10 days prior to the meetings. Meeting agendas will be noticed on the Commission's website and distributed electronically.

(G) Commission staff will secure appropriate meeting venues for Wildlife Resources Committee meetings with preference given to those that are provided free of charge. Meetings will be run by at least one of the Wildlife Resources Committee members or the designee, ~~two chairs~~ and facilitated by Commission staff.

(H) ~~In general~~ Unless specific conditions dictate otherwise, meetings will be structured to provide participants opportunities to engage in detailed discussions with Commission staff, Department staff, the presenter (if applicable), and stakeholders. ~~Meetings~~ The Wildlife Resources Committee will strive to provide an informal setting at its meetings, where all participants will have an opportunity to provide input into the conversation. However, if required, the ~~chairs~~ Wildlife Resource Committee retains the option to apply a more structured setting whereby discussion and public comment are governed by speaker cards and time limits.

(I) Non-~~chair~~ member Commissioners may attend Wildlife Resource Ccommittee meetings, however, they are expressly prohibited from participating in anything other than an observational capacity. Non-member Commissioners shall not make any comment, either directly or indirectly, during a Wildlife Resources Committee meeting.

(J) Commission staff shall prepare a ~~M~~meeting ~~S~~summary following each Wildlife Resources Committee meeting that summarizes the main discussion points and any recommendations developed by the Wildlife Resources Committee ~~committee chairs~~. Draft meeting summaries shall be provided to the Department and Wildlife Resources Committee ~~committee chairs~~ prior to finalization for review and comment. The final meeting summary shall be posted on the Commission's website and serve as the formal record of the meeting. Any recommendations developed by a committee shall be clearly

identified in the meeting summary and presented to the Commission for consideration at a future Commission meeting.

(K) Wildlife Resources Committee meetings shall be audio recorded. Wildlife Resource Commission meetings ~~may~~ shall be ~~taped~~ video recorded and broadcast on the internet ~~at the discretion of~~ unless the Commission ~~and available~~ makes a specific finding that, as to a specific fiscal year, funding is not reasonably available for video recording. This provision does not in any way inhibit any right that members of the public have concerning the use of a recording device to record public meetings of a state body.

Furthermore, the following provisions, drafted by the Petitioner, should also be included in the new section requested hereby.

(L) A meeting is subject to the Bagley-Keene Act if (a) any portion of the meeting relates to one or more matter within the Commission's jurisdiction, and (b) the meeting is attended (whether in person or otherwise) by all of the following: at least one Wildlife Resources Committee member (or a Wildlife Resources Committee designeee), at least one Department of Fish & Wildlife (the "Department") employee, and at least one person who is neither a member of the Department nor affiliated with the Commission (e.g., non-committee member Commissioners or Commission Staff). This provision only applies to meetings that concern, at least in part, nonmarine wildlife resource issues.

(M) The ability of the public to speak at a Wildlife Resources Committee meeting on a particular item does not preclude a member of the public from attending a later Commission meeting and commenting on that item, or a related item, during the Commission meeting but prior to the Commission taking action on the relevant item.

(N) If the Wildlife Resources Committee has a designee, the name of that designee shall be announced at a Commission meeting prior to that designee acting as the designee of the Wildlife Resources Committee.

(O) The WRC shall strive to adhere to an "equal time" model to the extent practicable, to prevent an unreasonable disparity of non-public Wildlife Resources Committee meetings being granted to specific parties holding disparate viewpoints.

(P) The Wildlife Resources Committee shall not create any sub-committee or other entity without express approval by the full Commission after the Commission has taken public comment on the issue. All subcommittes or similar entities created by Wildlife Resources Committee with Commission approval shall meet only as a part of Wildlife Resources Committee meetings, and all communications between members of these entities shall be treated as public records.

(Q) A log should be kept of all Wildlife Resources Committee-related meetings attended by Wildlife Resources Committee members or the Wildlife Resources Committee designee.

III. JUSTIFICATION FOR THE REQUESTED REGULATORY CHANGES

A. Any Rules Used by and for the WRC Are Regulations, Thus They Must Be Approved through the Proper Regulatory Process

The agenda for the Fish & Game Commission ("Commission") meeting of February 5, 2014, included the following agenda item: "DISCUSSION OF DRAFT POLICY AND PROCEDURES FOR WILDLIFE AND MARINE RESOURCES COMMITTEES" (the "Draft"). A copy of the Draft is available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

The Draft, as written, is a "regulation" under state law. Government Code section 11342.600 states, in its entirety,

> '[r]egulation' means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure.

As used in section 11342.600, the term "state agency" includes every state commission. Gov't Code § 11000. Thus, the Commission is clearly a state agency for the purposes of section 11342.600. Section 11342.600 is in accord with Fish & Game Code section 108, which "requires the commission to adopt rules to govern the business practices and processes of the Commission."[3]

Should the Commission attempt to utilize any rules regarding the operation of the Wildlife Resources Committee without having them adopted via proper regulatory rulemaking, that would violate Government Code section 11340.5(a). That section states:

> No state agency shall issue, utilize, enforce, or attempt to enforce any guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule, which is a regulation as defined in Section 11342.600, unless the guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule has been adopted as a regulation and filed with the Secretary of State pursuant to this chapter.

Case law confirms that the Wildlife Resources Committee would be using illegal "underground regulations" if the Commission allowed the Wildlife Resources Committee to operate by a set of rules that were not properly enacted. *See Engelmann v. State Bd. of Educ.*, 2 Cal. App. 4th 47, 62 (1991) (holding Board of Education was required to go through rule making process found in the Administrative Procedures Act when creating guidelines and manuals for a mutli-level review process used for selecting textbooks that could be used in public schools).

---

[3] *See* the Draft, available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf

B. Equal Access and Transparency Interests Will Be Served if the Petition Is Granted

The Petitioner sent a letter to the Commission on April 14, 2014, outlining why the Wildlife Resources Committee needed rules adopted pursuant to the proper regulatory process. A copy of that letter is attached and incorporated by reference. Put simply, that letter outlined the various potential pitfalls related to the draft rules that the Commission circulated earlier this year, rules that, it seemed, the Commission wanted to adopt without adhering to the proper regulatory process. Because three months have passed since that letter and the July 28, 2014, meeting of the Wildlife Resources Committee is being held without any binding rules or regulations, the Petitioner is now forced to make this formal demand that the lack of regulations be addressed.

Indeed, to prevent any possible argument that a Commission decision was made as the result of a fault in the undefined Wildlife Resources Committee public comment process in place as of July 28, 2014, the Petitioner strongly suggests that the Wildlife Resources Committee not make any final decisions or recommendations at that meeting.

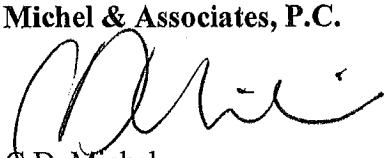
IV. THE COMMISSION HAS THE LEGAL AUTHORITY TO ADOPT THE REQUESTED REGULATORY CHANGES

Section 108 of the Fish and Game Code requires the commission to adopt rules to govern the business practices and processes of the Commission. Thus, the regulations sought hereby are clearly within the Commission's regulatory authority. *See also* Gov't Code § 11340.6 ("any interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation").

V. CONCLUSION

For the reasons stated herein, this Petition should be granted.

Sincerely,
Michel & Associates, P.C.



C.D. Michel

cc:
cc: Senior Assistant Attorney General Christopher Ames
(Christopher.ames@doj.ca.gov)

enc:
Letter of April 14, 2014

FGC

From: afa@mcn.org
Sent: Tuesday, June 30, 2015 5:41 PM
To: Mastrup Sonke@
Cc: FGC; Miller-Henson Melissa@; Fonbuena Sherrie@
Subject: Re: Commission Bylaws

June 30, 2015

Dear Sonke:

So am I to understand that there are NO official bylaws for the Commission?

Specific recommendations, you ask?

Indeed. See my original inquiry. Here are two:

I'm of the opinion that, if only three of the five commissioners are present, any issue on the agenda should be required to receive a 3:0 vote for passage. A 2:1 or 2:0 margin shouldn't be allowed to decide such issues. (Case in point: the recent failure of Endangered Status for the tri-colored blackbird.)

And this: As you know, the Commission recently put Public Forum back first-thing on the agenda, where it belongs. You might consider adding a Public Forum to the tail-end of each day's meeting, too, as a "public friendly" service.

Thoughts?

Cheers,

Eric Mills, coordinator
ACTION FOR ANIMALS
Oakland

----- Original Message -----
From:
"Mastrup Sonke@FGC" <Sonke.Mastrup@fgc.ca.gov>

To:
"afa@mcn.org" <afa@mcn.org>
Cc:
"FGC" <FGC@fgc.ca.gov>, "Miller-Henson Melissa@FGC" <Melissa.Miller-Henson@fgc.ca.gov>, "Fonbuena Sherrie@FGC" <Sherrie.Fonbuena@fgc.ca.gov>
Sent:
Tue, 30 Jun 2015 15:12:15 +0000
Subject:
Commission Bylaws

Hi Eric,

The Commission generally follows Robert's Rules of Order and strictly adheres to the Bagley-Keene Open Meeting Act. As you know, we have been working on adopting additional regulations that will govern the operations of the Commission. If you have any specific recommendations, please don't hesitate to share them with us.

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C. D. MICHEL*

SPECIAL COUNSEL
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ERIC M. NAKASU
W. LEE SMITH

ASSOCIATES
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MICHELLE BIGLARIAN
SEAN A. BRADY
SCOTT M. FRANKLIN
BEN A. MACHIDA
CLINT B. MONFORT
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LOS ANGELES, CA

* ALSO ADMITTED IN TEXAS AND THE DISTRICT OF COLUMBIA

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Attorneys at Law

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LOS ANGELES, CA

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June 5, 2015

California Fish and Game Commission
c/o Executive Director Sonke Mastrup
P.O. Box 944209
Sacramento, CA 94244-2090

VIA ELECTRONIC MAIL: fgc@fgc.ca.gov

Re: Petition for the Adoption of a Regulation Requiring Correspondence About Official Fish & Game Commission Matters to Be Conducted Via Government Issued Means

Mr. Mastrup:

This Petition is submitted on behalf of our clients, the National Rifle Association of America ("NRA") and California Rifle and Pistol Association ("CRPA") pursuant to Government Code sections 11340.6 and 11340.7.

I. REQUESTED ACTION

The Petitioners hereby request that the California Fish and Game Commission ("FGC") propose and adopt regulations requiring Department of Fish & Wildlife ("FWD") personnel, FGC Commissioners, and the staffers, agents, employees, and others assisting them with official Commission business, to conduct all government business in a way that maximizes public transparency and discourages the exclusion of any stakeholder group from being fully informed about the regulatory process. Toward this end, the FGC should mandate that all electronic correspondence concerning official Commission matters be conducted through government issued electronic-mail (i.e., e-mail) accounts that are stored on government owned servers, cloud data networks, or other electronic data storage mechanisms.

Use of personal email accounts for transmitting communications relating to any government business should be prohibited. The use of text messaging and other technologies that don't create a record should also be prohibited or discouraged.

Alternatively, should the FGC not wish to adopt this measure as a regulation, Petitioners request that FGC nevertheless adopt it as official policy of the Commission.

II. STANDING OF PETITIONERS

Petitioner NRA is an Internal Revenue Code § 501(c)(4) nonprofit corporation, incorporated in the State of New York in 1871, with principal offices and place of business in Fairfax, Virginia. NRA has approximately five million members, including hundreds of thousands of members who reside in California.

The founders of NRA desired to create an organization dedicated to marksmanship, or, in the parlance of the time, to "promote and encourage rifle shooting on a scientific basis." NRA's bylaws, at Article II, Section 5, state that one of the purposes of NRA is "[t]o promote hunter safety, and to promote and to defend hunting as a shooting sport and as a viable and necessary method of fostering the propagation, growth, conservation, and wise use of our renewable wildlife resources."

Petitioner CRPA is a nonprofit membership organization classified under section 501(c)(4) of the Internal Revenue Code and incorporated under the laws of California, with headquarters in Fullerton, California. Founded in 1875, the CRPA works to preserve the constitutional and statutory rights of gun ownership for its members, including the right to hunt. CRPA regularly participates in Fish and Game Commission matters on behalf of its tens of thousands of California resident members.

Based on the foregoing, the petitioners have standing to make the requested regulatory changes.

III. JUSTIFICATION FOR REQUESTED ACTION

a. The Commission Should Establish a Regulation Governing Communications of Official Matters that Promotes Government Transparency and Accountability

The California Constitution provides that "[t]he people have the right of access to information concerning the conduct of the people's business, and, therefore, the meetings of public bodies and ***the writings of public officials and agencies shall be open to public scrutiny***." (Cal. Const., art. I, § 3(b)(1).)[1] Current law, however, does not specifically address the propriety of FGC Commissioners using their personal communications technologies means, such as e-mails, texts, and servers, to conduct public business.

A regulation prohibiting Commissioners and their employees and agents from conducting public business via private or secret or non-public means is necessary to optimally provide transparency, open-government access, and accountability to facilitate CPRA requests, and to promote public understanding, participation, and confidence in the FGC and in its practices and procedures in matters deserving of public review.

---

[1]The California Public Records Act (Gov. Code, § 6250 et seq.) ("CPRA") provides that "'public records' include any writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency regardless of physical form or characteristics." (Gov. Code, § 6252(e).)

Such a regulation also furthers the principles articulated in Fish and Game Code section 107 that the FGC is legally obligated to adhere to. Relevant here are subdivisions: (b) stating "the commissioner shall conduct his or her affairs in the public's best interest;" (c) stating the "commissioner shall conduct his or her affairs in an open, objective, and impartial manner, free of undue influence, and the abuse of power and authority;" (d) stating FGC's programs "require public awareness, understanding, and support of, and participation and confidence in, the commission and its practices and procedures;" and (e) stating "the commissioner shall preserve the public's welfare and the integrity of the commission, and act to maintain the public's trust in the commission and the implementation of its regulations and policies."

With the public's increased and increasing skepticism of government officials who are using none traceable technologies and private e-mail accounts, the appearance of a conflict of interest that this creates, the distrust in government that these practices encourage, the diversity of views stakeholders the FGC should take all steps available to show by its actions and regulations that it is dedicated to being transparent beyond what current statutory law requires. This is especially critical for a body like the FGC whose actions directly and significantly impact stakeholders with a large diversity of views. Adoption of the proposed regulation is a small but significant step towards achieving just that.

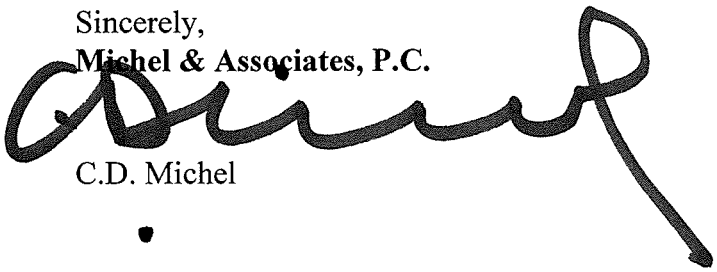
IV. THE COMMISSION HAS THE LEGAL AUTHORITY TO TAKE THE REQUESTED ACTION

Pursuant to section 108 of the California Fish and Game Code, the FGC must "adopt rules to govern the business practices and processes" of the FGC. Further, as discussed above, section 107 requires that the Commission maintain the public trust in implementing its regulations and policies. Thus, the regulation Petitioners propose is clearly within the FGC's regulatory authority.

V. CONCLUSION

For the above stated reasons, the FGC should accept this Petition and open the rulemaking process for a regulations that require electronic correspondence by Commissioners or their agents or employee about any official Commission matter to be conducted through government issued electronic-mail accounts that are hosted on government owned servers and that discourages the adoption or use of any technology or practice that serves to avoid creating a record that can be viewed by the public. Alternatively, the FGC should adopt this as an official policy, if not a regulation. Either way, this should be the standard operating procedure for the FGC.

Sincerely,
Michel & Associates, P.C.



C.D. Michel

CDM/sab

NATIONAL SHOOTING SPORTS FOUNDATION, INC.
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Headquarters: 11 Mile Hill Road • Newtown, CT 06470-2359 • Tel (203) 426-1320 • Fax (203) 426-1087
E-mail tsantos@nssf.org • nssf.org

TREVOR SANTOS
MANAGER, GOVERNMENT
RELATIONS/STATE AFFAIRS

July 8, 2015

California Fish and Game Commission
c/o Executive Director Sonke Mastrup
P.O. Box 944209
Sacramento, CA 94244-2090

Re: Petitions for the Adoption of a Regulation Requiring Correspondence About Official Fish & Game Commission Matters to be Conducted Via Government Issued Means

Dear Mr. Mastrup:

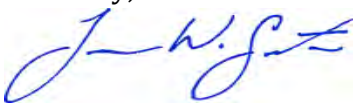
On behalf of the National Shooting Sports Foundation, I write to you today to express our support for the petition submitted on behalf of the National Rifle Association ("NRA") and California Rifle and Pistol Association ("CRPA") on June 5, 2015. The petition submitted on behalf of the NRA and CRPA "request(s) that the California Fish and Game Commission ("FGC") propose and adopt regulations requiring Department of Fish & Wildlife ("DFW") personnel, FGC Commissioners, and staffers, agents, employees, and others assisting them with official Commission business, to conduct all government business in a way that maximizes public transparency and discourages the exclusion of any stakeholder group from being fully informed about the regulatory process."

As the trade association for America's firearms, ammunition, hunting, and recreational shooting sports industry, the National Shooting Sports Foundation ("NSSF") seeks to promote, protect, and preserve hunting and the shooting sports. NSSF has a membership of nearly 13,000 manufacturers, distributors, firearms retailers, shooting ranges, and sportsmen's organizations. Our manufacturer members make the firearms used by law-abiding California sportsmen, the U.S. military and law enforcement agencies throughout the state.

The view of the NSSF follows that of the NRA and CRPA in that the use of personal email, personal cell phones, or any other personal device used for sending or receiving official government communications or business should be strictly prohibited or highly discouraged. When conducting business funded by tax-payers, the ultimate goal of the FGC and FWD should be complete transparency. Like the NRA and CRPA, the NSSF would respectfully request the FGC and DFW adopt a regulation, or official policy, requiring all business communications be conducted via government issued technology and stored on government servers, cloud-based databases, etc.

In closing, the National Shooting Sports Foundation strongly supports and would respectfully request that you move forward with the petition submitted on behalf of the NRA and the CRPA, and adopt regulations, or official policy, requiring all correspondence regarding official Fish & Game Commission matters be conducted through government issued means.

Sincerely,



Trevor W. Santos
Manager of Government Relations – State Affairs
National Shooting Sports Foundation

cc: California Fish and Game Commissioners
Mr. Charlton Bonham, Director, California Department of Fish and Wildlife
Governor Edmund G. Brown, Jr.
National Shooting Sports Foundation

Commission Procedures

The Evolution

Presented to the California Fish and Game Commission by Commission Staff on October 8, 2015

Evolutionary Forces

Public expectations:

- Greater transparency
- More access
- Active engagement
- Effective outcomes

Staff expectations:

- Efficient process
- Responsiveness
- Excellent service
- Procedures legal

Proposed Adaptations

- Commission quorum
- Agendas
- Committee recommendations
- Public participation
  - Written
  - Verbal
  - Audio/visual presentations
  - Prohibited behavior

Commission Quorum

Meetings may not be conducted without a quorum of members present:

- Commission meetings require three members
- Committee meetings require one appointed member
- Only the co-chairs assigned to a committee may actively participate in committee meetings

Agendas

Establish agenda-setting procedures:

- Public requests for agenda items must be received no later than the meeting immediately prior to the desired meeting
- Commission meeting agendas will be established by majority vote of the Commission but may be amended by the president, vice president or designee

Agendas

- Committee agendas are approved by a majority vote of the Commission
- Committee agendas may not contain items on Commission meeting agendas for action unless directed by majority vote of the Commission

Committee Recommendations

Establish procedures for committee recommendations:

- Committees may meet to make recommendations no later than 15 days prior to the Commission meeting at which action on the subject of the recommendation may be taken
- Committee recommendations shall be posted to the Commission website at least five days prior to said meeting

Public Participation - Written

- Establish procedures for submitting written comments and materials for Commission and committee meetings
- Establish procedures for what written comments and materials are posted to the Commission website and when

Public Participation - Verbal

Establish procedures for speaking at Commission and Committee meetings:

- Public comment taken before the Commission makes a decision on an agenda topic
- During public forum, public may address Commission policies or other matter within its jurisdiction, so long as the subject is not related to items already on the agenda
- Time allotted for individuals wishing to speak to an agenda item shall be set by the presiding commissioner at between one and three minutes

Public Participation – Verbal

- The public may be granted additional time to speak or make presentations, either through pre-approval by the president or designee of the president, or by having three people cede time.
- The Commission may limit the total amount of time for public comment on a particular issue by publishing the time limit on the meeting agenda

Public Participation – Audio/Visual

Establish procedures and criteria for audio/visual presentations at meetings:

- Must be pre-approved by the executive director
- Disapproval only if irrelevant, inappropriate, contains unauthorized copyrighted material, or, for Commission meetings only, exceeds the allotted time

Public Participation
Prohibited Behavior

Identify behaviors that could result in eviction from a meeting:

- Behavior preventing orderly function of meeting

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LOS ANGELES, CA

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SBRADY@MICHELLAWYERS.COM

September 24, 2015

VIA ELECTRONIC MAIL & U.S. POST

Sonke Mastrup
Executive Director
CALIFORNIA FISH & GAME COMMISSION
P.O. Box 944209, Sacramento, CA
smastrup@dfg.ca.gov

Re: Comments on Wildlife Resources Committee Procedures

Dear Mr. Mastrup:

We again write on behalf of our client the National Rifle Association of America to comment on the Wildlife Resources Committee's lack of established procedure and governing rules. Our office sent the Commission's Executive Director a letter on April 14, 2014, raising concerns that the originally proposed rules for the WRC would be improper as "underground regulations" because they had not been adopted pursuant to the proper rulemaking process. That letter also outlined nine other specific issues that are confusing or otherwise unclear as to plans for the future operation of the WRC.[1]

Our office followed up with the Executive Director about that letter. We were informed that the Commission had since addressed our client's concerns. Not seeing any evidence of that, on July 11, 2014, we sent a formal request that this Commission require that rules and procedures be established for the WRC through the normal regulatory approval process before the WRC takes any further

[1] A copy of the letter is attached as Exhibit 1.

action.[2] Around the same time Safari Club International submitted a letter raising similar concerns, and NSSF attorneys also submitted a letter correctly explaining the legal shortcomings for how the WRC is operated. Due to a lack of response to these correspondence, our office then followed up with an official petition on July 28, 2014, which the Commission accepted and referred it to staff for evaluation and recommendation.[3]

Despite all these efforts, our client's concerns have not been addressed *over a year later*. To date no official procedures for the WRC have been adopted. To the contrary, it seems like how the WRC runs is ever-changing, leaving stakeholders cynical about the process and with many questions that need to be answered, including:

> What is the process for arranging a WRC meeting? Who decides the date, location, and format?
>
> Who dictates what items will be discussed at the WRC? How are issues decided to be placed on the agenda for any given meeting? Is there a process for the public to suggest items for consideration by the WRC?
>
> Who decides (or what is the process for deciding) what actions the WRC will take, i.e., whether a recommendation will be made to the full Commission? What happens if one Commissioner disagrees with a recommendation? Is there a record kept of that? Is the Commission or the public informed of the disagreement?
>
> What form does a recommendation take? Who prepared it?
>
> Are any meeting minutes or notes of proposed actions prepared? If so, by whom? Are any meeting minutes or notes kept? If so, are they made available?
>
> Does the WRC comply with the Bagley-Keene Act as it must? If so, does it have established procedures to maintain compliance? Who created those procedures?

Until these (and other) questions are answered and the lack of transparency for what the WRC is doing is addressed, it is inappropriate for the WRC to engage in any more activity related to the Commission's policy making. Yet, the exact opposite seems to be occurring.

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[2] A copy of the letter is attached as Exhibit 2.

[3] A copy of the petition is attached. as Exhibit 3

Not only does the WRC continue to operate without any formal governing procedures in place, but it is *expanding* its operation. The October Commission meeting agenda includes, among other items, "Appointments to predator workgroup." While not entirely clear (which is an additional issue that needs to be addressed), it appears this item means the Commission will be discussing nominations and appointments to the WRC's so-called Predator Policy Workgroup ("PWG"). The propriety of such an expansion is dubious standing alone, but with so many questions remaining about the proper procedure and structure for the WRC itself, doing so is beyond the pale for a public entity.

Moreover, it is unclear whether it is even legal to form the PWG. Nothing in the statute creating the WRC provides for it.[4] Assuming it is legal, it remains unclear whether the Commission or the WRC would be the body responsible for creating it and regulating it. Accordingly, before the WRC expands with subcommittees like the PWG, the following questions should be answered:

> What is the source of authority to create the PWG? Assuming there is such authority, why is its creation not subject to the official rulemaking process? Would the Commission be able to create a workgroup under itself without going through the formal rulemaking process?
>
> Who has authority to dictate the criteria or process for nominating PWG members? Are such nominations subject to the official rulemaking process?
>
> Assuming such authority exists in either case, does it reside in the Commission or the WRC?
>
> Will the public have an opportunity to weigh in on the criteria for nominating PWG members?

Of course, the same queries regarding the lack of procedure for the WRC generally apply to the PWG, but addressing those now would be to put the cart before the horse. Our client is not alone in its concerns here. Even WRC staff recently recommended "[t]hat structure, function, and specific tasks for the predator workgroup be clearly identified."[5]

Needless to say, established rules and procedures are needed for the WRC now. Important matters are currently being addressed while many stakeholders remain uncertain about how to participate in the process because of the constantly changing process. The effect is to thwart the original purpose of the WRC, which was to facilitate input from stakeholders on matters of interest

---

[4] *See* Fish and Game Code § 106.

[5] See Item 7 on Page 8 at:
http://www.fgc.ca.gov/meetings/2015/Sep/WRC_MeetingBinder_20150907.pdf

regarding natural resources that the Commission may want to consider.

For these reasons, we respectfully request that the above questions be answered and that the WRC cease taking any actions until official rules and procedures governing it are adopted following a public comment period. If you have any questions, please feel to contact our office.

Sincerely,
Michel & Associates, P.C.

Sean A. Brady

cc'd by Email and U.S. Post:
Thomas Gibson, General Counsel
Office of the General Counsel
Department of Fish and Wildlife
(thomas.gibson@wildlife.ca.gov)
Charlton H. Bonahm, Director
Department of Fish and Wildlife
(director@wildlife.ca.gov)

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DAVID T. HARDY
TUCSON, AZ

April 14, 2014

VIA EMAIL, U.S. POST
& HAND DELIVERY

Sonke Mastrup
Executive Director
CALIFORNIA FISH & GAME COMMISSION
P.O. Box 944209, Sacramento, CA
smastrup@dfg.ca.gov

Re: Comments on Proposed Regulations and Notice of Improper Wildlife Resources Committee Procedures

Dear Mr. Mastrup:

We write on behalf of our client, the National Rifle Association of America, to comment on proposed policies and to notify you of apparent improprieties in the proposed adoption of policy and procedures related to the Wildlife and Marine Resources Committee (respectively "WRC" and "MRC").

The agenda for the Fish & Game Commission ("Commission") meeting of February 5, 2014, includes the following agenda item: "DISCUSSION OF DRAFT POLICY AND PROCEDURES FOR WILDLIFE AND MARINE RESOURCES COMMITTEES" (the "Draft") A copy of the Draft is available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

The Draft, as written, is a "regulation[1]" under state law. So the Commission appears to be

[1] Government Code section 11342.600 states, in its entirety,

> '[r]egulation' means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure.

Further, as used in section 11342.600, the term "state agency" includes every state commission. Gov't

improperly attempting to create "underground regulations[,]" i.e., regulations that are not valid because they were not adopted in accordance with the proper procedural guidelines.

I. The Proposed Procedures Must Be Properly Enacted Before They Can Be Implemented

California law is clear about the prohibition on the issuance or use of underground regulations:

> No state agency shall issue, utilize, enforce, or attempt to enforce any guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule, which is a regulation as defined in Section 11342.600, unless the guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule has been adopted as a regulation and filed with the Secretary of State pursuant to this chapter.

Gov't Code § 11340.5(a).

Case law confirms that the proposed rules in the Draft would be improper "underground regulations" if they arose as part of the implementation of the duties created by Fish and Game Code section 105 and 106, which, respectively, created the MRC and WRC. *See Engelmann v. State Bd. of Educ.*, 2 Cal. App. 4th 47, 62 (1991) (holding Board of Education was required to go through rule making process found in the Administrative Procedures Act when creating the guidelines and manuals for the mutli-level review process used for selecting the textbooks that could be used in public schools).

Accordingly, the Commission should follow normal regulatory standards (e.g., a series of three properly noticed Commission meetings used to introduce, discuss, and vote on a proposed regulation that was noticed via publication in the state's Regulatory Notice Register) to move forward with the creation of the proposed policies/regulations. Once the proper process has been complied with and the regulations have been filed with the Secretary of State, only then can the regulations be relied upon by the WRC.

II. Substantive Comments Regarding the Proposed Regulations

1. Based on the lack of notice regarding the formation and dissolution of the Predatory Policy subcommittee, it is clear the WRC needs rules to explain exactly how and when subcommittees will be formed. The Draft should be revised accordingly.

2. Fish & Game Code section 106 does not actually authorize or suggest the WRC is to perform its *own* meetings; the Commission should explain to the public why the Commission is going beyond its statutory mandate.

3. The WRC should have at least two members; there appears to be no difference between

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Code § 11000. Thus, the Commission is clearly a state agency for the purposes of section 11342.600.

a Commissioner's own abilities and a one-person WRC, and having two members will decrease the possibility of hasty or unfairly biased decision making.

4. The Draft should include a provision that, when the Commission makes its yearly appointment to the Committee, it should, to the extent practicable, appoint two WRC members who have differing backgrounds (e.g., a hunter and a member with non-hunting interests) to help ensure that recommendations have been "vetted" as much as possible before they get to the Commission.

5. Because the WRC is required to make recommendations (i.e., take "action[,]" as that term is defined in Government Code section 11122), that means final decisions will need to be made, which could be problematic if there are two Commissioners sitting on the WRC (e.g., a "tie"). The proposed regulations should address how any disputes between WRC members shall be resolved.

6. The WRC is, "to the extent practicable," to "attend meetings of the department staff, including meetings of the department staff with interested parties, in which significant wildlife resource management documents are being developed." Fish & Game Code § 106. Are these meetings all going to be open to the public and publicly noticed? Is there going to be a public record of these meetings occurring? If they are not, and further assuming the department has discretion as to who it meets with in private concerning the development of "significant wildlife resource management documents[,]" there are real transparency and equal access problems here.

7. Because the WRC was created by statute and because it includes more than one member, it is subject to the requirements of the Bagley-Keene Act. Gov't Code §§ 11121, 11123. Regardless, if it is the Commission's position is that the WRC, or any "subcommittees" it produces, will not be treated as if subject to the Bagley-Keene Act, the Commission should explain to the public the considerations that the Commission has found to outweigh the public's interest in open government.

8. Three Commissioners should never participate in any WRC meeting. The Draft obscures, at the least, the limits of Government Code section 11122.5(c)(2)(6). That section states:

> [a] majority of the members of a state body [e.g., the Commission] shall not, outside of a meeting authorized by this chapter, use a series of communications of any kind, directly or through intermediaries, to discuss, deliberate, or take action on any item of business that is within the subject matter of the state body . . . . The prohibitions of this article do not apply to . . . attendance of a majority of the members of a state body at an open and noticed meeting of a standing committee of that body, ***if*** the members of the state body who are not members of the standing committee attend only as observers.

(Emphasis added).

It seems, however, that someone within the Commission or related staff wants to blur the lines about non-committee member Commissioners attending committee meetings. This can be seen via a comparison of the Draft and the prior "approved" MRC rules previously posted on the Commission's website.

Compare the following.

- In the event that another Commissioner wishes to attend a meeting of the MRC, and there are two members of the MRC present at the meeting, that Commissioner may attend the meeting but must recuse himself or herself from any discussions related to Commission business. [2]

- Non-chair Commissioner [sic] may attend committee meetings.[3]

There is no legitimate reason to make this language *less* clear than it was in the prior draft. Further, it is debatable if the passage, as originally stated, is an accurate representation of the limitation stated in section 11122.5(c)(2)(6). Having three Commissioners on the dias during a committee meeting is inappropriate. If the Commission is going to have a meeting, it should be clearly noticed as a *Commission* meeting. History has show that non-committee Commissioners are likely going to speak at committee meetings even though doing so is patently inappropriate, and the rules should be absolutely clear to everyone, *including Commissioners and staff*, that non-committee Commissioners cannot legally speak at committee meetings.

9. WRC meetings should not be video recorded and posted on the internet. It was mentioned at the last WRC meeting that the cost of such service would be a problem. Though no actual cost information was provided, with the availability of YouTube and inexpensive digital cameras (perhaps even state-owned cellular phones), that statement is difficult to accept. Indeed, if the Commissioners and staff are all having travel costs reimbursed, it seems that the cost of video, which would *guarantee public access*, is likely much less than that which is already expended.

During the meeting of February 5, 2014, the Commission discussed the possibility of live-streaming WRC meetings. During that discussion, you mentioned that live-streaming meetings costs approximately six to eight thousand dollars per meeting, and the it was unclear if the Department of Fish and Wildlife had the money in its budget needed to live-stream the meetings. Because of the importance of public participation,

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[2] http://www.fgc.ca.gov/meetings/committees/MRCrulesandprocedures052213.pdf.

[3] http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

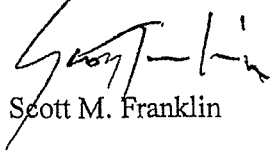
live streaming and later web access should be considered a priority.

10. To the extent that the Draft states committee meetings "may be taped and broadcast on the internet at the discretion of the Commission[,]" this provision should be clarified, as it can reasonably be interpreted as a prohibition on the public recording committee meetings, subject only to express permission of the Commission. *See* Gov't Code § 11124.1 (members of the public have the right to use a video recording device to record meetings of state bodies).

III. Conclusion

In summary, the Commission should incorporate all of the above comments into a new draft set of regulations that can be considered and adopted through the appropriate procedural mechanisms.

Sincerely,
Michel & Associates, P.C.



Scott M. Franklin

cc'd by Email and U.S. Post:
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July 11, 2014

VIA EMAIL & U.S. POST
President G. Michael Sutton
Vice President Jack Baylis
Commissioner Jim Kellogg
Commissioner Richard B. Rogers
Commissioner Jacque Hostler-Carmesin
California Fish & Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

Re: Request Wildlife Resources Committee Procedure and Meeting Protocols Be Put In Place *Before* That Committee Makes Any Recommendations to the Fish & Game Commission

Honorable Commissioners:

We write on behalf of our client the National Rifle Association.

Recently while conducting meetings, the Commission and the WRC have blurred the lines between a true Commission hearing, where policy decisions can legally be made and official actions can be taken, and WRC meetings where apparently the only action possible is the WRC making a recommendation for the Commission to consider. This letter is a formal request that the Fish & Game Commission (Commission) require the Wildlife Resources Committee (WRC) to establish and publicize rules and procedures under which it will operate before the WRC takes any further substantive action, and that such procedural rules be vetted through the normal regulatory approval process before they become effective.

1. The Commission is Sending Mixed Signals About the Authority of the WRC

There is confusion about the role and authority of the WRC because at Commission and WRC meetings, the Executive Director, as well as Commissioners Sutton and Baylis, have inaccurately stated that WRC meetings are a form of, or can operate as, official Commission meetings. The Commissioners and Commission staff have also made numerous other confusing and conflicting comments about the role, limitations, and procedural rules of the WRC. Commissioner Sutton said that the WRC meetings are of an "informal nature." But there has been no clarification about whether

the WRC is going to be the only opportunity for public comment on issues raised at WRC meetings, or if the public will have opportunity to comment on all issues agendized for Commission meetings, even if that issue was already discussed (or not) at a WRC meeting. This is compounded by the fact that WRC meeting videos are not available online, notwithstanding multiple requests from various segments of the stakeholder community for that type of access.

If the WRC meeting will provide for a longer format pre-discussion of a discussion that will take place again before the full Commission, then no binding action (other than perhaps a recommendation to the Commission action) takes place at a WRC meeting. If that is the case, then the Commission should say so unequivocally. This clarification would drastically reduce the amount of confusion being created by the uncertain state of the WRC's procedures and its authority.

2. *The Commission Must Establish Procedural Rules for the WRC Before It Allows the WRC to Address Substantive Issues*

Based on the recently released agenda for the July 28, 2014, WRC meeting, it appears that the Commission is moving forward with potentially substantive decision making at the upcoming next WRC meeting, even though the procedures for how the WRC will operate, and significantly, how the public can participate in WRC meetings, have not been publicized and apparently do not exist. Because there is no system or procedures in place, our clients, other stakeholders, and the interested public are unable to effectively participate in the rule and policy making process.

This office sent the Executive Director of the Commission a letter on April 14, 2014, raising concerns that the previously proposed WRC rules would be improper as "underground regulations." That letter also outlined nine other specific issues that are confusing or otherwise unclear as to plans for the future operation of the WRC. A copy of the letter is attached.

Our office recently followed up with the Executive Director about that letter. We were informed that the Commission has addressed the concerns raised our letter of April 14, 2014. We respectfully disagree. No new proposed procedural rules have been published, nor have we received a response letter addressing the issues noted in the letter of April 14, 2014.

So we now ask the Commission to please tell us; how have our client's concerns as recited in our April 14, 2014 letter, been addressed?

3. *The Commission Seems Biased, Favoring Participation by Anti-Hunting Groups Over Pro-Hunting Groups*

Holding WRC meetings without established procedures facilitates the impression that different rules apply to different stakeholders. Certain stakeholders appear to have more access and to information about WRC activities and plans. This not only creates an appearance of impropriety and fosters an antagonistic situation, it will result in increased investigations by watchdog associations suspecting bias in the way the Department and Commission are conducting their affairs.

If published rules are put in place, it would not only provide some clarity, it would also help limit unfair treatment, reduce the appearance of bias or conflicts of interest, alleviate concerns of bias,

and facilitate a more productive regulatory process.

4. Stakeholder Presentation Materials Should Be Made Publicly Available Well Before WRC Meetings

Furthermore, it was only because this office asked the Executive Director that we found out that the deadline for making a request to make a presentation at the July 28, 2014, WRC meeting was July 7, 2014. Assuming this was a deadline that was applicable to all who wanted to make a presentation to the WRC, shouldn't it have been publicized? And if that deadline did not apply to every group that wanted to make a presentation, our clients object to any content-based scheduling advantage that is being granted to other stakeholders.

If the purpose of the WRC is to have the most enlightened discussion possible concerning issues headed to the full Commission for consideration, then stakeholders and the public should not be surprised by new information presented for the first time at WRC meetings when there is no opportunity to prepare a rebuttal.

It is our understanding that there is a currently unwritten rule that presenters at WRC meetings are required to give the Executive Director a copy of presentation materials a few weeks prior to the WRC meeting. Though our clients don't necessarily agree with such a rule, if it is going to be enforced, why couldn't that information be circulated publicly beforehand?

5. The Commission's Attempt to Create an "Alternate" WRC Member Is Disconcerting

Another unsettled and troubling issue related to the WRC is the attempt (foiled by a loss of quorum at the June 4, 2014, meeting of the Commission) to create an "alternate" WRC "member" position. By law, the WRC is only required to have one member, so the claim that two members are need for meetings is inaccurate. Fish & Game Code § 106 ("The commission shall form a wildlife resources committee from its membership consisting of at least one commissioner.").

The WRC has *two* committee "members," Commissioners Kellogg and Baylis. If only one of committee "members" is unable to attend a WRC meeting, there is still no quorum or other procedural limitation that prevents a single WRC committee member from going forward with a WRC meeting.

The fact that some Commissioners are pushing very hard to have a third Commissioner appointed as a "member" to the WRC, even though there is no need to do so, raises concerns that by having three Commissioners at WRC meetings, those Commissioners would then attempt to act as the Commission and take a binding vote on Commission business.

At the January 15, 2014, WRC meeting, both the Executive Director and Commissioner Baylis indicated that had the three Commissioners present at that meeting wanted to, they could have acted as the Commission (an assertion we vigorously disagree with). Though the January 15, 2014, meeting was technically a Commission meeting, it was also an illegal meeting because it was not properly noticed as a Commission meeting.

If the Commission tries to use a noticed WRC meeting as an opportunity to take a Commission

vote on a controversial topic, that will result in litigation.

The Commission should consider the implications of the WRC's current methods of operation, and should draft a new set of proposed procedures for the WRC. In doing so, the "alternate" issue should be resolved.

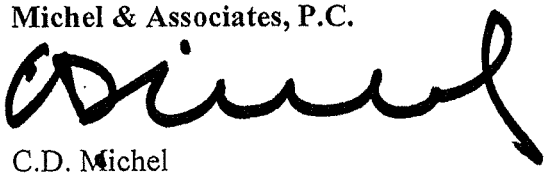
6. *Reservation of Rights*

Because it is not clear to us what the limitations are about making comments at the upcoming WRC and at later, related Commission meetings, our clients expressly reserve all rights to make a comment/presentation and at the July 28, 2014, WRC meeting and the August 6, 2014 Commission meeting, regardless of whether our client participates in one or both of these meetings.

7. *Conclusion*

The next WRC meeting should be used to formalize a set of proposed procedural rules that can be reviewed and approved by the Commission through its normal regulatory process. Otherwise the WRC's actions will continue to cause stakeholders and the public to believe that the Commission has lost its objectivity, and that it is now a biased politicized body. This directly conflicts with the reason the Commission was created in the first place. See *Young v. Dep't of Fish & Game*, 124 Cal. App. 3d 257, 273 (1981) (noting that the constitutional amendment that resulted in the Commission being a constitutional body "was to remove the old Fish and Game Commission from political influence").

Sincerely,
Michel & Associates, P.C.



C.D. Michel

CDM/smf

Enc.: April 14, 2014 Letter

cc: Sonke Mastrup
Executive Director
CALIFORNIA FISH & GAME COMMISSION
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July 28, 2014

SENT VIA E-MAIL
& HAND DELIVERED

California Fish and Game Commission
c/o Executive Director Sonke Mastrup
P.O. Box 944209
Sacramento, CA 94244-2090

sonke.mastrup@fgc.ca.gov

Re: Petition for Rule Making by the Fish & Game Commission Regarding the Need for Formal Procedures and Rules for the Proper and Fair Operation of the Wildlife Resources Committee

Dear Mr. Mastrup:

This Petition, submitted by the National Rifle Association of America ("NRA") pursuant to Government Code sections 11340.6 and 11340.7, requests that the California Fish & Game Commission (the "Commission") enact regulations to ensure public participation and fair debate vis-à-vis the Wildlife Resource Committee (the "WRC").

I. STANDING OF PETITIONERS

Petitioner NRA is an Internal Revenue Code § 501(c)(4) nonprofit corporation, incorporated in the State of New York in 1871, with principal offices and place of business in Fairfax, Virginia. NRA has approximately five million members, and hundreds of thousands of members in California.

The founders of NRA desired to create an organization dedicated to marksmanship, or, in the parlance of the time, to "promote and encourage rifle shooting on a scientific basis." NRA's bylaws, at Article II, Section 5, state that one of the purposes of NRA is "[t]o promote hunter safety, and to promote and to defend hunting as a shooting sport and as a viable and necessary method of fostering the propagation, growth, conservation, and wise use of our renewable wildlife resources."

NRA has been a party to or supported multiple lawsuits throughout the nation supporting and

defending the right to keep and bear firearms for hunting, sport shooting, and self-defense. Indeed, one of NRA's key functions is to preserve the tradition of hunting, by protecting it from unreasonable and unnecessary restrictions.

NRA has an established record of advocating against restrictions on hunting based on scientifically unsupported claims of alleged environmental harm.

Petitioner David Halbrook resides in Victorville, California, and has been a hunter for basically his entire life. Mr. Halbrook has hunted various big and small game in California in the past, and he intends to hunt in California in the future. Mr. Halbrook is a member of NRA and is the executive director of the Hunt For Truth Association.

Based on the foregoing, the petitioners have standing to make the requested regulatory changes.

II. REQUESTED REGULATORY CHANGES

Petitioners hereby seek the amendment of California Code of Regulations ("CCR"), title 14, via the addition of a new section dedicated to the procedural aspects of the operation of the WRC, including, but not limited to, public meetings held by the WRC.

The following provisions, based on draft language created by the Commission, should be included in the new section.

(A) Section 108 of the Fish and Game Code requires the commission to adopt rules to govern the business practices and processes of the Commission. Section~~s 105 and~~[1] 106 of the Fish and Game Code require the commission to establish ~~a minimum of two committees, the Marine Resources Committee and~~[2] the Wildlife Resources Committee~~, respectively~~.

(B) A minimum of one, but no more than two members of the Commission will be appointed to the Wildlife Resources C~~c~~ommittee~~s~~ at the first Commission meeting of each calendar year. To the extent feasible, the Commission shall place at least one Commissioner with substantial hunting experience on the Wildlife Resources Committee.

(C) All public are welcome to attend and participate meetings as defined in subsection (a).

(D) The Commission will establish the meeting schedule for the WRC ~~committees~~ each year

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[1] ~~Strikeout~~ and underline are used herein to reflect deletions and additions, respectively, that Petitioner proposes be made regarding language previously put forth by the Commission in the Draft.

[2] Petitioner is not taking any position on what regulations should or should not be adopted for the operation of the Marine Resources Committee, but reference thereto is omitted herein because this Petition does not concern the operation of the Marine Resources Committee.

as part of the annual rulemaking calendar the prior November and may schedule additional meetings as needed.

(E) Agenda will be approved at the Commission meeting before the committee meeting. Agendas will be developed by staff and will be comprised of standing items and topics requested by: ~~referred by~~ the Commission, ~~topics requested by~~ the Department, ~~and/or~~ state agencies, and federal agencies~~, and standing items~~. Public requests for agenda items must be made to the Commission and subsequently referred to the ~~appropriate committee~~ Wildlife Resources Committee.

Agenda items to be considered for the year will be adjusted based on urgency, need, and interest as determined by the Commission. Findings and recommendations will be made to the Commission for possible action by the ~~two chairs~~ Wildlife Resources Committee. If the Wildlife Resources Committee has two members, any finding or recommendation it makes must be unanimous.

(F) All Wildlife Resources Committee meetings ~~of committees~~ shall be noticed at least 10 days prior to the meetings. Meeting agendas will be noticed on the Commission's website and distributed electronically.

(G) Commission staff will secure appropriate meeting venues for Wildlife Resources Committee meetings with preference given to those that are provided free of charge. Meetings will be run by at least one of the Wildlife Resources Committee members or the designee, ~~two chairs~~ and facilitated by Commission staff.

(H) ~~In general~~ Unless specific conditions dictate otherwise, meetings will be structured to provide participants opportunities to engage in detailed discussions with Commission staff, Department staff, the presenter (if applicable), and stakeholders. ~~Meetings~~ The Wildlife Resources Committee will strive to provide an informal setting at its meetings, where all participants will have an opportunity to provide input into the conversation. However, if required, the ~~chairs~~ Wildlife Resource Committee retains the option to apply a more structured setting whereby discussion and public comment are governed by speaker cards and time limits.

(I) Non-~~chair~~ member Commissioners may attend Wildlife Resource Ccommittee meetings, however, they are expressly prohibited from participating in anything other than an observational capacity. Non-member Commissioners shall not make any comment, either directly or indirectly, during a Wildlife Resources Committee meeting.

(J) Commission staff shall prepare a ~~M~~meeting ~~S~~summary following each Wildlife Resources Committee meeting that summarizes the main discussion points and any recommendations developed by the Wildlife Resources Committee ~~committee chairs~~. Draft meeting summaries shall be provided to the Department and Wildlife Resources Committee ~~committee chairs~~ prior to finalization for review and comment. The final meeting summary shall be posted on the Commission's website and serve as the formal record of the meeting. Any recommendations developed by a committee shall be clearly

identified in the meeting summary and presented to the Commission for consideration at a future Commission meeting.

(K) Wildlife Resources Committee meetings shall be audio recorded. Wildlife Resource Commission meetings ~~may~~ shall be ~~taped~~ video recorded and broadcast on the internet ~~at the discretion of~~ unless the Commission ~~and available~~ makes a specific finding that, as to a specific fiscal year, funding is not reasonably available for video recording. This provision does not in any way inhibit any right that members of the public have concerning the use of a recording device to record public meetings of a state body.

Furthermore, the following provisions, drafted by the Petitioner, should also be included in the new section requested hereby.

(L) A meeting is subject to the Bagley-Keene Act if (a) any portion of the meeting relates to one or more matter within the Commission's jurisdiction, and (b) the meeting is attended (whether in person or otherwise) by all of the following: at least one Wildlife Resources Committee member (or a Wildlife Resources Committee designeee), at least one Department of Fish & Wildlife (the "Department") employee, and at least one person who is neither a member of the Department nor affiliated with the Commission (e.g., non-committee member Commissioners or Commission Staff). This provision only applies to meetings that concern, at least in part, nonmarine wildlife resource issues.

(M) The ability of the public to speak at a Wildlife Resources Committee meeting on a particular item does not preclude a member of the public from attending a later Commission meeting and commenting on that item, or a related item, during the Commission meeting but prior to the Commission taking action on the relevant item.

(N) If the Wildlife Resources Committee has a designee, the name of that designee shall be announced at a Commission meeting prior to that designee acting as the designee of the Wildlife Resources Committee.

(O) The WRC shall strive to adhere to an "equal time" model to the extent practicable, to prevent an unreasonable disparity of non-public Wildlife Resources Committee meetings being granted to specific parties holding disparate viewpoints.

(P) The Wildlife Resources Committee shall not create any sub-committee or other entity without express approval by the full Commission after the Commission has taken public comment on the issue. All subcommittes or similar entities created by Wildlife Resources Committee with Commission approval shall meet only as a part of Wildlife Resources Committee meetings, and all communications between members of these entities shall be treated as public records.

(Q) A log should be kept of all Wildlife Resources Committee-related meetings attended by Wildlife Resources Committee members or the Wildlife Resources Committee designee.

III. JUSTIFICATION FOR THE REQUESTED REGULATORY CHANGES

A. Any Rules Used by and for the WRC Are Regulations, Thus They Must Be Approved through the Proper Regulatory Process

The agenda for the Fish & Game Commission ("Commission") meeting of February 5, 2014, included the following agenda item: "DISCUSSION OF DRAFT POLICY AND PROCEDURES FOR WILDLIFE AND MARINE RESOURCES COMMITTEES" (the "Draft"). A copy of the Draft is available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf.

The Draft, as written, is a "regulation" under state law. Government Code section 11342.600 states, in its entirety,

> '[r]egulation' means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure.

As used in section 11342.600, the term "state agency" includes every state commission. Gov't Code § 11000. Thus, the Commission is clearly a state agency for the purposes of section 11342.600. Section 11342.600 is in accord with Fish & Game Code section 108, which "requires the commission to adopt rules to govern the business practices and processes of the Commission."[3]

Should the Commission attempt to utilize any rules regarding the operation of the Wildlife Resources Committee without having them adopted via proper regulatory rulemaking, that would violate Government Code section 11340.5(a). That section states:

> No state agency shall issue, utilize, enforce, or attempt to enforce any guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule, which is a regulation as defined in Section 11342.600, unless the guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule has been adopted as a regulation and filed with the Secretary of State pursuant to this chapter.

Case law confirms that the Wildlife Resources Committee would be using illegal "underground regulations" if the Commission allowed the Wildlife Resources Committee to operate by a set of rules that were not properly enacted. *See Engelmann v. State Bd. of Educ.*, 2 Cal. App. 4th 47, 62 (1991) (holding Board of Education was required to go through rule making process found in the Administrative Procedures Act when creating guidelines and manuals for a mutli-level review process used for selecting textbooks that could be used in public schools).

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[3] *See* the Draft, available at http://www.fgc.ca.gov/meetings/2014/feb/proposed_committee_procedures.pdf

B. Equal Access and Transparency Interests Will Be Served if the Petition Is Granted

The Petitioner sent a letter to the Commission on April 14, 2014, outlining why the Wildlife Resources Committee needed rules adopted pursuant to the proper regulatory process. A copy of that letter is attached and incorporated by reference. Put simply, that letter outlined the various potential pitfalls related to the draft rules that the Commission circulated earlier this year, rules that, it seemed, the Commission wanted to adopt without adhering to the proper regulatory process. Because three months have passed since that letter and the July 28, 2014, meeting of the Wildlife Resources Committee is being held without any binding rules or regulations, the Petitioner is now forced to make this formal demand that the lack of regulations be addressed.

Indeed, to prevent any possible argument that a Commission decision was made as the result of a fault in the undefined Wildlife Resources Committee public comment process in place as of July 28, 2014, the Petitioner strongly suggests that the Wildlife Resources Committee not make any final decisions or recommendations at that meeting.

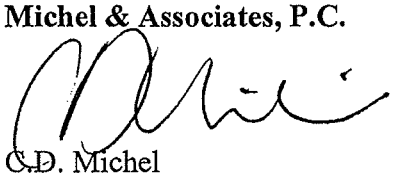
IV. THE COMMISSION HAS THE LEGAL AUTHORITY TO ADOPT THE REQUESTED REGULATORY CHANGES

Section 108 of the Fish and Game Code requires the commission to adopt rules to govern the business practices and processes of the Commission. Thus, the regulations sought hereby are clearly within the Commission's regulatory authority. *See also* Gov't Code § 11340.6 ("any interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation").

V. CONCLUSION

For the reasons stated herein, this Petition should be granted.

Sincerely,
Michel & Associates, P.C.



C.D. Michel

cc:
cc: Senior Assistant Attorney General Christopher Ames
(Christopher.ames@doj.ca.gov)

enc:
Letter of April 14, 2014

BEFORE THE CALIFORNIA FISH AND GAME COMMISSION

A Petition to List the Tricolored Blackbird (*Agelaius tricolor*) as Endangered under the California Endangered Species Act and Request for Emergency Action to Protect the Species

tricolor blackbird, Agelaius tricolor, Dave Menke, USFWS

Notice of Petition

For action pursuant to Section 670.1, Title 14, California Code of Regulations (CCR) and Sections 2072 and 2073 of the Fish and Game Code relating to listing and delisting endangered and threatened species of plants and animals.

I. SPECIES BEING PETITIONED:

Common Name: Tricolored Blackbird (*Agelaius tricolor*)

II. RECOMMENDED ACTION: Immediate Listing as Endangered with Emergency Regulations

The Center for Biological Diversity submits this petition to list the Tricolored Blackbird (*Agelaius tricolor*) as endangered throughout its range in California, under the California Endangered Species Act (California Fish and Game Code §§ 2050 et seq., "CESA"). This petition demonstrates that the Tricolored Blackbird clearly warrants listing under CESA based on the factors specified in the statute.

This petition provides identical information as contained in the Center's 2014 petition with the addition of an addendum providing new research.

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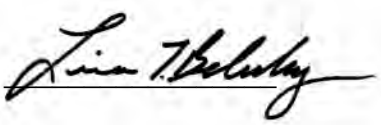
I hereby certify that, to the best of my knowledge, all statements made in this petition are true and complete.

Signature:  Date: August 19, 2015

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Executive Summary

The Tricolored Blackbird ("Tricolor;" *Agelaius tricolor*) is a colonial-nesting passerine largely endemic to California. It forms the largest colonies of any passerine in North America since the extinction of the Passenger Pigeon (*Ectopistes migratorius*, Bent 1958). Colonially nesting birds are particularly vulnerable to extinction because a small number of colonies can include a large proportion of the population; thus human activities can have catastrophic effects by killing adults or chicks or destroying habitat (Cook and Toft 2005). Such was the fate of the colonial Passenger Pigeon, Carolina Parakeet (*Conuropsis carolinensis*), and Great Auk (*Pinguinus impennis*) and will be the fate of the Tricolored Blackbird if immediate action is not taken. As scientists working with the Tricolored Blackbird noted, early actions are needed to protect colonial bird species from rapid collapse.

> **"Surely the legacy of Passenger Pigeon should be our understanding of how such extinctions can occur rapidly in extremely abundant organisms because of non-linear population dynamics and thresholds caused by inverse density dependence. Failure to address the impact of habitat and human activities on reproductive success of Tricolored Blackbird may again lead to the extinction of a once-abundant bird**." (Cook and Toft 2005:86.)

Tricolored blackbird populations are declining at an alarming rate in large part due to the direct loss and degradation of habitat from human activities. This includes historical market hunting of blackbirds, poisonings and shootings to protect crops from blackbirds, pesticide use, and harvest of grain crops grown for dairy silage and other agricultural grain crops and routine plowing of weedy fields throughout most of its range during nesting season. For example, every year, thousands of Tricolors, often entire colonies of tens of thousands of birds representing the largest known colonies in a given year, nest unsuccessfully on agricultural lands because their eggs and nests are destroyed during harvest or weed abatement activities (Beedy and Hamilton 1999, Hamilton 2004, Cook and Toft 2005, Meese 2006, 2007, 2008, 2009a, 2011). The concentration of most of the known Tricolor population in a few large breeding colonies increases the risk of major reproductive failures, especially in vulnerable habitats such as active agricultural fields (Cook and Toft 2005, Meese 2013). Moreover, entire colonies are often predated by rats, egrets, herons, coyotes, and other species, some colonies are partially or completely destroyed by storms, and insufficient insect prey in foraging areas near to nesting substrates appears to be causing widespread reproductive failure even in colonies unperturbed by harvest, predation, or storms (Meese 2006, 2007, 2008, 2009a, 2011, 2013). Because these factors are contributing annually to significant breeding failure, efforts to reduce and reverse population decline are critically needed. Unfortunately, voluntary measures undertaken over the past decade have not stopped the decline of the species or destruction of nesting habitat. Therefore, in order to ensure survival of the species the California Fish and Game Commission ("the Commission") should immediately list the Tricolored Blackbird as endangered and adopt emergency regulations to protect its nesting habitat.

The geographic range of Tricolors is generally restricted to California's Central Valley and surrounding foothills, and sparsely throughout coastal and inland locations north of the Central Valley and in southern California (Beedy and Hamilton 1999). California supports more than 99% of the population, but the species has also been reported in small numbers in southern

Oregon and northernmost western coastal Baja California with a single colony of 60 birds in western Nevada, and a similar number in central Washington (Beedy and Hamilton 1997, 1999, DeHaven 2000). The Tricolor's basic requirements for selecting breeding sites are open accessible water, a protected nesting substrate such as flooded or thorny or spiny vegetation, and adequate insect prey within a few kilometers of the nesting colony (Beedy and Hamilton 1999, Shuford and Gardali 2008). Historically, rivers flowing into the Central Valley would flood and create extensive marshes, providing abundant high-quality breeding habitat for Tricolors and other wetland-dependent species, but much of this habitat has been obliterated. Tricolors have demonstrated some flexibility in shifting breeding from marshes to other spiny and thorny vegetation types such as non-native Himalayan blackberry and thistles as well as newly developed silage crops such as Triticale. However, none of these new nesting habitat types are given any regulatory protection, rendering entire colonies vulnerable to complete reproductive failure during the active nesting season due to agricultural activities. In addition, Tricolor colonies often switch nesting locations from year to year, substantially complicating conservation efforts.

The Tricolor is sympatric with and morphologically similar to the Red-winged Blackbird ("Red-wing;" *A. phoeniceus*). However, unlike Red-wings, Tricolors breed in dense colonies, often traveling long distances to forage for their chicks, and males defend relatively smaller territories within their colonies, mating with one to several females per year (Beedy and Hamilton 1999). The overall distribution and location of nesting sites vary from year to year, and Tricolors are itinerant breeders, i.e., they may nest more than once at different locations during the breeding season (Hamilton 1998).

Tricolors form the largest breeding colonies of any North American landbird, and breeding colonies recently consisted of tens of thousands of birds at a single site. While Tricolor colonies can consist of thousands of breeding birds, thus giving an appearance of high local abundance to casual observers, the status of the bird is of great concern because the overall population has declined dramatically over the past 70 years, a decline that appears to have accelerated in the past 6 years (Meese 2014), its geographical range is largely restricted to California, and its gregarious nesting behavior renders colonies vulnerable to large-scale nesting failures due to destruction of active nests in its agricultural habitats and high levels of predation in its little remaining native emergent marsh habitat, predominately cattails and bulrushes. Every year, Tricolors experience large losses of reproductive effort to crop-harvesting and other agricultural activities, and predation, and suffer habitat losses to land conversions from rangeland to vineyards, orchards, and urban development and an unknown number are killed in autumn in rice paddies in the Sacramento Valley . Despite awareness of widespread reproductive losses over the past two decades, FWS, the Commission, and DFW have failed to take any serious regulatory action. The Center for Biological Diversity submitted a petition to list the Tricolor as an endangered species under the California and Federal Endangered Species Acts in 2004 due to the documented population decline from historical number and the serious threats from agricultural harvest and habitat loss, but the petition was denied and the threats continued. Consequently, the population of Tricolors continued to drop precipitously to the point where the need for emergency action is now unequivocal.

The Tricolored Blackbird was once considered one of the most abundant bird species throughout much of its range (Cook and Toft 2005). In 1859, Heermann wrote that wintering flocks of Tricolors would "darken the sky for some distance by their masses," a description similar to that of the now-extinct Passenger Pigeon (Cook and Toft 2005). Beginning in the 1930s and continuing until 2014, numerous efforts have been made to estimate abundance of Tricolors (Neff 1937, DeHaven et al. 1975, Hamilton et al. 1995, Beedy and Hamilton 1997, Hamilton 2000, Kelsey 2008, Kyle and Kelsey 2011, Meese 2014). Numbers of Tricolors estimated in the 1930s compared with numbers estimated in 2014 very clearly and unequivocally demonstrate an extremely precipitous decline in the population of Tricolors in the Central Valley, the historical stronghold of the species, and elsewhere including the Central Coast and southern California. Population trends of Tricolors in the Central Valley indicated a decline of at least 50% between the 1930s and early 1970s (DeHaven et al. 1975), and an additional decline of approximately 56% of the remaining population was reported from 1994 to 2000 (Hamilton 2000). More recent statewide surveys included greatly expanded efforts with more sites, and these surveys documented additional dramatic declines: from an initial survey count of 395,000 birds in 2008, numbers declined dramatically to a count of about 145,000 in 2014—despite the fact that this was the largest effort ever expended to census the entire population of Tricolored Blackbirds, this was the smallest population ever recorded. The situation is dire indeed.

Petitioner requests immediate protection of the Tricolored Blackbird. The Center is extremely concerned about the continued destruction of Tricolor nests on dairy farms and other agricultural lands in the Central Valley and the failure of voluntary measures to stem the decline in abundance. The Center is also concerned with the failure of the wildlife agencies to adequately protect active nests and birds in this critical Tricolor nesting habitat—which currently supports some of the biggest colonies of Tricolors comprising a large proportion of the remaining population. Other important nesting substrates, such as Himalayan blackberry, are occasionally destroyed by herbicide application (Meese 2011). Widespread reproductive failures are regularly documented even in the species' native marsh habitat, due to predation and lack of insects with which to feed young (Meese 2013). As a result, through this letter, the Center is requesting immediate action by the California Fish and Game Commission prohibiting (or at a minimum delaying) harvesting and plowing activities on private lands used for Tricolor breeding during the upcoming 2015 nesting season. These activities are already in clear violation of the California Fish and Game Code section 3503 which protects all birds' nests and eggs from destruction (Cal. Fish & G. Code § 3503 ["It is unlawful to "take, possess, or needlessly destroy the nest or eggs of any bird"]). Furthermore, these activities are in large part responsible for current precipitous decline of the species that necessitates immediate listing under the California Endangered Species Acts as discussed in detail below.

Petitioner acknowledges that the California Department of Fish and Wildlife ("CDFW") and other partners have been engaging in "public/private cooperation" to address the ongoing violations of the applicable statutes and the resultant large-scale nesting failures. Thanks to these voluntary measures, many thousands of nests have been saved from destruction during crop harvest. However, while laudable, these measures are only acceptable mitigation if they are consistently negotiated and proven effective at significantly reducing Tricolor nest failures. Given the past efforts, it is unsurprising that CDFW takes the position that crop purchases or

reimbursements for delayed harvest are not a feasible long-term solution for Tricolor habitat management on private agricultural lands. Petitioner agrees that such voluntary and cooperative methods will not be sufficient to slow or reverse the Tricolor's recent precipitous decline. For example, in 2011 (the last year for which detailed data were available on colony fates) 56% of all nests in silage fields were destroyed despite efforts to contact farmers and coordinate buy-outs of harvest delays (Meese 2011). Numerous voluntary recommendations to halt the population declines have been proposed in the reports on the 2008, 2011, and 2014 statewide surveys, but these recommendations have not been widely adopted and as a result the populations continue to plummet. The Tricolored Blackbird Working Group set a recovery goal of 725,000 Tricolored Blackbirds in 2007 but every year since then the population has declined, so it has rapidly become much more difficult to meet the recovery goal. Because CDFW cannot demonstrate that concrete measures will be implemented immediately to protect critical nesting sites on private lands in the 2015 breeding season under the voluntary and cooperative partnerships, listing is necessary and establishment of regulatory protective measures to reduce known sources of Tricolored Blackbird mortality.

Even with some voluntary public/private cooperation in place for this nesting season, the Tricolor indisputably warrants listing under the California Endangered Species Acts as discussed more fully below. As a result, pursuant to the California Endangered Species Act, California Fish & Game Code §§ 2070, *et seq*., the Center for Biological Diversity hereby formally petitions the California Fish and Game Commission to list the Tricolored Blackbird as "endangered" under the California Endangered Species Act. In addition, the Center hereby requests that the Commission immediately adopt emergency regulations to list the Tricolored Blackbird as endangered under California Fish and Game Code Section 2076.5.

Procedural History

As the Commission is aware, the Center for Biological Diversity petitioned for an emergency listing of the Tricolored Blackbird in 2004 under both the California Endangered Species Act ("CESA") and the Federal Endangered Species Act ("ESA") based on the then-already precarious status of the species due to declining populations. The petition was denied by both the Commission and the U.S. Fish and Wildlife Service (*see* Federal Register 2006). Currently the Tricolor is a nongame species of management concern and California Species of Special Concern, the Bureau of Land Management listed it as a sensitive species, and it has been on the IUCN red list of endangered species since 2006 (IUCN 2011), but given precipitous population declines even since 2004, clearly the Tricolor requires the safety net of the California Endangered Species Act.

While the Tricolored Blackbird is considered a non-game bird of management concern by FWS, this designation does not provide any specific legal protection to the species. Furthermore, while the species is theoretically afforded protection under the federal Migratory Bird Treaty Act (MBTA), the statute is rarely if ever enforced against private parties.

The Tricolor is also designated a species of special concern by CDFW and theoretically must be considered during project actions subject to the California Environmental Quality Act

("CEQA"). However, this status does not protect the species from activities that do not trigger CEQA's environmental review requirements, and even when considered, CEQA's substantive mandates for environmental protection have not been implemented with regards to protection of the Tricolor. The California Fish and Game Code section 3503 protects all active nests and eggs from destruction or "take", however this statutory prohibition has not been consistently if ever enforced by CDFW to protect the Tricolor from impacts on agricultural fields during the nesting season.

The CESA Listing Process and Standard for Acceptance of a Petition

Recognizing that certain species of plants and animals have become extinct "as a consequence of man's activities, untempered by adequate concern for conservation," (Fish & G. Code § 2051 (a)), that other species are in danger of extinction, and that "[t]hese species of fish, wildlife, and plants are of ecological, educational, historical, recreational, esthetic, economic, and scientific value to the people of this state, and the conservation, protection, and enhancement of these species and their habitat is of statewide concern" (Fish & G. Code § 2051 (c)), the California Legislature enacted the California Endangered Species Act.

The purpose of CESA is to "conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat...." Fish & G. Code § 2052. To this end, CESA provides for the listing of species as "threatened"[1] and "endangered."[2] The Commission is the administrative body that makes all final decisions as to which species shall be listed under CESA, while the CDFW is the expert agency that makes recommendations as to which species warrant listing.

The listing process may be set in motion in two ways: "any person" may petition the Commission to list a species, or the CDFW may on its own initiative put forward a species for consideration. Fish & G. Code § 2072.7. In the case of a citizen proposal, CESA sets forth a process for listing that contains several discrete steps. Upon receipt of a petition to list a species, a 90-day review period ensues during which the Commission refers the petition to CDFW, as the relevant expert agency, to prepare a detailed report. The CDFW's report must determine whether the petition, along with other relevant information possessed or received by the Department, contains sufficient information indicating that listing may be warranted. Fish & G. Code § 2073.5.
During this period interested persons are notified of the petition and public comments are accepted by the Commission. Fish & G. Code § 2073.3. After receipt of CDFW's report, the Commission considers the petition at a public hearing. Fish & G. Code § 2074. At this time the

[1] "Threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Fish & G. Code § 2067.
[2] "Endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." Fish & G. Code § 2062.

Commission is charged with its first substantive decision: determining whether the petition, together with CDFW's written report, and comments and testimony received, present sufficient information to indicate that listing of the species "may be warranted." Fish & G. Code § 2074.2. This standard has been interpreted by courts as the amount of information sufficient to "lead a reasonable person to conclude there is a substantial possibility the requested listing could occur." *Natural Resources Defense Council v. California Fish and Game Comm*. 28 Cal.App.4th at 1125, 1129. If the petition, together with CDFW's report and comments received, indicates that listing "may be warranted," then the Commission must accept the petition and designate the species as a "candidate species." Fish & G. Code § 2074.2.

Once the petition is accepted by the Commission, then a more exacting level of review commences. CDFW has twelve months from the date of the petition's acceptance to complete a full status review of the species, seek peer review of the draft report, make the final report available to the public for at least 30 days, and recommend whether such listing "is warranted;" CDFW may seek an extension of up to six months if needed to complete peer review and public review. Fish & Game Code § 2074.6. Following receipt of CDFW's status review, the Commission holds an additional public hearing, which may be continued, and determines whether listing of the species "is warranted." Fish & Game Code §2075.5. If the Commission finds that the species is faced with extinction throughout all or a significant portion of its range, it must list the species as endangered. Fish & G. Code § 2062. If the Commission finds that the species is likely to become an endangered species in the foreseeable future, it must list the species as threatened. Fish & G. Code § 2067.

Notwithstanding these listing procedures, the Commission may adopt a regulation that adds a species to the list of threatened or endangered species at any time if the Commission finds that there is any emergency posing a significant threat to the continued existence of the species. Fish & G. Code § 2076.5. Petitioner asks that the Commission do so here.

1.0 Population Status and Trend

> **If a flock of goldfinches is called a "charm," and a flock of crows, a "murder," what is a flock of Tricolored Blackbirds (*Agelaius tricolor*) called? Whatever the word, it could not possibly be adequate to describe the mind-boggling energy and excitement generated by a flock of over 50,000 Tricolors settling at a colony. Whether an avid birder or weekend naturalist, you can't help but be amazed by this sight, for it is one of the Central Valley's most spectacular natural phenomena. (**Edson and Green, Central Valley Bird Club Bulletin 2004:Volume 7.)

Tricolored Blackbirds form the largest breeding colonies of any North American landbird, a distinction once held by the now-extinct Passenger Pigeon. In the 1800s and early 1900s, the Tricolored Blackbird was considered one of the most abundant bird species throughout much of its range, which consists of low-elevation wetlands and grasslands of Central, Coastal, and Southern California (Cook and Toft 2005). In 1859, Heermann wrote that wintering flocks of Tricolors would "darken the sky for some distance by their masses," a description notably similar to that of the Passenger Pigeon (Cook and Toft 2005). However, a history of market hunting and massive loss of native marshland habitat drastically reduced the population by the

mid-twentieth century. The majority of the population, with the last statewide survey counting fewer than150,000 birds, can still breed in colonies of tens of thousands, but there remain few such large nesting colonies, and those that remain are extremely vulnerable to human activities such as crop harvesting while nests are still active and loss or degradation of suitable foraging habitats (Cook and Toft 2005). This species is on a clear trajectory towards extinction.

Much information is readily and publicly available regarding historical and current population status and trend of the Tricolored Blackbird. The best source of information is from the excellent Tricolored Blackbird Portal that is maintained by the University of California, Davis and available at: tricolor.ice.ucdavis.edu. The Portal provides on-line data entry to hundreds of users and provides access to field data, reports, and published articles about the Tricolored Blackbird. The Portal provides a history of research on population status and trend of the Tricolored Blackbird, which is paraphrased below.

Although the Tricolored Blackbird is mentioned in several articles and books dating to the mid-20th century, the first field work that was focused on Tricolors was conducted by Johnson Neff, a biologist who worked for the Bureau of Biological Survey, the forerunner of today's U.S. Fish & Wildlife Service. Neff's work was primarily focused on the Sacramento Valley, but he also worked at sites in the San Joaquin Valley and in southern California in conjunction with other state and federal biologists and volunteers. After widespread reports of the birds' disappearance from coastal locations, Neff conducted six years of field surveys (from 1931–1936), and additional banding of nestlings until 1940, to determine the status of the birds in the Central Valley.

After 1940, perhaps in response to Neff's finding of fairly large numbers of remaining birds (e.g., over 736,000 adults in eight counties and 282,000 nests at one site in Glenn County in 1934), there followed a more than 20-year period of relatively little research into Tricolor status and biology. Then, during the 1970s, Richard DeHaven of FWS conducted surveys for Tricolors in first the Central Valley and then the entire breeding range (excluding Baja California). These efforts were undertaken to determine changes in the population status of the Tricolor since the last surveys in the 1940s.

In the 1980s Edward (Ted) Beedy began field investigations of Tricolors with an emphasis on estimating the abundance of the species and determining factors responsible for the observed nesting failures of colonies in the Central Valley. Shortly thereafter, William (Bill) Hamilton of U. C. Davis began his field investigations. Hamilton's work extended for 13 field seasons, through 2005, and covered a wide range of topics, including population estimation, productivity estimation, foraging ecology, and the phenomenon known as "itinerant breeding," whereby individuals breed once in one location and then fly northward to a different location to breed again. Beedy and Hamilton wrote the *Birds of North America* treatment of the Tricolored Blackbird (Beedy and Hamilton 1999).

Beedy and Hamilton suggested using volunteers to conduct a statewide survey during a 3-day interval in April to best estimate the global population of the species. Early attempts at statewide surveys to assess population status and trend were conducted in 1994, 1997, 2000, 2001, and

2005. Of these, surveys conducted in 1994, 1997, and 2000 were similar enough in scope and effort to enable the detection of a significant downward trend in the population during this period (Cook and Toft 2005).

Beginning in 2008, the triennial statewide survey was revamped to include a strict new hierarchical coordination structure to standardize methodology and ensure more equal survey effort and thus more comparable results. The Statewide Survey, which occurs in mid-to-late April, is a volunteer effort with participants from most lower-elevation regions of California within the range of the Tricolor, and directed by a statewide coordinator. The 2008 survey was the first to use county coordinators—local experts with extensive experience with Tricolors on the local level—and this new hierarchical protocol (statewide coordinator, county coordinators, local participants) was used in the 2008, 2011, and 2014 surveys. The survey protocol is designed to document both presence and absence at a site, along with an estimate of the number of Tricolors and characteristics of occupied sites (nesting substrate, distance to water, presence of stored grains). These three most recent statewide surveys provide current, relatively more reliable information on the numbers and distribution of Tricolored Blackbirds throughout California and are a means to document trends in the population. These surveys also complement more intensive field efforts that provide insights into the factors causing the observed population decline.

Below this petition describes both the historical and more recent survey methodology and results.

1.1 Historical Population Estimates

The first surveys and population estimates for Tricolors were instigated by Neff in the early 1930s. During the 1960s, other researchers focused their studies on ecology and behavior of the species (e.g., Orians 1960, 1961a, 1961b,Orians and Collier 1962, Payne 1969), but did not provide range-wide population estimates. DeHaven et al. (1975) conducted a second set of more comprehensive range-wide surveys to determine changes in the population status of Tricolors since Neff's work in the 1930s.

From 1930 to 1936, Neff (1937) estimated the population of Tricolors using several methods. The author and cooperators checked the active population of colonies numerous times by conducting flight-line counts (i.e., counting the birds flying in or out across a base line for five minutes); checking distance from base line to feeding ground or nesting site, and estimating probable time required for each trip. Nests were counted by walking nest transects: detailed observations in a randomly-chosen subset of a colony that counted all nests within a 6-foot wide strip and extrapolating from this sample to estimate the total number of nests. Generally, the number of nests rather than the number of breeding adults was reported.

Based on number of nests reported and multiplying by 1.5 (mean estimated sex ratio of 2 females breeding with each male), Beedy and Hamilton (1997) calculated that the surveyors in the 1930s observed as many as 736,500 adults per year in just 8 counties. Neff (1937) documented numerous large colonies, including one in 1934 in Glenn County that contained about 200,000 nests (300,000 breeding adults), over an area greater than 24 ha. Several other colonies in

Sacramento and Butte Counties contained more than 100,000 nests. Hamilton et al. (1995) calculated that Neff observed about 1,105,100 individual Tricolors. Neff, however, concentrated most of his effort in the Sacramento Valley so most likely underestimated total population size at the time.

In 1969 and 1970, DeHaven et al. (1975) surveyed the Central Valley Tricolor breeding range by car, and in 1971, the entire breeding range (excluding Baja California) was surveyed. In 1972, the authors surveyed from the northern San Joaquin Valley to southern Oregon. Additional information was provided to the authors by volunteer ornithologists. Population estimates were made by counts and by projections based on research findings that each Tricolor female attends one active nest and that males mate with on average two females.

DeHaven et al. (1975) estimated the number of breeding birds at 157 colonies. Of these, 40 colonies (25%) had fewer than 1,000 birds, 97 colonies (62%) had from 1,000 to 10,000 birds, and 20 colonies (13%) had more than 10,000 birds. All colonies outside the Central Valley contained fewer than 10,000 Tricolors. They found fewer colonies, fewer non-breeding Tricolors, no nesting areas even approaching the size of some of the previously reported colonies, fewer birds in the largest colonies, and fewer total Tricolors than Neff (1937). Overall, DeHaven et al. (1975) concluded that the population of Tricolors has likely been reduced by more than 50% below levels reported in the 1930s, and that downward trajectory was continuing.

Beedy et al. (1991) summarized all historical and recent breeding accounts, including unpublished observer reports from a variety of sources. Based upon this information they concluded that the Tricolor had declined further from population estimates by DeHaven et al (1975), and that this decline was coincident with continuing losses of wetland habitats in the Central Valley. They reported a range of about 35,000–110,000 breeding adults per year in the 1980s, with an approximate average of 52,000 breeding adults reported per year in that decade (from Beedy and Hamilton 1997). Unfortunately their population estimates were not based well enough on field surveys and so cannot be considered adequate for evaluating the population for the period addressed. For example, Beedy et al. (1991) estimated a 76% decline in colony size between the 1930s and 1970s, whereas Graves et al. (2013), using a more comprehensive database, documented a 63% decline in mean colony size specifically from 1935 to 1975. Further, Beedy et al. (1991) documented a 62% decline in average colony size from the 1970s to the 1980s and Cook and Toft (2005) demonstrated a decline in average colony size from 1994 to 2000. Although Graves et al. (2013) found no decline from the 1970s to 2009, that study appears to have combined data that were not truly comparable. Since 2009, there has been a well documented marked decline in average colony sizes (Meese 2014), discussed below.

Three even more comprehensive surveys were conducted in 1994, 1997, and 2000 (Hamilton et al. 1995, Beedy and Hamilton 1997, Hamilton 2000). These surveys were co-sponsored by FWS and CDFW to document the Tricolor's population status, including investigating size and location of colonies, nesting habitat characteristics, behavior, reproductive success as correlated with habitat type, patterns of land ownership, and total population size and distribution. The surveys were coordinated by experienced Tricolor researchers at U.C. Davis and included these researchers in addition to numerous local volunteer ornithologists and agency personnel as

participants. U.C. Davis researchers often provided follow-up confirmation of the larger volunteer-reported colonies.

The total number of Tricolors counted during the 1994 statewide survey was estimated to be 369,359 individuals. This suggests a decrease in population abundance of at least 50% (and probably more) based on Neff's (1937) results between the 1930s and early 1990s and a clear downward trend in the population. The ten largest colonies located during the survey and additional full season range-wide surveys in 1994 included 60.5% of all breeding individuals, pointing to the importance of protecting large breeding colonies and their nesting and foraging habitat, if the species is to be conserved. Importantly, full season survey results indicated that 70% of all Tricolor nests and 86% of all foraging by nesting birds occurred on private agricultural land in 1994 (Hamilton et al. 1995). Approximately 54% of all observed Tricolor nesting efforts were associated with agricultural crops, primarily grain crops grown for silage at dairies (Beedy and Hamilton 1997).

The total number of Tricolors counted during the 1997 survey was estimated to be 232, 960 individuals. This suggests a decrease in the population by approximately 37% between 1994 and 1997. Population declines were most apparent in the species' historical stronghold in the Central Valley, including Sacramento, Fresno, Kern, and Merced Counties. Approximately 75% of all breeding adults located during the survey were concentrated within the 10 largest colonies.

The total number of Tricolors located during the 2000 survey was estimated to be 162,508 individuals. This suggests an additional decrease in the population by approximately 30% between 1997 and 2000 and an overall decline of approximately 56% between 1994 and 2000. Fewer colonies were located in 2000 than in 1994 (Hamilton 2000) and colonies were smaller on average in 2000 compared to 1994 (Cook and Toft 2005). These data likely underestimate the true magnitude of change that occurred during this time period. The reliability of the censuses to estimate the Tricolor population likely increased over time because the number of participants grew and participants were better informed about colony locations in each succeeding year Hamilton (2000) states "…the method of the Census and the survey, to reinvestigate all known breeding places and to search for new ones, has become an increasingly complete assessment of Tricolored Blackbird distribution and abundance. The 2000 Census probably located a greater proportion of the entire population that did censuses in previous years."

More than 40% of all Tricolor reproductive effort in 2000 was associated with dairies in the San Joaquin Valley and southern California (Hamilton 2000). Hamilton (2000) pointed out that conditions were more favorable for breeding Tricolors in 2000 than 1999, including the buy-out of the Tevelde and George Colonies in Tulare County and the success of the Delevan NWR and Hills Duck Club (Colusa County) and Merced NWF (Merced County) colonies. However, at least four large colonies, one in Fresno County, two in Kings County, and one in Tulare County, were lost to crop harvest in 2000.

Despite the favorable conditions in 2000, Hamilton (2000) stated that "...the central conclusion of the census and survey is that tricolors are continuing to decline precipitously in numbers … The conclusion that tricolor numbers are plummeting is based not only upon these data, but also

on the collective experience of local experts throughout California who have observed tricolors over long intervals." One of the participants in the 2000 survey was DeHaven, who surveyed the same area in the 1970s, and who wrote in a FWS white paper "[e]vidence of habitat loss, from urban expansion and agricultural conversions from such high-value (for Tricolors) uses as livestock forage production, to low- or no-value uses such as vineyards and orchards, was widespread." He further noted "[t]hese present observations support a conclusion of another large population decline between the 1970s and today."

In 2001, Point Reyes Bird Observatory (PRBO) coordinated the Tricolored Blackbird survey in California. The PRBO effort did not entail a robust count, but rather cited reports submitted by participants over several months (Humple and Churchwell 2002). The survey included season-long coverage instead of just 2–3 days in April to include colonies that might be completely missed if depredation or draining occurred prior to the visit date. However, this methodology is problematic because as itinerant breeders some of the birds were probably double-counted. Data were available for a total of 48 sites visited: 142, 045 breeding birds were counted and the largest colony size was approximately 30,000 (Humple and Churchwell 2002).

In sum, survey results from 1994 to 2001 show that the number of Tricolors counted plummeted from an estimated 370,000 in 1994, to 240,000 in 1997, to 162,000 in 2000, to 142,045 in 2001. Numbers are unknown from the 2005 survey. These population data suggest a decline of 62% in less than a decade. Fewer colonies were located in 2000 than in 1994 (Hamilton 2000) and colonies were smaller on average in 2000 compared to 1994 (Cook and Toft 2005). The earlier surveys were important in assessing general trends in population and colony sizes in different regions, but starting in 2008 the surveys provided even more comprehensive coverage of the state, and utilized a means for the public to input data with the advent of the Tricolored Blackbird Portal Taken together, the available data and information shows a clear and alarming downward trend of the Tricolored Blackbird population in California.

1.2 Recent Population Estimates

The 2008 statewide survey was coordinated by Audubon California (Kelsey 2008). The goal of the survey was to "develop the best statewide population estimate possible, using volunteers across the state." Audubon California placed particular emphasis on expanding overall geographic coverage and on thoroughly surveying southern California counties. The survey used a three-tiered system:

1st tier is a statewide coordinator,
2nd tier is county coordinators, and
3rd tier is volunteer participants.

This three-tiered structure allowed for increased recruitment of volunteers, improved survey coverage, and was more thoroughly based on the local knowledge embodied in the county coordinators. The 2008, 2011, and 2014 surveys all were conducted using the same three-tiered structure and same survey protocols for recruiting and training volunteers and conducting the surveys (e.g., identifying birds, estimating colony size, and recording colony attributes such as

nesting substrates, distance to open water, and presence of stored grains). And significantly, the USFWS funded the development of the Tricolored Blackbird Portal prior to the 2008 survey, which enabled for the first time the on-line entry of records of observations of breeding birds.

The 2008 survey was carried out April 25 to 27. However, during this time several large colonies nesting in silage were harvested, thus complicating the count (Kelsey 2008). In response, the 2011 survey was conducted April 15 to 17, earlier than previous surveys to better avoid the harvest time of silage crops. The 2014 survey was conducted from April 18 to 20. The three-day window captures as many birds as possible on colonies during their first breeding attempt of the year while using a narrow window to ensure birds are not double-counted, as colonies and individual birds can shift locations over relatively short periods of time during the breeding season. Below are the population results.

2008—A total of 155 volunteers participated in the 2008 survey, visiting 361 historical and new sites in 38 counties within California. The census total was 394,858 birds at 180 sites. During the survey, 135 sites were documented as breeding colonies with an estimated 392,581 breeding birds. Out of 38 counties surveyed, there were 32 in which Tricolored Blackbirds were detected.

Regional distribution was similar to that reported from previous surveys, with the vast majority of birds (86.4%) occurring in the San Joaquin Valley. Nine of the top 10 and 15 of the top 20 colonies were in the San Joaquin Valley, with 63% of the population occurring at only five colony sites in Merced, Tulare, and Kern counties. In southern California, 5,487 birds were counted at 24 sites. Several known historical sites occurred on private land and volunteers were unable to gain access. As a result, this may be an underestimate of the number of birds, but Kelsey (2008) noted that there is no reason to suspect that a large number of birds were left uncounted in southern California.

2011—A total of 100 volunteers participated in the 2011 statewide survey, visiting 608 historical and new Tricolored Blackbird colony sites in 38 counties. The statewide population estimate was 259,322 birds at 138 sites in 29 counties.

The majority of Tricolored Blackbirds (89%) again were counted in the San Joaquin Valley and Tulare Basin, matching the results in prior surveys. The three largest concentrations of birds occurred in Merced (54%), Kern (24%), and Tulare (9%) counties. The top 10 largest colonies for 2011 were found in these three counties and 16 of the top 22 were from the San Joaquin Valley or Tulare Basin. Notably, 65% of the population was consolidated into only six colony sites in Merced, Kern, and Tulare counties. The southern California subpopulation was estimated to be 5,965 individuals at 32 sites in three counties, with a total of 74 sites visited.

2014—Overall, 38 county coordinators and 143 volunteers participated in the survey. A total of 145,135 birds were counted in 37 counties, out of 41 counties and 802 locations surveyed. Tricolored blackbirds were observed at a total of 143 locations. This represents a near-quadrupling of the number of locations surveyed since the 2000 statewide survey, when only 206 sites were surveyed (Hamilton 2000).

1.3 Summary

In 2014, 75 new location records were added by 27 different Portal users as result of the statewide survey. This is the same number of new location records that were added as a result of the 2011 statewide survey. In 2008, 180 sites were visited, while in 2011, 608 sites were visited and in 2014, 802 sites were visited. Despite this substantial increase in sites that were visited, the total number of birds counted declined dramatically, from 394,858 birds in 2008 to 259,322 birds in 2011 to just 145,135 birds in 2014.

Every major study of *A. tricolor* published since the 1970s has sounded the alarm bell regarding the precipitous conservation status of the species:

> "Further research is needed to determine whether this downward trend, which may have reduced the Central Valley population by more than 50%, is continuing, and whether it has yet reached the point of concern.…" (DeHaven et al. 1975)
>
> "Reported tricolor colony size estimates in 1994 compared to the total count in 1997...indicated that the total tricolor population declined by about 37%, and the greatest declines occurred in Sacramento, Fresno, Kern, and Merced Counties, which hosted about 72% of the total adults observed in April 1994...In some portions of their range, tricolors have definitely declined or been eliminated, including local extirpation in portions of the Central Valley where they were once abundant...and many historical sites in coastal southern California counties." (Beedy and Hamilton 1997)
>
> "The central conclusion of the Census and survey is that tricolors are continuing to decline precipitously in numbers, from millions in the 1930s...to an estimated 750,000 in 1975..., 370,000 as of the 1994 Census and 162,000 in this account for 2000. The conclusion that tricolor numbers are plummeting is based not only upon these data, but also on the collective experience of local experts throughout California...Tricolors are a diminished natural spectacle in the Central Valley and in Southern California, the former strongholds of this species." (Hamilton 2000)
>
> "The long-term population trends and patterns in reproduction reported in this study reveal that the Tricolored Blackbird possesses most of the traits that ultimately led to the extinction of the Passenger Pigeon in the same ecological circumstances. These factors include the loss of vast areas of native wetland along with the increasing loss of upland, non-native vegetation favorable for nesting, the trend of decreasing colony size in a highly social breeder, a habit of itinerant breeding, and wholesale mowing down of the largest breeding colonies in agricultural harvest." (Cook and Toft 2005)
> "We interpret our results to provide clear evidence that extinction is imminent for Tricolored Blackbird if current land-use trends continue, as they certainly will, and if measures are not implemented immediately to protect breeding colonies in non-native nesting substrates. Overall the current decline of the population is strongly correlated with its persistent use and re-use of attractive habitats where reproduction often fails, combined with continuing losses of productive nesting substrates of all kinds… The

protection of native emergent marshes is not the solution to reverse the declining population because this habitat provides attractive population sinks. Under current protections, Tricolored Blackbird may therefore be falling through the policy "cracks", because it is not targeted directly as an officially endangered species and protecting its native breeding habitat under current environmental policy is not sufficient to reverse the declining population." (Cook and Toft 2005)

"In 1994 and 2000 the top 10 colonies accounted for 60% and 59% of the total population estimate, respectively. In 2008, this has increased to 77.5%. This increase in concentration of individuals at fewer colonies increases the chances of reproductive failure for a significant proportion of the population in any given year." (Kelsey 2008)

"This year's population estimate represents a substantial decrease from 2008 of approximately 135,000 birds, or a 34% decline (far more than would have been missed by any gaps in coverage). This number is more similar to the population estimate in 2005. One important probable cause of this decline is low reproductive success that has been documented in reports over the past three years (Meese 2008, 2009a, 2010). Several of the largest colonies in recent years have had an average nest success rate of 0.25 young fledged per nest and the reproductive success of these colonies has been declining for several years... This may be a major factor in the observed population decline despite continued conservation efforts (Meese 2009a)." (Kyle and Kelsey 2011)

"The 2014 statewide survey is believed to have been the most thorough ever conducted. Concerned citizens have entered dozens of new location records into the Portal, resulting in a rapid increase in knowledge of where the birds breed, and the number of locations surveyed increased from 361 in 2008 to 802 this year. Yet despite this rapid increase in knowledge, the number of birds in California as estimated by the Statewide Survey again declined sharply." (Meese 2014)

"Bird numbers were down markedly from the two previous statewide surveys in the San Joaquin Valley, especially in Kern and Merced counties, where the breeding birds had recently been most concentrated... Overall, the number of breeding birds in the San Joaquin Valley dropped 78% in 6 years, from 2008 to 2014…, and the number of birds seen in counties along the Central Coast was less than 10% of that seen in 2008..." (Meese 2014)

Graves et al. (2013) analyzed a dataset comprising 2463 records of the size of breeding colonies from 1907 to 2009. The resulting database included 1964 records of breeding or non-breeding birds from 1183 sites in 46 counties. The authors conducted a systematic statistical evaluation of trends for Tricolors to determine the magnitude of overall decline and whether it is continuing, whether trends were apparent across regions, whether trends varied among different types of breeding habitats, whether the geographic distribution of the species has changed, and if so whether distributional changes were linked to changes in habitat used for breeding.

Statewide, colony size, as indexed by the number of birds per record, declined significantly and substantially from 1935 to 1975 (Graves et al. 2013). The authors did not detect a decline in average colony size from 1980 to 2009, however, this may have been due to attempts to combine data that were not comparable. On a regional basis, both the number of birds per breeding site (colony) and total birds per region decreased drastically before and after 1980 (Figure 1). Regions included Central Coast, North Coast, Northeast Interior, Sacramento valley, San Francisco Bay, San Joaquin Valley, and Southern California.

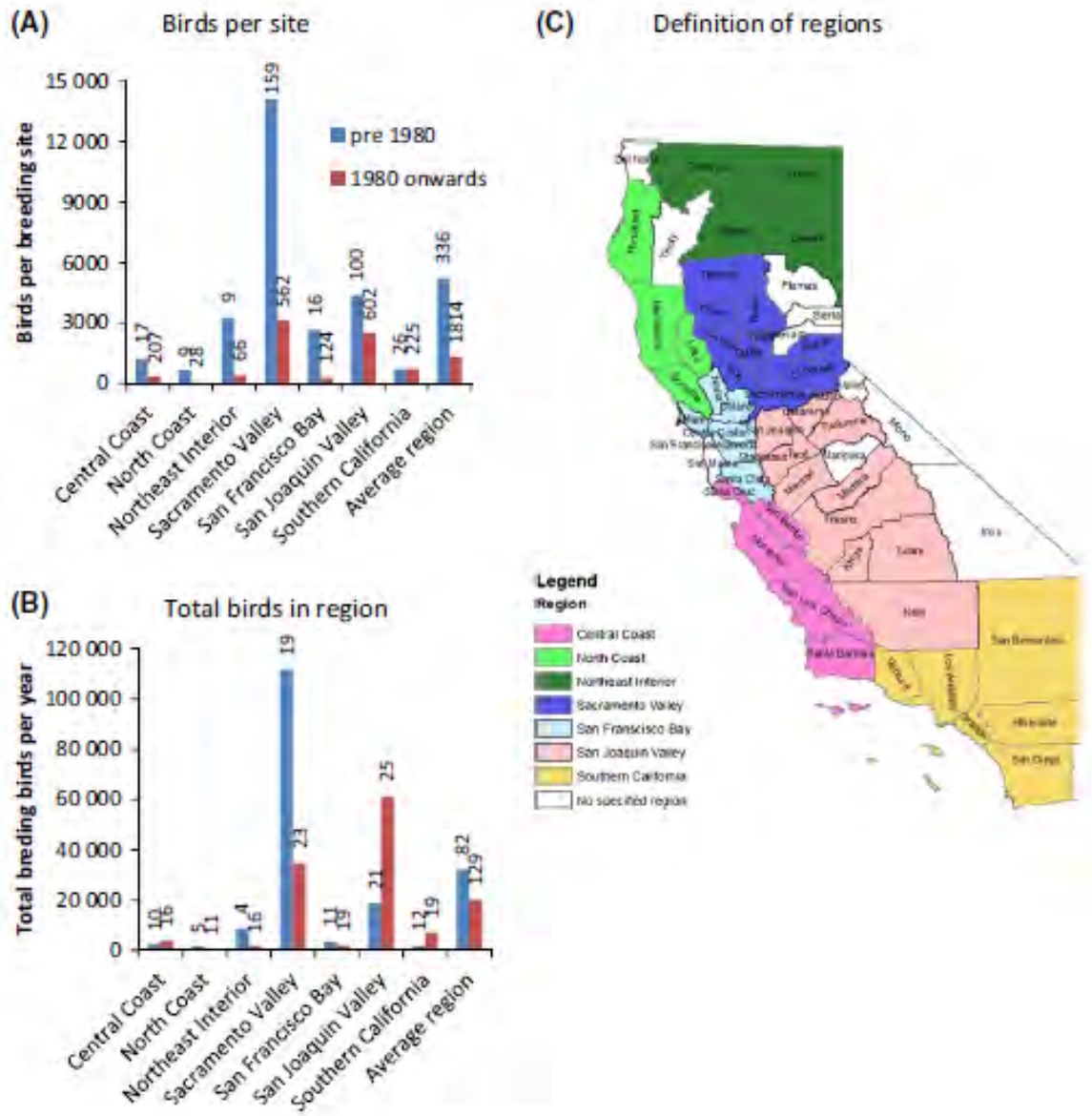


Figure 1: Number of Tricolored Blackbirds Per Breeding Site and Total Number of Breeding Birds Per Year Before and After 1980 By Region

There was evidence for geographical variation in the average size of breeding colonies over time. Prior to 1980, the Sacramento Valley supported far larger populations than any other region, while after 1980 the San Joaquin Valley held that distinction. One of the most hard-hit regions appeared to be the Central Coast. The authors noted on page 4: "In 1935 the Central Coast had 72% larger colonies than the average across all regions but subsequent to this these sites declined 80% more rapidly than colonies in other regions." Results of the 2014 statewide census survey showed continuing drastic declines in the Central Coast region, with the number of birds counted in that region were only 10% of those counted in 2008 (Meese 2014).

Since 2009 (the last year in the Graves et al. dataset), two more state-wide census surveys were conducted, and additional data were recorded during intervening years regarding colony sizes. The 2014 census reported a substantial downward trend in the sizes of the largest colonies over the past decade. Meese (2014:11) stated "A total of 93,000 birds was seen in the 10 largest colonies, 64% of the total. This is a much lower percentage of the total than was seen in the 10 largest colonies in 2011, when 208,800 birds, or 81% of the total, were seen in the 10 largest colonies, and in 2008, when 306,00 birds, 77.5% of the total, were seen in the 10 largest colonies." Figure 2 below shows the 10-year trend in the sizes of the largest colonies, from Meese (2014:11).

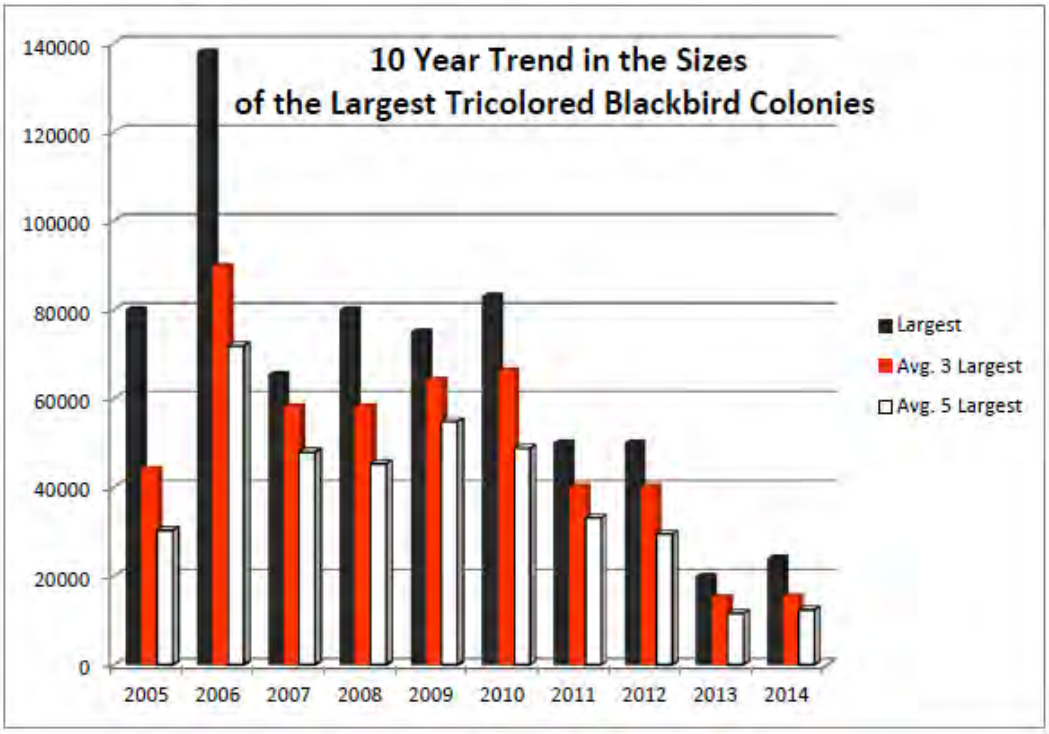


Figure 2: 10-Year Trend in Sizes of Largest Tricolored Blackbird Colonies

In addition to average colony size, the size of the largest colony has declined precipitously since the first reported surveys. Neff (1937) documented numerous large colonies, including one in

1934 in Glenn County that contained about 300,000 breeding adults over an area greater than 24 ha. Several other colonies in Sacramento and Butte Counties contained more than 100,000 nests. In stark contrast, Bob Meese reported that in 2014 the numbers of birds seen at occupied locations ranged from 1 to just 24,000, with only a single colony in Madera County (Road 12 Avenue 24) consisting of more than 20,000 birds and only 3 colonies consisting of 10,000 or more birds. This is a dramatic and extremely troubling decline in the size of the largest nesting colonies compared with historical data, even incorporating the recently described phenomenon of "mega" colonies nesting in silage crops, because forming large colonies is likely an adaptive trait against predation and colony size is positively correlated with reproductive success (Meese 2013). For a species such as the Tricolored Blackbird, bigger colonies are better.

In sum, extensive range-wide surveys for the Tricolor provide clear and unequivocal evidence that the species has experienced and is continuing to experience a precipitous population decline. Total numbers of birds counted, average colony sizes, and size of the largest colony all decreased over time. Further, as documented below, there is no evidence that many of the factors implicated in this decline are being prevented or alleviated, including ongoing destruction of grain silage colonies, failure to protect highly productive nesting substrates (i.e. Himalayan blackberry thickets, thistles, and other productive upland breeding habitats), permanent loss of nesting and foraging habitat due to increasing urbanization and vineyard and orchard deployment in the Central Valley and southern California, continued high levels of predation in marsh nesting habitats by herons and other predators, spraying of agricultural contaminants throughout the range of the species, and shooting of birds in rice fields in the Central Valley. Without the legal protection offered by the California Endangered Species Act, current trends are likely to continue and the Tricolor is likely to become extinct in the foreseeable future.

2.0 Range and Distribution

2.1 Species' Range

More than 99% of Tricolored Blackbirds live in California, with just a few scattered populations in Oregon, Washington, coastal Baja California, Mexico and a single breeding colony in western Nevada (Beedy and Hamilton 1999). The range of the Tricolor is largely restricted to southernmost Oregon and the Modoc Plateau of northeastern California, south through the lowlands of California west of the Sierra Nevada to northwestern Baja California (Neff 1937, Orians 1961a, DeHaven et al. 1975, Beedy and Hamilton 1999) with some rare reports from Nevada and Washington (Beedy and Hamilton 1999). The elevational range of the Tricolor is documented to extend from sea level to approximately 1220 meters (4,000 feet) in Shasta County to 1280 meters (4,200 feet) on Klamath Lake (Neff 1937). Although most of the Tricolor population and the largest colonies are currently found in the San Joaquin and Sacramento valleys, the species also breeds in several southern California counties where, a century ago, it was considered to be the most abundant bird species (Baird in Cooper 1870).

The range of the Tricolored Blackbird is similar to that reported early in the previous century although contractions in some areas, particularly southern California, are apparent as discussed

below. Shuford and Gardali (2008: 438–439) describe the historical and recent range of the Tricolored Blackbird as follows:

> "The Tricolored Blackbird's known historical breeding range in California included the Sacramento and San Joaquin valleys, the foothills of the Sierra Nevada south to Kern County, the coastal slope from Sonoma County south to the Mexican border, and, sporadically, the Modoc Plateau (Dawson 1923, Neff 1937, Grinnell and Miller 1944). Historical surveys, however, did not include large areas of the species' currently known breeding range and consequently did not document its full extent at the time (see below)…
>
> "The overall range of the species is little changed since the mid-1930s (Beedy and Hamilton 1999), though more recent surveys have documented occurrence in some areas lacking extensive prior coverage that likely were occupied historically (Hamilton et al. 1995; Beedy and Hamilton 1997; Hamilton 2000, 2004; Green and Edson 2004). This mostly includes documentation of local populations at the periphery of the range, such as those on the coast north to Humboldt County, in northeastern California, and in the western Mojave desert, and of new colony sites within the overall historic range (see map). Since 1980, active breeding colonies have been observed in 46 California counties; all of the largest (>20,000 adults) were in the Central Valley or at the Toledo Pit, Riverside County [*sic*: Toledo Pit is in Tulare County]."

The southern California population (in the Los Angeles Basin, Inland Empire/Riverside, and San Diego regions south of the Transverse Range) appears to have been geographically isolated since the 1970s-1980s (R. Cook pers. comm.). There are no recent records from Santa Barbara or Ventura Counties and relatively small numbers in coastal Los Angeles and Orange County. While there have been from time to time, colonies of as much as 5000 birds in the very northern part of Los Angeles and San Bernardino Counties, those are undoubtedly due to migrations of flocks from the Central Valley (R. Cook pers. comm.).

Within its range, the species is nomadic and highly colonial; large flocks appear suddenly in areas from which they have been absent for months, they breed and then quickly withdraw (Orians 1961a). In one season nesting colonies have been found widely scattered, and in another there have been great concentrations in relatively restricted districts (Neff 1937). The size and location of colonies vary from year to year, although certain sites are regularly used (Orians 1961a, Hamilton et al. 1995, Cook 1996, Hamilton 2000, Kelsey 2008, Kyle and Kelsey 2011, Meese 2014).

Wintering Tricolored Blackbird populations move extensively throughout their range in the nonbreeding season. Major wintering concentrations occur in and around the Sacramento–San Joaquin River Delta and coastal areas, including Monterey and Marin counties, where they are often associated with dairies (Shuford and Gardali 2008). Small flocks also may appear at scattered coastal locations from Sonoma County south to San Diego County, and sporadically north to Del Norte County (Beedy and Hamilton 1999, Unitt 2004). They are rare in winter in the southern San Joaquin Valley and in the Sacramento Valley north of Sacramento County

(Beedy and Hamilton 1999). In Riverside County Tricolor populations appear to be residential with similar numbers of birds observed in winter in the same areas where they breed in the spring (R. Cook; unpublished data).

2.2 Historical Distribution

The Tricolor's requirements for selecting breeding sites are open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few kilometers of the nesting colony (Beedy and Hamilton 1999, Shuford and Gardali 2008). Historically, rivers flowing into the Central Valley would flood and create extensive marshes, providing abundant breeding habitat for Tricolors and other wetland-dependent species. In the 19th century, autumn flocks of thousands of Tricolors were described in the Shasta area, and a wintering flock observed in Solano County "...numbering so many thousands as to darken the sky for some distance by their masses," (Baird 1870 in Beedy and Hamilton 1999). J. G. Cooper noted that the Tricolor was "the most abundant species near San Diego and Los Angeles, and not rare at Santa Barbara," (Baird 1870 in Beedy and Hamilton 1999).

The first systematic range-wide surveys of the population status and distribution of the Tricolor were conducted by Neff (1937). These surveys found Tricolor breeding colonies in at least 26 counties in California, although the survey of the range was still incomplete. Neff (1937) estimated abundance at 252 colonies, mostly associated with freshwater emergent wetlands in rice-growing areas of California, and numerous very large colonies were reported.

Population surveys and banding studies carried out from 1969–1972 by DeHaven et al. (1975) found 168 breeding colonies at 113 locations, each at least 1.6 km apart. About 78% (131) of the colonies were in the Central Valley, with 80 in the Sacramento Valley and 51 in the San Joaquin Valley. The remaining 22% (37) of colonies were in other parts of California and in southern Oregon. The counties where the most colonies were found in a single season were Sacramento, Merced, Stanislaus, Glenn, and Colusa.

The survey results from DeHaven et al. (1975) indicated that the geographic range and major breeding areas of the species had not changed since the first surveys were conducted by Neff in 1937. However, DeHaven et al. (1975) found fewer colonies, fewer non-breeding Tricolors, no nesting areas even approaching the size of some of the previously reported colonies, fewer birds in the largest colonies, and fewer total Tricolors.

It is worth noting that even the earliest surveys had been conducted after most of the Central Valley's wetlands were already lost. Thus, the historical distribution and population abundance of Tricolors prior to the profound and widespread loss of their native wetland and grassland habitats are unknown.

2.3 Current Distribution

Overall, a comparison of the historical and current distribution of the species shows that in some portions of their range, Tricolors have declined or been eliminated (Beedy and Hamilton 1997). Local near or complete extirpation has occurred in portions of the Central Valley where the species was once abundant, and in many historical sites in coastal southern California counties, including Santa Barbara, Ventura, Los Angeles, Orange, and San Diego Counties (Beedy and Hamilton 1997, Meese 2014). Thus the species has been extirpated or nearly extirpated in portions of its former range.

Since 1980, active Tricolor breeding colonies have been observed in 46 counties in California, and most of the largest colonies are still located in the Central Valley (Beedy and Hamilton 1999). The species currently breeds throughout the Central Valley west of the Cascade Range and west of the Sierra Nevada (into the foothills), and from Humboldt and Shasta Counties, south to extreme southwestern San Bernardino County, western Riverside County, and western and southern San Diego County. Breeding also occurs in marshes of the Klamath Basin in Siskiyou and Modoc Counties, Honey Lake Basin in Lassen County and in some central California coastal counties.

Outside California, the Tricolor has bred in southern Klamath and southern Jackson Counties and in northeast Portland (Multnomah County), near Clarno and Wamic (Wasco County), at the John Day Fossil Beds National Monument (Wheeler County), near Stanfield (Umatilla County), and at Summer Lake (Lake County). A small colony reportedly nested in Grant County, Washington in 1998, and small colonies were identified in Douglas County, Nevada and in northern Baja California (Beedy and Hamilton 1999). Several small colonies totally fewer than 500 birds were reported in Baja California in 2013 (Feenstra 2013).

In 1991 researchers at U.C. Davis initiated a large-scale study of Tricolors, investigating size and location of colonies, nesting habitat characteristics, behavior, reproductive success as correlated with habitat type and patterns of land ownership. This study was expanded in 1994 to include a FWS and CDFW sponsored range-wide population census led by the U.C. Davis researchers and including a volunteer base of experienced local ornithologists. The results of this census and additional season long survey data are reported in Hamilton et al. (1995). Census participants located individuals nesting in 74 colonies in 32 California counties, with breeding occurring in 26 counties. In 1994, the largest Tricolor colonies were found in Merced, Colusa, Tulare, Glen, Kern, Sacramento, and Yuba Counties (Beedy and Hamilton 1997).

Annual population censuses were henceforth attempted in 1995 and 1996 but efforts and methods were not comparable to those of 1994. A second comparable census and additional season long surveys were conducted in 1997 using the same coverage, methods, and surveyors as in 1994 (Beedy and Hamilton 1997). Census results reported individual Tricolors in 32 California counties, including 50 non-breeding adults in Klamath County, Oregon, and 950 breeding adults in northwestern Baja California.

In 1997, the largest Tricolor colonies were found in Colusa, Tulare, Kings, Riverside, Kern, Sacramento, and San Joaquin Counties (Beedy and Hamilton 1997). The two largest observed colonies during the 1997 breeding season were found in Colusa and Tulare Counties. The Colusa County colony formed in May, after the volunteer survey ended, by birds that probably nested elsewhere earlier on in the season. One of the largest colonies found in 1997, of about 23,300 nests, was found at a wetland created in 1994 in San Jacinto, Riverside County. "Although Riverside remains the stronghold for the species in southern California, numbers have declined by 89% since 1997 and 66% since 2005." (R. Cook, 2014).

During the 2000 census, 25 colonies were located, with the largest colonies occurring in Tulare, Merced, Riverside, and Colusa counties. It is notable that the large colonies that formed in Sacramento county in the early 1990s (including 1994) were absent in surveys conducted between 1997 and 2003.

During the 2008 survey, 135 breeding colonies were documented, with the largest "mega" colonies in Merced, Tulare, and Kern counties, all in the San Joaquin Valley. Again, very large colonies were absent from Sacramento county (Kelsey 2008). In 2011 the three largest concentrations of birds also were found in Merced, Kern, and Tulare counties, with 65% of the population consolidated into only six colony sites in these three counties (Kyle and Kelsey 2011). In 2014, the largest nesting colonies occurred in Tulare, Madera, and Merced counties, but these colonies all supported drastically fewer numbers of Tricolors than in the previous two census surveys (Meese 2014). However, Placer and Sacramento counties saw a marked increase in the number of birds (Meese 2014).

The number of birds observed differed markedly by bioregion in 2014, Southern California (Ventura, the far southern part of Kern, Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties) had 12,386 birds, the San Joaquin Valley (from Kern County in the south to San Joaquin County in the north) had 73,412 birds, coastal locations (from Alameda County to Santa Barbara County) had 1,732 birds, the Sierra foothills (Amador, Calaveras, El Dorado, Placer, and Sacramento counties) had 25,717 birds, and the Sacramento Valley (from Yolo County in the south to Tehama County in the north) had 31,531 birds.

Table 1 below shows the locations surveyed, locations occupied, number of birds, and proportion of total from the most recent statewide census survey in 2014 (Meese 2014:8).

Table 1: Locations Surveyed and Occupied, Number of Tricolored Blackbirds, and Proportion of Total by County (Meese 2014 Table 1:8)

County	Locations Surveyed	Locations Occupied	Number of Birds	Proportion of Total
Alameda	27	1	50	0.034
Amador	6	2	5500	3.793
Butte	6	1	60	0.041
Calaveras	9	5	404	0.279

Colusa	23	0	0	0
El Dorado	9	5	1375	0.948
Fresno	25	1	6	0.004
Glenn	29	1	300	07207
Kern	64	12	3977	2.743
Kings	15	1	5000	3.448
Lake	6	1	150	0.103
Lassen	2	1	232	0.16
Los Angeles	11	6	4707	3.246
Madera	10	2	27166	18.735
Mariposa	1	1	13	0.009
Mendocino	5	1	100	0.069
Merced	46	5	10532	7.263
Monterey	22	6	399	0.275
Napa	11	1	70	0.048
Orange	17	1	14	0.01
Placer	20	4	17600	12.138
Riverside	28	9	4368	3.012
Sacramento	98	19	29272	20.188
San Benito	13	1	80	0.055
San Bernardino	10	6	1380	0.952
San Diego	30	6	1417	0.977
San Joaquin	9	2	515	0.355
San Luis Obispo	29	5	98	0.068
Santa Barbara	18	7	935	0.645
Santa Clara	6	0	0	0
Santa Cruz	8	0	0	0
Shasta	15	1	250	0.172
Solano	15	3	610	0.421
Sonoma	4	0	0	0
Stanislaus	36	10	8852	6.105
Sutter	18	1	8	0.006
Tehama	5	2	300	0.207

Tulare	30	5	18259	12.592
Tuolumne	8	3	825	0.569
Yolo	33	2	81	0.056
Yuma	25	3	268	0.185

The largest numbers of breeding Tricolors were historically found in the Central Valley; Orians (1961a) and DeHaven et al. (1975) reported that the species' center of breeding abundance and the largest colonies were in this region. In 1994 and 1997, more than 75% of all breeding adults were located there (Beedy and Hamilton 1997). In 2000 approximately 70% of the population was located in the Central Valley (Hamilton 2000). In 2008, 86.4% of the population was found in the San Joaquin Valley, and in 2011, 89% of the population occurred in the San Joaquin Valley and Tulare Basin. However, in the 2014 census only 50% of the population was documented in the San Joaquin Valley, with more birds counted in the Sacramento Valley than at any time since the 1990s. Meese (2014:10) stated "the 29,272 birds seen in Sacramento County exceeded the total seen in any statewide survey since 1997, when 31,338 birds were seen in the county (Beedy and Hamilton 1997)." Yet the numbers of birds counted in the Sacramento Valley are still a fraction of the hundreds of thousands of birds documented in the 1930s by Ness.

A detailed Distribution Map is provided below in section 11.

3.0 Abundance

3.1 Historical Abundance

Shuford and Gardali (2008: 438) describe the historical abundance of the Tricolored Blackbird as follows:

> "Few 19th-century accounts exist of the abundance of Tricolored Blackbirds in California. Heermann (1859:53) described fall flocks of thousands in the Shasta region and a wintering flock in Solano County "numbering so many thousands as to darken the sky for some distance by their masses." Belding (1890) observed an "immense" colony in San Joaquin County. According to J. G. Cooper, the Tricolored Blackbird was "the most abundant species near San Diego and Los Angeles, and not rare at Santa Barbara" (Baird 1870:266; Baird et al. 1874:166). Grinnell (1898) reported them in "considerable numbers" throughout the year in Los Angeles County.
>
> "Neff (1937) conducted the first systematic surveys of the species' population status and distribution. In 1934, he observed as many as 736,500 adults in just eight Central Valley counties. From 1931 to 1936, he found 252 colonies in 26 California counties. The largest colony, in Glenn County, contained >200,000 nests (about 300,000 adults) and covered almost 24 ha; several others in Sacramento and Butte counties contained

>100,000 nests (about 150,000 adults). Most large colonies were associated with freshwater emergent wetlands in rice-growing areas of the Sacramento Valley."

3.2 Current Abundance

Meese (2014) noted that "the rate of decline in the number of tricolors appears to be increasing. From 2008 to 2011 the number of tricolors dropped by 34%, from 395,000 to 258,000 birds (Kyle and Kelsey 2011), but from 2011 until this year the number of tricolors dropped by 44%, from 258,000 to 145,000 birds." Figure 3 below shows the downward trend in abundance during the three recent statewide surveys, from Meese (2014:7). The total number of Tricolors counted was down 44% in 3 years, and 64% in 6 years.

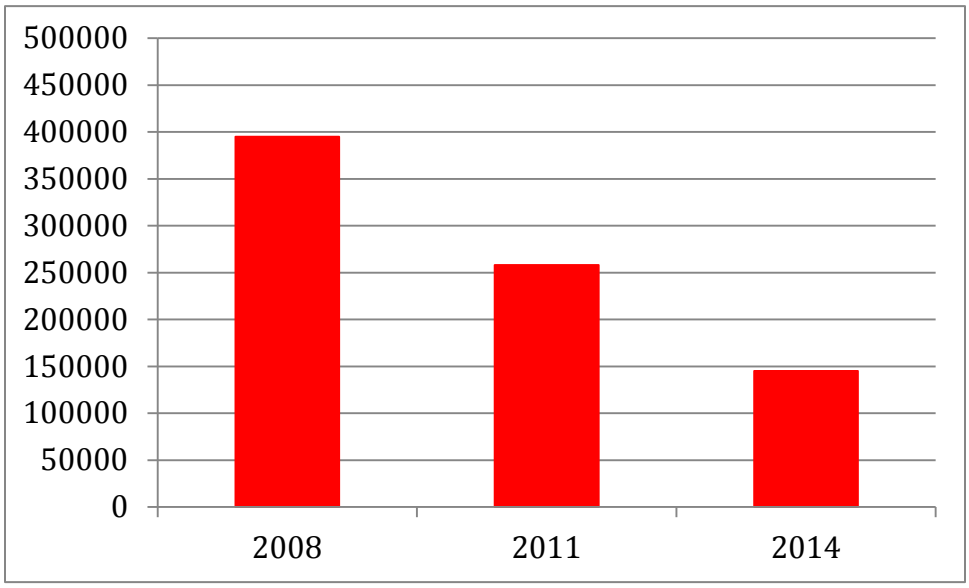


Figure 3: Trends in Abundance of Tricolored Blackbirds from Census Surveys

Meese (2014:12) summed the troubling results of the three most recent statewide surveys, which represent the best estimates of the abundance of Tricolored Blackbirds over the past decade:

> "The results of the 2014 Tricolored Blackbird Statewide Survey show that there are far fewer birds now than in the recent past. The results of the past 3 statewide surveys (2008, 2011, and 2014) are most directly comparable due to similar methods and levels of effort . . . . And the development of the Tricolored Blackbird Portal in 2008 provided a previously unavailable public resource that has met the needs of concerned citizens and encouraged their participation in tricolored blackbird conservation efforts while greatly improving data quality and management.

> "The rate of decline in the number of tricolors is alarming and appears to be accelerating: a comparison of the results of the 2008 to 2011 interval shows that the number of tricolors declined by 34%, from 395,000 to 258,000 birds. But from 2011 to 2014 the number of birds declined by 44%, from 258,000 to 145,000 birds…Thus, conservation efforts to date have been insufficient to stem the decline in the number of tricolors and the rate of decline is increasing."

4.0 Life History

The highly synchronous and colonial nesting behavior of the Tricolored Blackbird is likely an adaptation that increases reproductive success through predator saturation and mutual defense against predators (Cook and Toft 2005). Much fascinating information has been learned about the adaptive traits of highly colonial nesting birds from studies of the Tricolor, beginning in the 1960s. The Tricolored Blackbird portal administered by U.C. Davis states:

> "In the 1960's, two graduate students from U.C. Berkeley, Gordon Orians and Robert Payne, conducted seminal research on blackbirds, including Tricolors, that focused on behavior and adaptations for marsh nesting (Orians) and reproductive physiology (Payne) and helped to provide an ecological and evolutionary context for tricolor breeding, food preferences, and habitat selection and compared and contrasted tricolors with other blackbird species.
>
> "In the late 1960's, Frederick Crase, a Bureau of Reclamation biologist, and Richard DeHaven, who worked for the U.S. Fish & Wildlife Service, began working on the tricolored blackbird and studied food habits, habitat relationships, population status, and movement patterns. This work was described in a number of publications from the mid-1970's until the late 1980's. This work confirmed the continuing decline in the number of tricolored blackbirds and highlighted the dependence of food supplies, especially insect abundance, on colony productivity, and suggested that otherwise apparently suitable nesting sites might be abandoned if surrounding foraging habitats were not sufficiently productive or extensive."

The portal further notes that in the 1980s Ted Beedy began field investigations of Tricolors with an emphasis on estimating the abundance of the species and determining factors responsible for the observed nesting failures of colonies in the Central Valley. Shortly thereafter, Bill Hamilton began his field investigations. Hamilton's work continued for 13 field seasons, through 2005, and covered topics such as population estimation, productivity estimation, foraging ecology, and the phenomenon known as "itinerant breeding," whereby individuals breed once in one location and then fly northward to a different location to breed again. Hamilton's graduate student, Liz Cook, conducted and published important work on nesting dynamics, and his colleague Bob Meese began banding studies in 2007 and reported extensively on colony fates and productivity. These studies are described below.

4.1 Species Description

The Tricolor is medium-sized and sexually dimorphic, breeding in dense colonies largely in California's Central Valley, Coast Ranges, and southern California (Beedy and Hamilton 1999). Total length ranges from 18-24 cm, and body mass ranges from 40–70 g depending on the season (Beedy and Hamilton 1999).

The sexes of the Tricolor differ in size, plumage and behavior. Beedy and Hamilton (1999) offered a detailed description of the species:

> "In general, males are larger than females; have striking red, white, and black plumage; and display when breeding. Adult males are entirely black with a blue gloss in full sunlight, with bright brownish-red lesser wing coverts forming a red patch on the epaults (wing shoulder), and median coverts buffy (August-February) to pure white (February-July), depending on the season. Adult females are mostly black with grayish streaks, relatively whitish chin and throat (rarely with faint pinkish or peach wash), and small but distinct reddish shoulder patch. Immature males are similar to adult males but with duller black plumage mottled with gray (August-March), becoming almost entirely dull black (April-June), and with shoulder patch mixed with black (August-March only). Immature females are similar to adult females but the wing lacks the reddish patch. Immatures of both sexes usually retain some brownish or grayish underwing coverts, which contrast with newer adjacent black feathers. Juveniles of both sexes (April-August) are similar to adult females, but much paler gray and buff."

The plumage of the Tricolor and Red-wing is so similar that museum specimens are sometimes misidentified (Orians 1961a). The adult male Tricolor has a bluish luster to its black plumage, and the red of the epaulets is bright scarlet in contrast to the dull orange-red of the male Redwing (Orians 1961a). Both sexes of Tricolors are distinguished from Red-wings by bill shape, tail shape, and primary feathering formula; the outermost primary (P9) is longer than P6 in Tricolors and shorter in Red-wings (Beedy and Hamilton 1999). In addition, Tricolors have longer outer primaries, creating a narrower and more pointed wing shape than other blackbirds (Beedy and Hamilton 1999). The most conspicuous feature of the male plumage is the broad white border to the middle wing coverts (Orians 1961a).

In most races of the Red-wing these feathers are tipped with buffy, but in those races occupying the central Coast Ranges and Central Valley of California, where the Tricolor is most abundant, these feathers are black so that the wing lacks the light-colored stripe (Orians 1961a). Orians (1961a) noted that "[t]his plumage difference between males is not only conspicuous to the human observer, it is the most important means of species identification used by the birds themselves. Occasional Red-wings in a flock of Tricolors are singled out for special attack by a resident male Redwing in whose territory the flock lands." Orians (1961a) also described the difference between female Tricolors and Red-wings: "[i]n general, female Tricolors are more uniformly sooty than female Redwings, there being less contrast between throat and breast. In the autumn, female Redwings are strongly tinged with rusty on the back, a feature never shown by the female Tricolor." Females of both species are more difficult to distinguish because,

although female Tricolors are darker than most races of the female Red-wing, female Red-wings are actually the darkest in the region of distributional overlap. Interestingly, there appears to be a convergence of female plumage where the two species overlap, in contrast to a divergence of plumage in the males (Orians 1961a).

Sexual dimorphism in size is less in the Tricolor than in the Red-wing. Male Tricolors are smaller than male Red-wings in wing, tail, tarsus, and bill depth, but are larger in culmen, whereas female Tricolors are larger than female Red-wings in wing, tail, tarsus, and culmen, but are smaller in bill depth (Orians 1961a). This longer, narrow bill of the Tricolor is one of the most reliable morphological differences between the species (Orians 1961a).

Flight of the Tricolor consists of long, shallow undulations and flocks tend to be compact (Beedy and Hamilton 1999).

4.2 Taxonomy and Population Genetics

Mitochondrial DNA (cytochrome *b*) studies indicate that the nine *Agelaius* species are a polyphyletic assemblage of ecologically similar species (Beedy and Hamilton 1999). . "Within *Agelaius sensu lato*, *A. tricolor* clusters with four species, what might be called the true *Agelaius* (i.e., *sensu stricto*): *A. phoeniceus* (the Red-winged Blackbird of North and Central America), *A. assimilis* (the Red-shouldered Blackbird of western Cuba), *A. humeralis* (the Tawny-shouldered Blackbird of Hispaniola and Cuba), and *A. xanthomus* (the Yellow-shouldered Blackbird of Puerto Rico) (Lowther et al. 2004)." (Meese et al. 2014).

Behavioral difference between the Central Valley and southern California populations and an absence of exchange of individual banded birds between the two areas suggests the Tehachapi Mountains may act as a potential dispersal barrier (Berg et al. 2010). Elena Berg and colleagues at U.C. Davis used two complementary molecular markers, nuclear DNA microsatellites and mitochondrial DNA sequences, to examine the genetic structure of seven colonies of Tricolored Blackbirds in the Central Valley. Microsatellites evolve rapidly and are highly variable, and therefore are effective at determining the amount of gene flow among populations. In contrast, maternally inherited mitochondrial DNA (mtDNA) does not recombine, thus allow the description of historical changes in population size (by detecting maternal bottlenecks) and temporal variation in gene flow. The researchers found no evidence for population structuring within the seven areas, suggesting that the Central Valley colonies are a single population at the genetic level.

Berg and colleagues then used similar techniques to determine whether gene flow occurred between northern and southern populations, and whether there was population structuring within the southern populations (Berg et al. 2010). Microsatellite and sequencing results revealed no evidence of significant population structuring between the southern California and Central Valley Tricolor populations, indicating either considerable movement and genetic exchange between regions and few if any isolated populations, or that any isolation is very recent and not yet reflected in the population genetic signatures. Furthermore, the higher allelic diversity of the southern California population, despite its smaller overall population size compared to the

Central Valley population, suggests that the southern California population is an important reservoir of genetic variation for the species overall (Berg et al. 2010). Berg et al. (2010) noted however that "the genetic signature of a recent and dramatic decrease in effective population size in southern California is of high concern, since it suggests that despite the lack of evidence for recent bottlenecks in this species, there are many fewer birds breeding in southern California than in the recent past."

4.3 Reproduction and Growth

Males begin singing as early as late February. Nesting is initiated in late March to early April, primarily in the San Joaquin Valley, and again in May to June in the rice-growing region of Sacramento Valley and foothill areas (Hamilton 1998, Beedy and Hamilton 1999). Male Tricolors may arrive before females at the colony sites, but sometimes by less than one day, and sometimes both sexes arrive together and begin breeding activity the same day (Beedy and Hamilton 1999). Dense concentrations of birds will gather and suddenly fly to another place, changing locations frequently and then returning to potential nest sites. This is described as "prospecting behavior" (Beedy and Hamilton 1999). Requirements for breeding colony sites are accessible water, protected nesting sites such as flooded or spiny, stinging, or otherwise armored or protective vegetation, and adequate amounts of suitable foraging areas within a few kilometers of the nesting colony (Beedy and Hamilton 1997). Most adults at a colony site begin nesting 2–3 days after prospecting begins. When Tricolors arrive at a breeding site, previously established breeding Red-wings and Yellow-headed (*Xanthocephalus xanthocephalus*) blackbirds may be excluded from territories by extremely large numbers of Tricolors.

Females construct their nest within the small territory of the male, and one male will breed with 1–4 females (Beedy and Hamilton 1999). Extreme synchrony is characteristic of most colonies of Tricolors—even in colonies of up to 100,000 nests, all eggs may be laid within one week (Orians 1961a). Males do not assist with nest construction or incubation, but do assist with food gathering and feeding of the young.

During the breeding season, Tricolors exhibit itinerant breeding whereby individuals often move after their first nesting attempts and breed again at a different geographical location (Hamilton 1998). At some colonies a second wave of nesting follows fledging of the initial cohort (Beedy and Hamilton 1999).

4.4 Diet and Foraging Ecology

Tricolors are opportunistic foragers, taking any locally abundant insect including grasshoppers (Orthoptera), beetles and weevils (Coleoptera), caddis fly larvae (Trichoptera), moth and butterfly larvae (Lepidoptera), dragonfly larvae (Odonata), and lakeshore midges (Diptera), as well as grains, snails, and small clams (Beedy and Hamilton 1999). In earlier studies Tricolors were described as grasshopper followers (Orians 1961b; Payne 1969) and losses of grasslands and reduced grasshopper abundance may have contributed to the decline of the Tricolor population observed between the 1930s and 1970s (Crase and DeHaven 1977). Recently,

however, grasshoppers have been abundant enough locally to support some large Tricolor colonies (Meese 2013).

Tricolors forage in all seasons in pastures, dry seasonal pools, agricultural fields including alfalfa with continuous mowing schedules, rice fields, feedlots, and dairies (Beedy and Hamilton 1997). The birds will also forage in riparian scrub, saltbush (*Atriplex* spp.) scrub, borders of marshes, and grasslands. They do not forage regularly in weed-free row crops and intensively managed orchards and vineyards (Beedy and Hamilton 1997). Rangeland that is not heavily grazed is also important foraging habitat for Tricolors in some portions of their range (Cook 1996).

Adult Tricolors, when foraging for themselves, will consume the most easily obtained food; in many agricultural settings, this means the utilization of feed grains provided to livestock in feeding troughs and/or stored silage (e.g., cracked corn, sometimes available in huge quantities). Where such animal feeds are not available, as in colonies situated outside of livestock rearing areas, adults typically foraged close to the colony on abundant and easily-obtained foods such as spilled rice and unharvested grains (Hamilton and Meese 2006).

The hatching of eggs results in an immediate shift to foraging for animal prey. Foraging behavior exploits the most-abundant and most easily obtained foods that meet immediate dietary needs of nestlings. Animal matter is essential for 0–9 day old nestlings but grains and seeds are utilized by adults and > 9-day-old nestlings. Animal prey fed to nestlings is diverse, including caterpillars of several Lepidopteran species, grasshoppers, aquatic larvae of water scavenger beetles (Coleoptera: Hydrophilidae), midges, beetles, and other invertebrates (Hamilton and Meese 2006).

Hamilton and Meese (2006) found that when foraging for themselves, adults rarely travel more than 3 km from breeding colonies, and frequently take advantage of super-abundant food resources at or near dairies (e.g., stored grains, cracked corn, livestock feed) but will travel greater distances, occasionally more than 8 km, in search of animal prey with which to feed their young. Occasional forays of up to 13 km from the colony have been documented (Beedy and Hamilton 1997), although sustained short-distance foraging within sight of the colony is also observed (Cook 1996). There are some indications that the size of the foraging arena may correlate to nestling starvation as adults travel longer distances to find food (Liz Cook, pers. comm.).

Only a portion of the area within commuting distance from the nest is used for foraging. Many unsuitable areas, including cultivated row crops, orchards, vineyards, and heavily grazed grasslands, are associated with high-quality Tricolor foraging habitat such as irrigated pastures, lightly grazed rangelands, dry seasonal pools, mowed alfalfa, fields, feedlots, and dairies (Beedy and Hamilton 1999, Hamilton and Meese 2006). Wintering Tricolors in the Sacramento Valley appear to forage heavily on the seeds of plants such as rice, grains, and weeds (Crase and DeHaven 1978).

Orians (1961a) demonstrated that the Tricolor's colonial social structure is more energetically demanding than the territorial structure of the Red-wing due to the high energetic requirements

of flying back and forth from distant feeding sites when foraging for young. Tricolors require food supplies that can be rapidly exploited once they reach the feeding site. Thus, the species has an unpredictable breeding distribution and poorer reproductive success than the Red-wing in unfavorable years (Orians and Collier 1962).

4.5 Mortality and Population Regulation

Band recovery data suggest that Tricolors live at least 13 years, although data are currently insufficient to estimate survival rates. Bob Meese of U.C. Davis initiated a number- and color-banding program in 2007. The color-banding continued until 2009 and the banding with USGS aluminum bands has continued through 2014 and has resulted in the banding of nearly 57,000 birds and the recapture of over 1,100 unique individuals. His band and re-sight samples of birds with number bands have been used to estimate an average annual adult survival of 60% (Meese unpub.).

Known causes of mortality include exposure to inclement weather (see "Other Natural or Anthropogenic Factors"); predation (see "Disease and Predation"); starvation (Meese 2010) and possible brood reduction via removal of live chicks from nests by females (Hamilton et al. 1995); competition with other species, including Great-tailed Grackles (*Quiscalus mexicanus*) which are aggressive towards Tricolors and may represent a serious future threat (Beedy and Hamilton 1999); agricultural contaminants and shooting for crop protection (see "Other Natural or Anthropogenic Factors"); widespread destruction of nesting substrate during the nesting season that results in direct mortality of nestlings, as well as historical and ongoing loss of nesting and foraging habitat (see "Present Or Threatened Destruction, Modification, or Curtailment of Habitat or Range").

5.0 Kind of Habitat Necessary for Survival

The Tricolored Blackbird forms the largest breeding colonies of any North American landbird (Cook and Toft 2005). As many as 20,000 to 30,000 nests have been recorded in cattail (*Typha* spp.) marshes of 4 hectares or less, with individual nests <0.5 meters from each other (Neff 1937, DeHaven et al. 1975b). Nest heights range from a few centimeters to about 1.5 meters above water or ground at colony sites in freshwater marshes (Neff 1937) and up to 3 meters in the canopies of willows (*Salix* spp.) and other riparian trees; rarely, they are built on the ground. The Tricolor's basic requirements for selecting breeding sites are open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few kilometers of the nesting colony (Beedy and Hamilton 1999, Shuford and Gardali 2008).

Tricolors are nomadic and highly colonial, and males defend relatively small territories within the colony (Orians and Collier 1962). Territories average about 35 square feet, or 1.8 m^2 to 2.35 m^2 in size, and one to three females construct nests within these small territories (Orians and Collier 1962, Beedy and Hamilton 1999). Unlike Red-wing Blackbirds, who gather food on and adjacent to their territories which average about 500–30,000 square feet in size, Tricolors do not forage on their territories but exploit the area around the colony (Orians and Collier 1962).

Historically most Tricolored Blackbird colonies were in the extensive native marshlands, riparian shrubs, upland shrubs, and grasslands of California, but the loss of these native habitats has forced a shift in nesting to largely non-native vegetation. Shuford and Gardali (2008:439–440) stated:

> "The colonial breeding system of the Tricolored Blackbird probably evolved in the Central Valley, where the locations of surface waters and rich sources of insect food were ephemeral and varied annually (Orians 1961). Before its rivers were dammed and channelized, the Central Valley flooded in many years, forming a vast mosaic of seasonal wetlands, freshwater marshes, alkali flats, native grasslands, riparian forests, and oak savannas. Virtually all these habitats once supported nesting or foraging Tricolored Blackbirds. The evolution of a colonial breeding system enabled this species to assess changing local conditions rapidly and exploit outbreaks of locusts and other ephemeral insects over large areas to meet their food demands. Nomadic, colonial social organization in birds evolves most frequently in semiarid areas with great annual fluctuations in climate (Orians 1961).
>
> "With the loss of a natural flooding cycle and most native wetland and upland habitats in the Central Valley, Tricolored Blackbirds now forage primarily in artificial habitats. Ideal foraging conditions for this species are created when shallow flood-irrigation, mowing, or grazing keeps the vegetation at an optimal height (<15 cm). Preferred foraging habitats include crops such as rice, alfalfa, irrigated pastures, and ripening or cut grain fields (e.g., oats, wheat, silage), as well as annual grasslands, cattle feedlots, and dairies (Beedy and Hamilton 1999). These blackbirds also forage in remnant native habitats, including wet and dry vernal pools and other seasonal wetlands, riparian scrub habitats, and open marsh borders. Vineyards, orchards, and row crops (tomatoes, sugar beets, corn, peas, beets, onions, etc.) do not provide suitable nesting substrates or foraging habitats for Tricolored Blackbirds."

Most Tricolored Blackbirds forage within 5 km of their colony sites (rarely up to 13 km; Orians 1961, Beedy and Hamilton 1997). Proximity to suitable foraging habitat may be a determinant in the establishment of colony sites, as Tricolored Blackbirds often forage, at least initially, in the field containing the colony site (Cook 1996). However, often only a minor fraction of the area within the commuting range of a colony provides suitable foraging habitat (Beedy and Hamilton 1999, Hamilton and Meese 2006).

Itinerant breeding of Tricolors suggests that they may be philopatric to more than one nesting site (Beedy and Hamilton 1999). Hamilton et al. (1995) found that 19 of 72 (26%) colonies used the same nesting sites during surveys conducted between 1992 and 1994. Eleven (15%) colonies in 1994 repeated either their 1992 or 1993 nesting location but not both. These results may indicate a low to moderate degree of site tenacity and/or that suitable breeding habitat is limited (Cook and Toft 2005). The yearly shifts in breeding distribution of Tricolors are likely related to insect supplies and other unknown breeding requirements (DeHaven et al. 1975).

Wintering Tricolored Blackbirds often congregate in huge, mixed-species blackbird flocks that forage in grasslands and agricultural fields with low-growing vegetation and at dairies and feedlots (Shuford and Gardali 2008). In February, however, this species segregates into pure Tricolored Blackbird flocks, which may subdivide further into age- and sex-specific flocks (Shuford and Gardali 2008). At this time, foraging flocks roam across the landscape until they find a suitable nesting substrate with an abundant insect source nearby.

Historically, nesting substrate consisted mostly of native emergent marsh vegetation dominated by cattails *(Typha* spp.) or tules (*Scirpus* spp; Neff 1937). Neff (1937) documented about 93% of nests (n = 252 colonies) in cattails, bulrushes and willows (*Salix* spp.) with some in nettles (*Urtica* spp.) and thistles (*Cirsium* spp.). However, Tricolors have been flexible in their choice of nesting substrates and have shown an increasing trend towards use of upland substrates for nesting following the 1930s, and many of these new substrates consisted of non-native plant species that would not have been present in the California landscape prior to the arrival of Europeans (Cook and Toft 2005). As noted by Cook and Toft (2005), the apparent shift from using wetland to upland habitats is "surely due to the loss of 96% of California wetlands over the last 150 years from 1,500,000 ha before European settlement." The use of freshwater marshes as breeding colony sites decreased from 93% in the 1930s (Neff 1937) to 54% (n = 158 colonies) in the 1970s (DeHaven et al. 1975b). Orians (1961a) found 64% of colonies in the Sacramento Valley nesting in cattails and other emergent vegetation; other nests were in agricultural fields, and one colony nested in trees along a river. DeHaven et al. (1975) reported that about 69% of colonies had nests built in marsh vegetation including cattails, bulrushes, willows, or some combination, and 49% were in cattails only.

Within the Central Valley, DeHaven et al. (1975) also documented breeding colonies in the rice-growing regions of the Sacramento Valley and in the pasturelands of the lower Sacramento Valley and San Joaquin Valley. In the rice lands, the annually flooded rice was the dominant crop, but small grains, hay, safflower, sugar beets, corn, and beans were also grown. The pasturelands consisted largely of irrigated fields of introduced grasses, alfalfa, hay, and small grains. In both areas, insects in flooded fields probably provide the primary food for breeding Tricolors. Colonies outside the Central Valley were found in a diverse array of habitat types, including within chaparral covered hills (Riverside and Colusa Counties), orange and avocado groves interspersed with grass-covered hills (San Diego County), sagebrush grasslands (Siskiyou County), and salt-marsh habitat of San Francisco Bay (Alameda County) (DeHaven et al. 1975).

An increasing percentage of colonies since the 1970s have been reported in Himalayan blackberry (*Rubus armeniacus*) and thistles (DeHaven et al. 1975b, Hamilton et al. 1995, Cook 1996). The most commonly used substrates today include native emergent marshes, grain silage at dairies, and Himalayan blackberry. Other less commonly used nesting substrates include safflower (*Carthamus tinctorius*), tamarisk (*Tamarix* spp.), elderberry/Western Poison Oak (*Sambucus* spp. and *Toxicodendron diversilobum*), Giant Reed (*Arundo donax*), and riparian scrublands and forests (e.g., *Salix* spp., *Populus* spp., *Fraxinus* spp.; Beedy and Hamilton 1999, Shurford and Gardali 2008).

In recent decades some of the largest Tricolor colonies have been found in triticale and other grain fields in the San Joaquin Valley (many of which are planted for silage) (Collier 1968, Hamilton et al. 1995, Beedy and Hamilton 1999, Meese 2006). The largest colonies occur in fields of triticale, a wheat-rye hybrid the name of which is an acronym of *Triticum* [wheat] and *Secale* [rye]. These fields of triticale are frequently harvested while nests are still active (Cook and Toft 2005, Meese 2007, 2008, 2009a, 2011). In 1994 approximately 40% of all breeding birds located throughout the nesting season were found in silage grain fields while approximately 47% nested in native emergent marshes and 31% in thickets of the introduced Himalayan blackberry (Cook and Toft 2005). In 2000, 17% of the breeding effort occurred in silage grain fields, while 54% of nesting was in emergent marsh and 12% in Himalayan blackberry, and additional colonies nested in other flooded and upland habitats. In 2014, 41% of nesting substrate was Himalayan blackberry and 38% was triticale, with cattails making up only 8.8% (Meese 2014:9; Table 2 below).

Graves et al. (2013) examined records from all surveys conducted from 1907 until 2009, portrayed in Table 2 below. For all records, the dominant breeding habitat was cattails, which comprised 48% of breeding records and 65% of breeding birds. Triticale was also important, with 9% of birds but only 1% of records due to the very large colony sizes (and only appearing as a substrate in recent years since it was not planted in earlier years). Bulrushes contained 7% of breeding birds and 9% of records. Other important upland breeding vegetation included Himalayan blackberry with 6% of breeding birds and 11% of records, and thistles with 5% of birds and 9% of records.

Table 2: Number of Records and Total Number of Breeding and Non-breeding Tricolored Blackbirds in Different Vegetation Types, 1907–2009 (Graves et al. 2013 Appendix A1:14)

	Total		Breeding		Non breeding	
Habitat	**Records (%)**	**Total birds (%)**	**Records (%)**	**Total birds (%)**	**Records (%)**	**Total birds (%)**
Cattails	400 (34%)	2,848,874 (53%)	326 (48%)	1,843,704 (65%)	74 (14%)	1,005,170 (43%)
Unknown	209 (18%	238,137 (5%)	19 (3%)	74,968 (2%)	190 (35%)	163,169 (7%)
Blackberry	157 (13%)	648,137 (12%)	72 (11%)	175,518 (6%)	85 (16%)	472,619 (20%)
Bulrush or tule	95 (8%)	380,706 (7%)	63 (9%)	202,550 (7%)	32 (6%)	178,156 (8%)
Thistles	83 (7%)	227,486 (4%)	59 (9%)	142,850 (5%)	24 (4%)	84,636 (4%)
Stinging nettle	47 (4%)	65,263 (1%)	32 (5%)	19,000 (1%)	15 (3%)	46,263 (2%)
Grassland	36 (3%)	8085 (0.2%)	0 (0%)	0 (0%)	36 (7%)	8085 (0.3%)
Grain fields						
Triticale	14 (1%)	437,300 (8%)	8 (1%)	261,650 (9%)	6 (1%)	175,650 (7%)

Rice paddy	13 (1%)	8027 (0.2%)	5 (1%)	3150 (0.1%)	8 (2%)	4877 (0.2%)
Barley	5 (0.4%)	15,540 (0.3%)	1 (0.1%)	4000 (0.1%)	4 (1%)	11,540 (1%)
Wheat	6 (0.4%)	78,775 (2%)	6 (1%)	45,500 (2%)	0 (0%)	33,275 (1%)
Other grain fields	4 (0.3%)	6625 (0.1%)	1 (0.1%)	6000 (0.2%)	3 (1%)	625 (0.03%)
Agricultural fields						
Pasture	22 (2%)	37,801 (1%)	0 (0%)	0 (0%)	22 (4%)	37,801 (2%)
Mustard	18 (2%)	106,667 (2%)	6 (1%)	65,250 (2%)	12 (2%)	41,417 (2%)
Feedlot	6 (1%)	3713 (0.1%)	0 (0%)	0 (0%)	6 (1%)	3713 (0.2%)
Alfalfa	5 (0.4%)	5300 (0.1%)	1 (0.1%)	1000 (0.03%)	4 (1%)	4300 (0.2%)
Other ag. fields	3 (0.2%)	65,600 (1%)	1 (0.1%)	65,000 (2%)	2 (0.4%)	600 (0.03%)
Trees/Orchards						
Willows	26 (2%)	70,984 (1%)	23 (3%)	51,079 (2%)	3 (1%)	19,905 (1%)
Riparian trees	4 (0.3%)	8050 (0.2%)	0 (0%)	0 (0%)	4 (1%)	8050 (0.3%)
Tamarisk	2 (0.2%)	2787 (0.1%)	2 (0.3%)	2787 (0.1%)	0 (0%)	0 (0%)
Other trees/orchards	10 (1%)	12,948 (0.2%)	2 (0.3%)	2200 (0.1%)	8 (2%)	10,748 (1%)
Shrubs and herbs						
Giant reed	5 (0.4%)	5651 (0.1%)	2 (0.3%)	3900 (0.1%)	3 (1%)	1751 (0.1%)
Atriplex or salt bush	7 (1%)	6536 (0.1%)	7 (1%)	4536 (0.2%)	0 (0%)	2000 (0.1%)
Other shrubs/herbs	1 (1%)	47,565 (1%)	0 (0%)	0 (0%)	1 (0.2%)	47,565 (2%)
Other habitats						
Marsh	1 (0.1%)	1050 (0.02%)	0 (0%)	0 (0%)	1 (0.2%)	1050 (0.04%)
Wildflower field	1 (0.1%)	450 (0.01%)	0 (0%)	0 (0%)	1 (0.2%)	450 (0.02%)

Graves et al. (2013) documented that since 1980 the majority of nesting birds were recorded in upland nesting substrate types, 29% of breeding birds were recorded in cattails, 21% in triticale, 13% in Himalayan blackberry, 7% were in unknown habitat types, 5% in bulrush, 5% in prickly lettuce (*Lactuca serriola*), 4% in wheat, 4% in thistle, 3% in mustard, 3% in willows, 1% in stinging nettles, 1% in saltbush, and <1% in alfalfa, barley, giant reed, citrus groves, rice paddy, tamarisk, and wild rose. (*See also* Cook and Toft 2005.) Average colony sizes declined for all habitat types except for colonies in native stinging nettles, although nettles did not support large number of either breeding or non-breeding Tricolors. Mean colony size in cattails was 34%

larger in the early years of records as compared to those in blackberry, bulrush, and thistle, but declined 38% more rapidly than in those other substrates (Graves et al. 2013:6).

The proximity of breeding sites to nearby quality foraging areas is an important determinant of whether a colony will settle in an area for nesting, as described in "Diet and Foraging Ecology" section above.

Another important indicator of breeding-site selection for Tricolor colonies is the presence of young, rapidly and vigorously growing nesting substrates such as cattails, bulrush, and milk thistle (Meese 2007). The plants must be strong enough to support nests for the duration of the breeding period. Thus, not just any spiny or thorny substrate will provide suitable breeding habitat.

The number of birds or colonies nesting in a particular substrate is an important indicator of the value of that habitat, but even more insightful is the reproductive success in different habitat types. Both Cook and Toft (2005) and Meese (2013) reported on reproduction of Tricolored Blackbirds in different nesting substrates using multiple years of data. Cook and Toft (2005) found mean number of chicks per nest varied among nesting substrates, with nests in non-native vegetation fledging significantly more offspring than those in native vegetation. Table 3 below (from Cook and Toft 2005:82) shows mean reproductive success (number of chicks per nest at 8 days after first egg hatched) of colonies by substrate and study region from 1992–2003.

Table 3: Reproductive Success of Tricolored Blackbirds by Nesting Substrate

	Number of chicks per nest		
	n	Mean	SE
Nesting Substrate			
Emergent marsh	40	0.5	0.09
Himalayan blackberry	23	2.0	0.16
Silage – all	26	0.2	0.08
Silage [a]	4	1.0	0.26
Other flooded plants	6	1.2	0.51
Other upland plants	7	1.2	0.37
Total native plants	46	0.6	0.11
Total non-native plants [a]	34	1.7	0.15

[a] *Excluding colonies that were lost to crop harvesting.*

Tricolors nesting in Himalayan blackberry had greater reproductive success than those nesting in grain silage, but colonies in grain silage were far larger than those in any other upland nesting substrate, and where nests were not destroyed by silage harvest, number of fledglings per nest was higher than in native marsh habitat (Table 3; Cook and Toft 2005). These results suggest that the annual loss of nests due to harvest of grain silage during the Tricolor breeding season is a significant factor contributing to the decline of the species.

Meese (2013) documented reproductive success of 870,000 nests from 11 colonies over a 6-year period from 2006 to 2011. He found that only 11% of colonies studied fledged an average of one or more young per nest, revealing chronically low (below-average from previous studies) reproductive success throughout the Central Valley. Importantly, the abundance of insects was positively correlated with reproductive success. The colony with the highest reproductive success of 1.44 fledglings per nest was in milk thistle in Merced County in 2010, surrounded by open rangeland where grasshoppers were super-abundant.

Suitable Tricolor habitat therefore can be more than meets the human eye: factors such as insect availability in proximity to nest sites, age of vegetation, or other currently unknown habitat characteristics provide crucial breeding requirements for Tricolors in addition to suitable nesting substrates (Meese 2013). While many colonies are found in the same location year after year, colonies often move, nesting a second time in one breeding season in a different location, and in different locations in subsequent years. Therefore, it is critical at present to protect the habitat that is documented to be used by Tricolors (each year or occasionally), rather than assuming that protecting habitat that superficially appears suitable but is not actually used (i.e., relying solely on currently protected public lands that do not at present support breeding Tricolors) will be sufficient to conserve the species.

6.0 Factors Affecting the Ability to Survive and Reproduce

Under the California ESA, a petition must include information regarding the population trend, range, distribution, abundance, and life history of a species, the factors affecting the ability of the population to survive and reproduce (*see supra*). The petition must also include information about the degree and immediacy of the threat, the impact of existing management efforts, suggestions for future management, the availability and sources of information, information regarding the kind of habitat necessary for species survival, and a detailed distribution map, all of which are both satisfied below. Cal. Fish & Game Code § 2072.3.

Cited reasons for decline of Tricolors include historical and ongoing loss of suitable breeding and foraging habitats, direct destruction of nests from agricultural harvesting during breeding season, historical market hunting of blackbirds, extensive predation of entire colonies by rats, egrets, herons, coyotes, and other species, poisonings and shootings to protect crops from blackbirds, pesticide use, and an ongoing failure of existing regulatory mechanisms to prevent such threats despite awareness of population declines for decades.

6.1. Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range

The greatest threats to this species are the direct loss and degradation of habitat from human activities (Beedy and Hamilton 1999). Most native habitats that once supported nesting and foraging Tricolored Blackbirds in the Central Valley have been replaced by urbanization and agricultural croplands unsuited to their needs. In Sacramento County, a historical breeding center of this species, the conversion of grassland and pastures to vineyards expanded from 3,050 hectares in 1996 to 5,330 hectares in 1998 (DeHaven 2000) to 6,762 hectares in 2003 (Calif. Agri. Statistics Serv., www.nass.usda.gov/ca/). Conversions of pastures and grasslands to vineyards in Sacramento County and elsewhere in the species' range in the Central Valley have resulted in the recent loss of several large colonies and the elimination of extensive areas of suitable foraging habitat for this species (Cook 1996, DeHaven 2000, Hamilton 2004, Cook and Toft 2005).

DeHaven et al. (1975) pointed out that many marshes and other "apparently suitable" nesting sites were unused by Tricolors each year. Graves et al. (2013) documented a decline of breeding populations in the Sacramento Valley including both a reduction in average colony size and the total breeding population, and hence the number of sites occupied, from 1907 until 2009. These colonies declined in average size despite the fact that many of the marsh (cattail and bulrush/tule) sites in this region were in wildlife refuges and protected from modification. Increased management for wintering waterfowl may have altered the marshes from their historical conditions, or something other than absolute amount of breeding substrate may be affecting breeding populations, such as insect abundances in foraging habitat (e.g., Meese 2013). The 2014 census documented a resurgence of breeding Tricolors in Sacramento County, which supported 20% of the population, but the overall population for the entire species was so low that this only amounted to fewer than 30,000 birds (Meese 2014). In another example, the coastal population of Tricolors declined 91% in 6 of the last years, yet there has been no direct loss of nests due to agricultural harvests, again suggesting other unknown factors such as lack of sufficient insect prey base to support successful reproduction,

6.1.1 Destruction of Native Habitats

Destruction of Tricolor breeding habitat has been documented as far back as the first published population studies on the species. Neff (1937) stated "...the destruction of nesting habitats by man is of most importance. Reclamation and drainage have destroyed many favorable habitats. Areas in the vicinity of San Francisco and Los Angeles are now so highly developed that it is doubtful whether or not any colonies could exist there. Other habitats have been destroyed by the dredging or cleaning of reservoirs, marshes, and canals in order to destroy the growths of cattails and tules." The surveyors documented specific instances of destruction of known colony sites, including draining and burning of some surveyed localities.

DeHaven et al. (1975) also noted the loss of breeding habitat leading to the loss of colonies where they formerly occurred. Colonies studied near Davis in Yolo County during the 1960s were not located again due to the near-complete loss of nesting habitat. No nesting habitat was

found near Riego Road in Sacramento County where Orians (1961a) found colonies, and at Cache Creek in Kern County where Collier (1963) found colonies.

The vast majority of the native habitat for Tricolors has been lost or degraded. Only 560,500 of an original 4,000,000 acres (about 14%) of wetlands in the Central Valley were extant in 1939 (Beedy and Hamilton 1997). By the mid-1980s, an estimated 480,000 acres of freshwater emergent marshes, or 85% of the total remaining freshwater wetlands in 1939, were reduced by one-half to about 243,000 acres (Beedy and Hamilton 1997). Graves et al. (2013) found declines in sizes of colonies in the Central Coast resulted from four early records, and three of these came from cattails in which declines were rapid: remaining marsh nesting habitat has been reduced to small isolated patches of habitat that also support high densities of Tricolor predators. Further, native perennial grasslands—prime Tricolor foraging habitat—have been reduced by more than 99% in the Central Valley and surrounding foothills (Beedy and Hamilton 1997).

6.1.2 Colony Destruction by Agricultural Activities

The relatively recent phenomenon of Tricolors nesting in grain silage fields at dairies was not mentioned by DeHaven et al. (1975) (but see Collier 1968), however silage is well-documented as a primary attribute of present-day Tricolor nest site selection (Beedy and Hamilton 1997, Beedy and Hamilton 1999, Cook and Toft 2005, Meese 2007, 2008, 2009a, 2011). Harvest of grain silage is conducted in relation to moisture content of the forage, the timing of which coincides with Tricolors using the crops for nesting (USFWS 2000). This causes nest destruction and direct mortality, which in turn is threatening much of the remaining breeding population of the species (USFWS 2000). In addition, many former agricultural areas within the range of the Tricolor are now being urbanized, and the trend is projected to continue (Beedy and Hamilton 1997).

Dairy grain silage consists of varieties of wheat, often triticale, but also barley, oats, and other crops. Crops can be monocultures or mixtures of grain plants and may also be infested with weeds such as prickly lettuce (*Lactuca serriola*) and thistles (*Cirsium* spp.). These plants may grow to 3–4 feet in height and appear to provide some protection against predators on Tricolor nests because of their dense growth, somewhat spiny/irritating character, and typically monotonous relief in the landscape.

Silage fields around dairies are probably highly attractive to breeding Tricolors because of relative protection from predators but also because crops at a single location may cover tens of acres or more. Because they are intensely colonial, tens of thousands of Tricolors can potentially occupy a silage field as small as 20–40 acres in size. Nest densities in these fields are often not as great as in some other upland substrates but approximately one nest per square meter is not uncommon (Liz Cook, pers. comm.). In addition to providing a suitable nesting substrate, dairies typically provide abundant grain sources at their feedlots for settling adult Tricolors, large amounts of nearby foraging habitat for insects (e.g. alfalfa), and reliable water supplies.

Silage is grown to be an early cut green feed. Crops are planted in late winter/early spring and mature to harvest stage usually between about mid-April and the first week in May. Harvest

stage occurs when the plants contain the highest amount of moisture in their seed heads (milk stage). This stage may last about a week within which time the plants are most valuable as silage feed. The crop is chopped, often in a single day, into fine pieces and allowed to ferment into the final product that is fed to dairy cows. Fields that grew silage are almost immediately turned over to a second crop such as corn (Liz Cook pers. comm. with David Hardt, refuge manager, Kern National Wildlife Refuge).

Tricolors begin establishing nesting colonies in grain silage in late March/April when the plants are tall and sturdy enough to support nests. This means that the timing of silage harvest usually coincides closely with the late nestling/early fledgling stage of Tricolor offspring. The timing of silage harvest and the Tricolor nesting cycle is such that colonies in silage are always lost unless there is intervention on their behalf or for some other unlikely reason that the crop is not harvested (Liz Cook, pers. comm.).

The concentration of most of the Tricolor reproductive effort into a few large colonies that are selecting grain silage as a nesting substrate has greatly increased the risk of extinction should the annual destruction of such a large proportion of nests continue unabated (Cook and Toft 2005). In 2014, Meese (2014) reported 38% of all nesting substrate was in silage (triticale) although data are not available as to how many colonies or individual birds were lost to harvest during that year. This underscores the heavy reliance on this nesting substrate by these imperiled birds concurrent to the decimation of other suitable breeding habitats such as vast areas of cattail marshes that occurred earlier in the 20th century.

Table 4 below provides examples of breeding failures because of harvest of grain silage from 1993 to 2011. For example, approximately half of the documented Tricolor population in 2000 nested in two silage fields in 2003, and the vast majority of this breeding effort was destroyed. In 2008, 45% of all nests in silage were destroyed, amounting to 140,000 nests in Tulare, Madera, Merced, and Fresno counties. As late as 2011—seven years after the formation of the Tricolored Blackbird Working Group and two years after the updated *Conservation Plan for the Tricolored Blackbird* was published—56% of all nests in silage were still destroyed by harvest. Meese (pers. comm.) reported more colonies lost to harvest in both 2013 and 2014 despite efforts to financially compensate landowners to prevent or delay harvest. Hundreds of thousands of additional nests would certainly have been lost over the years without the concerted effort of a handful of dedicated individuals, who monitored Tricolor colonies and attempted to coordinate buy-outs or harvest delays of the biggest colonies. From 1993 to 2011, more than one million nests were documented to have been destroyed by harvest and certainly many more undocumented nests have been obliterated over the years on private lands.[3] Sources for Table 4 below include Hamilton 1993, Hamilton et al. 1995, Beedy and Hamilton 1997, Hamilton et al. 1999, Hamilton 2000, Hamilton and Meese 2005, Meese 2006, 2007, 2008, 2009a, 2011, and Liz Cook unpublished data. This is not a complete summary of all colonies that nested in silage, only a sample of monitored sites.

[3] There were likely tens if not hundreds of thousands of nests destroyed by harvest over the years for which there is no data due to their locations on private property.

Table 4: Tricolor Blackbirds Breeding in Silage by County, Estimated Number of Nests Saved by Crop Buy-out or Harvest Delay, and Estimated Number of Nests Destroyed

Year	County	Number of Breeding Birds	Number Saved by Buy-out or Harvest Delay	Estimated Nests Destroyed)
1993	Tulare	48,000		48,000
1994	Fresno	70,000		70,000
1994	Kern	11,600		11,600
1994	Tulare	50,000		50,000
1995	Fresno	50,000		50,000
1995	Tulare	50,000		50,000
1996	Fresno	50,000		50,000
1996	Tulare	50,000		50,000
1997	Fresno	52,500		52,500
1997	Tulare	40,000		40,000
1998	Fresno	40,000		40,000
1998	Tulare	40,000		40,000
1999	Tulare	14,000		14,000
2003	Tulare	20,000		20,000
2003	Kern	50,000	20,000	30,000
2006	Kern	158,000	138,000	20,000
2006	Tulare	76,000		76,000
2006	Merced	110,824	70,824	40,000
2007	Tulare	122,870		106,750
2008	Tulare	140,000	110,000	30,000
2008	Madera	10,000		10,000
2008	Merced	55,000		55,000
2008	Fresno	45,000		45,000
2008	Kern	60,000	60,000	0
2009	Merced	20,000		20,000
2009	Fresno	35,000		Unknown
2009	Madera	15,000		Unknown
2009	Kern	18,000	18,000	0
2009	Tulare	144,000	31,500	Unknown
2011	Kern	50,000		30,000
2011	Fresno	20,000		20,000
2013	Riverside	2000		1330
TOTAL				**≥1,000,000**

Prior to 1980, the Sacramento Valley held the largest number of birds, whereas from 1980 onwards the San Joaquin Valley supported the largest total breeding populations of Tricolored

Blackbirds (Graves et al. 2013). Graves et al. (2013) postulated one reason for the decline in average colony size in the San Joaquin Valley and decline in total breeding population was that colonies in triticale were all within the San Joaquin Valley (or Sacramento County), all during the last 20 years, and they were >40 times larger than colonies in other habitats during this period. These are the very colonies that were often destroyed.

Other agricultural activities such as sheep grazing can destroy Tricolor colonies. At Owens Creek in Merced County in 2010, a colony of 15,000 birds nesting in milk thistle and mustard produced only 1,500 fledglings after intensive grazing of the vegetation by domestic sheep (Meese 2010).

6.1.3 Destruction of Other Suitable Upland Breeding Substrates and Surrounding Habitats

Cook and Toft (2005) found Himalayan blackberry supported the highest densities of nesting Tricolors among all used substrates and reproductive success was significantly higher in these than other most commonly used substrates (emergent marsh and silage) using data from 1992 to 2003 (Table 4). However, Himalayan blackberry nesting sites are currently not protected and many important traditionally used sites have been lost in recent years (Cook and Toft 2005).

Other important upland nesting substrates, including thistles and prickly lettuce, are likewise not protected because they are considered to be non-native plants and often occur on private property. For example, the 2010 Owens Creek colony in milk thistle and mustard described above was destroyed by grazing sheep. In Merced County in 2011, two large colonies were reported in milk thistle: Owens Creek with 20,000 birds and South of Childs with 10,000 birds: both of these colonies were entirely destroyed by cutting of the thistle (Meese 2011). That same year, Meese (2011:12) also noted that at least four colony sites in Himalayan blackberry substrates on private property were all apparently sprayed with herbicides since 2010. These included Hulen Levee in Merced County, Central American 1 in Stanislaus County, Openshaw Road in Butte County, and Ostrom Road in Yuba County. A colony of 50,000 Tricolors at Sandy Mush and 99 in Merced County in 2011 was reduced to just 15,000 due to harvest of the fava bean crop in which they were nesting.

6.2 Inadequacy of Existing Regulatory Mechanisms

The Tricolored Blackbird is not protected by existing regulatory mechanisms. The Yolo Audubon Society submitted a petition to the Commission to list this species as endangered under the state Endangered Species Act in 1991, but the petition was withdrawn in 1992 (Beedy and Hamilton 1997:19-20). Based on concerns about the Tricolor's population status, FWS included this species as a Category 2 candidate for federal listing as either threatened or endangered. *See, e.g.*, 59 Fed. Reg. 58992 (November 15, 1994).[4] However, FWS later decided to discontinue the

[4] Category 2 candidates are species for which information in the possession of FWS indicates that proposing to list as endangered or threatened is possibly appropriate, but for which persuasive data on biological vulnerability and threat are not currently available to support proposed rules.

practice of maintaining a list of Category 2 candidates. 61 Fed.Reg. 64,481 (December 5, 1996). The Center for Biological Diversity submitted a petition to emergency list the species as endangered under the state and federal Endangered Species Acts in 2004, but this was denied.

Currently, the Tricolored Blackbird is only considered a FWS non-game bird of management concern (species are of concern because of (1) documented or apparent population declines, (2) small or restricted populations, or (3) dependence on restricted or vulnerable habitats) and a species of special concern by CDFW (animals not listed under the federal Endangered Species Act or the California Endangered Species Act, but which nonetheless (1) are declining at a rate that could result in listing, or (2) historically occurred in low numbers and known threats to their persistence currently exist). These designations do not provide any specific legal protection to the bird aside from the requirement that project's triggering CEQA review must analyze the impacts of the proposed action on the Tricolor. *See, e.g.,* 14 Cal. Code Regs.§§ 15065, 15380. However, its special status does not protect the species from activities that do not trigger CEQA review. Furthermore, while the nests and eggs of this species are protected under the California Fish & Game Code § 3503 *see supra*, CDFW has failed to enforce the law to end the devastating annual "take" by private property owners during Tricolor nesting season.

6.3 Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Neff (1942) reported that:

> "Market hunting of blackbirds in the interior valleys of California became a thriving business in about 1928 or 1929, and a dependable market for them was developed largely through Italian produce firms in the larger cities. During the depression years the number of men so engaged increased markedly, but decreased by 1936 or 1937. Using automatic shotguns and firing into dense masses of blackbirds feeding on rice stubble, these market hunters killed large numbers of all species of blackbirds; one group of market hunters shipped nearly 400,000 dressed blackbirds from one Sacramento Valley shipping point in five seasons, and during the winter season of 1935-1936 they shipped about 88,000 birds."

6.4 Disease or Predation

Historical accounts documented the destruction of nesting colonies by a diversity of avian, mammalian, and reptilian predators (Beedy and Hamilton 1999). Historically, terrestrial predators have probably included wolves (*Canis lupus*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), raccoons (*Procyon lotor*), mink (*Mustela vison*), striped skunks (*Mephitis mephitus*) and spotted skunks (*Spilogale gracilis*), gopher snakes (*Pituophis catenifer*), non-native rats (*Ratus ratus*), western rattlesnakes (*Crotalus viridis*), and king snakes (*Lampropeltis getulus*). Avian predators are reported to be Black-crowned Night-Herons (*Nycticorax nycticorax*), Great Blue Herons (*Ardea herodias*), Common Ravens (*Corvus corax*), Cooper's Hawks (*Accipter cooperii*), Burrowing Owls (*Athene cunicularia*), American Crows (*Corvus brachyrhynchos*), Swainson's Hawks (*Buteo swainsoni*), Northern Harriers (*Circus*

cyaneus), Barn Owls (*Tyto alba*), Short-eared Owls (*Asio flammeus*), Yellow-billed Magpies *(Pica nuttalli*), and Merlins (*Falco columbarius*). Predation by feral cats (*Felis catus*; Beedy and Hamilton 1997), rats (*Rattus* spp.; Meese 2010) and Cattle Egrets (*Bubulcus ibis*; Meese 2013), has recently been reported. Tricolors respond to predators by sitting silently rather than attempting to attack them, as do Red-wings (Beedy and Hamilton 1997, 1999).

Predation is a major cause of large-scale nesting failures in many Tricolor colonies, especially those nesting in native emergent marshes (Hamilton et al. 1995, Beedy and Hamilton 1997; Hamilton 2000). Cook and Toft (2005) found that reproductive success was significantly lower in native emergent marshes than other substrates, excluding silage that was not lost to harvesting operations (Table 3). Heron and raccoon predation upon colonies nesting in marshes, especially, can destroy all or nearly all nests within colonies (Hamilton et al. 1995, Hamilton 2000). For example, Tricolor nesting at Kern NWR, Kern County and at Maxwell I and Maxwell II colonies in Colusa County failed due to night-heron predation. Black-crowned Night Heron predation—which often results in the nest failure of an entire colony —is particularly troubling at national wildlife refuges, which are becoming increasingly important nesting sites for both Night Herons and Tricolors as private range and dairy lands are converted to vineyards and orchards or urban uses, and as grain silage fields are subject to harvest during nesting season. Some large colonies (up to 100,000 adults) may lose >50% of nests to coyotes (*Canis latrans*), especially in silage fields, but also in freshwater marshes when water is withdrawn (Hamilton et al. 1995). Thus, water management by humans often has the effect of increasing predator access to active colonies (Shuford and Garaldi 2008).

Nesting over water provides some protection from predators (Weintraub and George 2012), but the reduction of native wetlands to less than 4% of their original extent has probably concentrated predator populations in the remaining wetlands more than was true historically (Cook and Toft 2005). As noted above, water management in some areas results in reduced water, and because cattails do not have armaments such as thorns or stinging hairs, nesting blackbirds are exposed to higher rates of predation (Meese 2013). Cook and Toft (2005) found that from 1992 to 2003, a larger proportion of colonies in native wetlands than in upland substrates suffered complete reproductive failure attributable primarily to predation. In particular, some of the largest breeding colonies in wetlands, such as those in the Sacramento Valley, failed completely despite the fact that colonial nesting is considered an adaptation against predation.

More recent studies have documented wholesale reproductive failure of entire colonies due to predation by Cattle Egrets (Meese 2013). Since 2006, predation by Cattle Egrets on eggs and nestlings has caused nearly complete reproductive failures of even very large colonies, but this currently is limited to Tulare County. In contrast to Cook and Toft (2005) which found a correlation between nesting substrate and reproductive success, Meese (2013) documented widespread reproductive failures of entire colonies from 2006 to 2011 that appeared unrelated to nesting substrate. Instead, Meese found that insect abundance around these colonies was insufficient to support successful breeding, resulting in nestling starvation and failure of females to lay eggs. Meese (2014:110) states "[t]his loss of foraging habitat may result in a decline in productivity over a period of years that is difficult to detect, but that decline may ultimately lead

to the situation where, despite the availability of suitable nesting substrate, tricolors abandon colonies or decline to extinction in an area where they formerly were abundant." If this is correct, then colonies adjacent to dairies, which recently represent the largest colonies of breeding Tricolors, may appear to be ecological traps, fledging relatively few young in most years even when not lost to silage harvest (Meese 2013).

Cook and Toft (2005) note that in earlier studies, colony settlement was reported to be sporadic and unpredictable (Neff 1937, Orians 1961) and banded nestlings were only somewhat philopatric (DeHaven et al. 1975b). More recent data, however, indicate repeated settlement of many sites despite poor breeding outcomes. The recent losses of known breeding sites were concomitant with the decline in local breeding populations despite an abundance of what appear to be other suitable sites which do not become used. This trend toward apparent increased philopatry probably reflects the now extremely limited availability of suitable nesting habitat.

6.5 Other Natural or Anthropogenic Factors

6.5.1 Storms and Droughts

Severe storms are documented to cause near-complete reproductive failures of colonies. At the Plumas Arboga colony in Yuba County in 2009, a colony of 20,000 Tricolors nesting in cattails produced fewer than 1,000 fledglings after a severe storm (Meese 2009a). Colony monitoring in 2010 reported hundreds of dead nestlings found on the ground beneath nests in milk thistle at the 2,000-bird colony on San Felipe Ranch in Merced County after a severe storm; this colony ultimately produced only 200 young (Meese 2010). Also during 2010 a second colony of 10,000 birds nesting in mustard and milk thistle at Merced NWR was destroyed by storm, with only 500 fledglings produced.

Meese (2010:11) wrote: "[s]pring storms, and especially the winds associated with storms, played a major role in limiting the productivity of several colonies in 2010, especially those established in milk thistle in Merced County. The second settlement at Merced National Wildlife Refuge Duck Slough appeared to be nearly wiped out due to a storm with high winds on May 20, affecting a colony visually estimated to consist of 15,000 breeding birds. The nearby San Felipe Ranch colony was affected by the same storm, and when surveyed on May 27 was visually estimated to have suffered a greater than 50% mortality of nestlings, as hundreds of dead nestlings were observed on the ground beneath the milk thistle nesting substrate. The Bear Creek colony, also established in milk thistle, was not as severely impacted but hundreds of nests were observed to have been affected, most apparently shaken sideways during strong winds. The eggs in these nests were likely spilled out on to the ground while the nestlings were either ejected or forced to cling precariously to horizontal nest cups."

Drought also may have adverse effects on Tricolored Blackbird populations, but no empirical data are available (Bob Meese, pers. comm.) Beedy (2014:3) wrote that "the recent drought and effects of climate change have noticeably reduced the extent of suitable nesting and foraging habitat in the Central Valley compared to conditions when I first began my intensive studies of this species in the mid-1980s. The effects of the drought on the available wetlands and moist,

insect-producing agricultural fields, was especially apparent during this year's Statewide Survey—in the third year of a severe drought." However, the Tricolored Blackbird population had been steadily declining from 2008 to 2014, so drought cannot be implicated in the decline for the entire time period.

The Tricolored Blackbird evolved over millennia in a region (California) that is naturally susceptible to periodic drought and severe storms. However, their population size and available habitat has been so reduced by humans over the past century that natural weather events now have a more pronounced effect on the overall population—this is precisely the problem when small, endangered populations with little remaining habitat are faced with large-scale natural stochastic (unpredictable) events such as droughts and severe storms. Drought and severe storms may have adverse effects on reproductive success, but this only makes protecting active nesting colonies from damaging human activities such as harvest, pesticides, grazing sheep, or poor water management all the more critical.

6.5.2 Poisons and Contaminants

Various poisons and contaminants have caused mass mortality of Tricolored Blackbirds (Shuford and Garaldi 2008). McCabe (1932) described the strychnine poisoning of 30,000 breeding adults as part of an agricultural experiment. Neff (1942) considered poisoning to regulate numbers of blackbirds preying upon crops (especially rice) to be a major source of mortality. This practice continued until the 1960s, and thousands of Tricolored Blackbirds and other blackbirds were exterminated to control damage to rice crops in the Central Valley.

Beedy and Hayworth (1992) observed a complete nesting failure of a large colony (about 47,000 breeding adults) at Kesterson Reservoir, Merced County, and selenium toxicosis was diagnosed as the primary cause of death. Hosea (1986) attributed the loss of at least two colonies to aerial herbicide applications.

Beedy and Hamilton (1997) documented more evidence of Tricolor mortality due to contaminants. A large Tricolor breeding colony of nearly 50,000 birds at Kesterson Reservoir in Merced County experienced a complete nesting failure in 1986 (Beedy and Hayworth 1992). Some of the dead nestlings had club feet; other shorebirds and water birds collected at the reservoir had similar deformities. Pathological examinations of the Tricolor nestlings indicated heart muscle degeneration, and liver sampled showed higher concentrations of selenium than in Red-wing nestlings collected in an uncontaminated area at Merced NWR (Beedy and Hayworth 1992). The cause of the 1986 Tricolor nestling deaths was suspected to be selenium toxicosis (Beedy and Hamilton 1997). A recent incident reported to CDFW was the death of Tricolors from in Riverside County that were poisoned by bait left out for ground squirrels (R. Cook, pers. comm.).

Hamilton observed a colony sprayed by mosquito abatement operators in Kern County, and all sprayed eggs failed to hatch, and the loss of at least two Tricolor colonies was attributed to herbicide applications (Beedy and Hamilton 1999). While the link between environmental contaminants and nesting failure of Tricolors is largely unstudied, enormous amounts of

chemicals are introduced into the environment every year by the California agriculture industry, particularly in the Central Valley, which is the historical stronghold of the Tricolor and the most intensive agricultural region in the state. Table 5 shows amount and type of pesticides applied in five of the counties that support the some of the greatest numbers of breeding Tricolors.

Table 5. Type and Amount of Pesticides Used in Fresno, Merced, Sacramento, San Joaquin, and Tulare Counties (California Department of Pesticide Regulation 2002)

County	Chemical	Pounds Applied	Chemical	Pounds Applied
Fresno	Aluminum Phosphide	15,080.9830	Metam-Sodium	1,981,875.2816
	Bacillus Thuringiensis I	1,690.3241	Methoprene	15.6594
	Chlorophacinone	0.1511	Methyl Bromide	417,510.3194
	Chlorpyrifos	321,888.9509	Oryzalin	11,850.1164
	Copper Sulfate	115,084.1100	Petroleum Oil	2,329,338.9000
	Diazinon	70,289.4242	Phosmet	95,969.6584
	Diphacinone	0.7339	Pyrethrins	162.6464
	Malathion	43,158.9558	Strychnine	40.7266
	Mancozeb	37,528.9088	Zinc Phosphide	35.7129
Merced	Aluminum Phosphide	2,971.6662	Metam-Sodium	422,398.3113
	Bacillus Thuringiensis I		Methoprene	157.8358
	Chlorophacinone	1.1929	Methyl Bromide	131,116.9563
	Chlorpyrifos	61,795.4767	Oryzalin	2,594.6929
	Copper Sulfate	105,569.4900	Petroleum Oil	569,390.7400
	Diazinon	23,995.9920	Phosmet	9,044.3520
	Diphacinone	0.8929	Pyrethrins	590.9544
	Malathion	17,868.8865	Strychnine	89.1223
	Mancozeb	8,991.6591	Zinc Phosphide	265.5314
Sacramento	Aluminum Phosphide	1,957.8636	Metam-Sodium	34,853.1512
	Bacillus Thuringiensis I	77.9603	Methoprene	278.8712
	Chlorophacinone	0.1346	Methyl Bromide	9,339.2350
	Chlorpyrifos	29,307.3649	Oryzalin	6,544.5375
	Copper Sulfate	49,294.402	Petroleum Oil	223,652.1400
	Diazinon	14,780.1577	Phosmet	8,031.6110
	Diphacinone	0.3048	Pyrethrins	71.4711
	Malathion	2,852.0994	Strychnine	0.8122
	Mancozeb	11,154.9237	Zinc Phosphide	60.1408
San Joaquin	Aluminum Phosphide	2,362.2914	Metam-Sodium	10,122.7993
	Bacillus Thuringiensis I	562.7223	Methoprene	95.2427
	Chlorophacinone	0.1439	Methyl Bromide	176,519.4093
	Chlorpyrifos	52,076.1370	Oryzalin	6,757.1516
	Copper Sulfate	100,613.6600	Petroleum Oil	534,153.4400

	Diazinon	17,664.0315	Phosmet	10,195.7060
	Diphacinone	0.3140	Pyrethrins	260.5963
	Malathion	11,265.6954	Strychnine	35.1823
	Mancozeb	23,385.1615	Zinc Phosphide	12.6028
Tulare	Aluminum Phosphide	2,786.4064	Metam-Sodium	117,861.9303
	Bacillus Thuringiensis I	198.8293	Methoprene	0.6954
	Chlorophacinone	0.2265	Methyl Bromide	123,817.5579
	Chlorpyrifos	202,428.6137	Oryzalin	6,219.4719
	Copper Sulfate	267,978.4700	Petroleum Oil	2,978,688.3000
	Diazinon	43,560.2082	Phosmet	81,260.5161
	Diphacinone	1.1976	Pyrethrins	46.7505
	Malathion	25,292.3724	Strychnine	57.4777
	Mancozeb	16,267.6174	Zinc Phosphide	1.6000

While Tricolors were not studied directly, many of the chemicals used within the breeding range of the Tricolor are known to be highly toxic to birds. For example, malathion, chylorpyrifos, and diazinon are organophosphorus pesticides that bind with cholinesterase in animals and disrupt neural functioning. Chlorpyrifos is moderately to very highly toxic to birds (EXTOXNET 2004). Birds are quite susceptible to diazinon poisoning: in 1988, the EPA concluded that the use of diazinon in open areas poses a "widespread and continuous hazard" to birds. Bird kills associated with diazinon use have been reported in every area of the country and at all times of the year. Birds are significantly more susceptible to diazinon than other wildlife (EXTOXNET 2004).

Malathion is moderately toxic to birds. The reported acute oral LD50 values are 167 mg/kg in blackbirds and starlings (EXTOXNET 2004). The precise oral or inhalation median lethal doses for aluminum phosphide or phosphine in birds are not known, but exposure of turkeys and hens to 211 and 224 mg/meters cubed for 74 and 59 minutes respectively resulted in labored breathing, swelling of organs, tonic-clonic convulsions and death (EXTOXNET 2004).

Methoprene is slightly toxic to birds, but non-lethal effects that may affect survival of the birds appeared at acute oral doses of 500 mg/kg, and included slowness, reluctance to move, sitting, withdrawal, and incoordination (EXTOXNET 2004). These effects may decrease bird survival by making them temporarily more susceptible to predation (EXTOXNET 2004).

Phosmet is documented to be highly toxic in Red-wings, with a reported acute oral LD50 of 18 mg/kg (EXTOXNET 2004). Zinc phosphide is highly toxic to wild birds, although blackbirds were found to be less sensitive than other taxa (EXTOXNET 2004).

6.5.3 Killing Blackbirds for Crop “Protection”

Historically, blackbirds were reportedly shot in great numbers by ranchers in order to drive the flocks away from crops, or by pleasure hunters utilizing blackbirds for target practice, and poison

to regulate blackbird damage to crops was a major source of adult mortality (Neff 1942). Beedy and Hamilton (1997) noted that this practice continued until the 1960s, during which thousands of Tricolors were killed in the Central Valley. Reduction in numbers of blackbirds and improved harvesting methods has resulted in a decrease in blackbird extermination programs in the region, but the practice of shooting blackbirds has not ended. A history of widespread persecution of blackbird species has contributed to the Tricolor population decline documented over the past century, and may account for some of the ongoing population decline.

The killing of blackbirds in autumn in paddies of ripening rice in the Sacramento Valley is a known but unquantified source of mortality to post-breeding adult Tricolored Blackbirds. Due to the similarity in appearance to Red-wings, rice farmers who shoot blackbirds kill both species, and perhaps others (Bob Meese, pers. comm.). As noted by Meese (2009a:16):

> "Colonies in the Sacramento Valley are much less dependent upon ephemeral substrates than are those in the San Joaquin Valley, but Sacramento Valley birds have their own serious threats. This year, two birds that I banded in 2008 were shot by a rice farmer outside Richvale in Butte County and subsequently reported to me by staff at Sacramento National Wildlife Refuge. Although only two Tricolors were confirmed killed, these were apparently turned in to federal wildlife officials because of the bands that were found on their legs and serve to suggest a potentially much larger problem. One wonders how many Tricolors are shot each summer in the Sacramento Valley? Previously, in 2006, I was told by two Colusa County staff that flocks of blackbirds were annually shot in Colusa County and that such shooting did not require a permit. This is true for most blackbird species, but not for Tricolors, which are protected under the Migratory Bird Treaty Act. Additionally, a rice farmer in Yuba County told me in July, 2008 that he knows of several rice farmers who annually "herd" and then shoot blackbirds. The shooting of blackbirds during the breeding and post-breeding seasons is in all probability a source of additive mortality, that is, mortality in addition to that which would normally occur due to other factors (starvation, disease, etc.), as it involves primarily breeding and post-breeding adults, and thus may be especially important as a limiting factor in population growth in Tricolors."

6.5.4 Allee Effect of Small Population Size

As noted above, small populations, especially those that are squeezed into ever-smaller areas of suitable habitat, are more vulnerable to stochastic (unpredictable) events such as storms and droughts. Cook and Toft (2005) also raised an alarm bell about the effects of a small population size to a species with socially facilitated breeding. With these species, reduced populations may become extinct through Allee effects, or "inverse density dependence," defined as a positive relationship between population density and survival and reproduction (Allee 1931, Stephens and Sutherland 1999). Conversely, as population density and colony size decreases, so too does survival and reproduction, even if there may remain several hundred thousand individual birds. The Passenger Pigeon, once the most abundant bird in North America, may have ultimately succumbed to extinction following widespread hunting and habitat loss because it could not survive at low population densities (Stephens and Sutherland 1999).

Cook and Toft (2005:85) stated:

> "Like Passenger Pigeons, Tricolored Blackbirds breed colonially and are now adapted to the patchy distribution of a habitat that was widespread before European immigration to North America. The extinction of the Passenger Pigeon has been attributed to a combination of highly social and nomadic breeding, the fragmentation of the mast forests that provided abundant forage, and intense commercial hunting (Stephans and Southerland 1999). Together these factors pushed the population past a lower threshold of inverse density dependence (the Allee effect) and on to the alternative stable state of global extinction (Stephans and Southerland 1999). Importantly, Passenger Pigeon was once the most abundant bird species in North America, with flocks reported to darken the skies for hours (Wilcove 1999), similar to descriptions of flocks of Tricolored Blackbird in California's Central Valley in the mid-1800s (Heermann 1859)."

Cook and Toft pointed out that because local populations of Tricolored Blackbirds are still found in dense breeding colonies, they can leave a false impression of abundance upon casual observers. The long-term population trends and patterns in reproduction show that the Tricolored Blackbird possesses most of the traits that ultimately led to the extinction of Passenger Pigeon in the same ecological circumstances. These factors include the loss of vast areas of native wetland along with the increasing loss of upland, non-native vegetation favorable for nesting, the trend of decreasing colony size in a highly social breeder, a habit of itinerant breeding (Hamilton 1998), and wholesale slaughtering of the largest breeding colonies in agricultural harvest.

7.0 Degree and Immediacy of Threat And Request for Emergency Action

7.1 Degree and Immediacy of the Threat

The San Joaquin Valley and Sacramento Valley have historically been the heart of the Tricolor's range and supported the largest populations. The recent population decline has been most severe in the San Joaquin Valley and along the Central Coast. The number of birds counted in the San Joaquin Valley plummeted 78% in 6 years, from 340,700 to about 73,500 birds, and the decline in especially alarming in Kern and Merced counties (Meese 2014). Efforts to provide water in private duck clubs adjacent to dairies in Kern and Tulare counties have been largely ineffective at halting the steep decline in the number of breeding birds in Kern County over the past 3 years, to an all-time low (Bob Meese, pers. comm). Along the Central Coast, the number of birds is down 91% in 6 years, from 7,014 to 627 birds. For many years few birds were recorded nesting in their historical stronghold of Sacramento County where once entire colonies of 100,000 birds were observed (Neff 1937); in 2014 fewer than 30,000 total birds were recorded in the County. Active nesting colonies of the extremely imperiled Tricolored Blackbird continue to be destroyed by crop harvest, grazing sheep, pesticide use, and poor water management, all of which have caused failures of entire of nearly entire colonies in recent years (Meese 2007, 2008, 2009a, 2010, 2011). Further, an unknown number of Tricolors are shot and killed each year while foraging in rice paddies in the Sacramento Valley during autumn.

The population in southern California remains highly endangered as well with an average of fewer than 6,000 birds observed during springtime breeding surveys conducted since 2005. Although Meese (2014) reported an increase of 126% in southern California over the 2008 census, as R. Cook (2014) explained: "this magnitude of change cannot be accounted for by local reproduction and recruitment. On closer examination, it is apparent that the increase occurred predominantly in Los Angeles County, and specifically the Mojave Desert area between the San Gabrielle Mountain range and the Kern County border. In 2014, 4,500 birds were reported from Holiday Lake alone versus 840 in all of Los Angeles County in 2011. Holiday Lake is only 45 linear miles from the city of Bakersfield in the southern San Joaquin Valley and only slightly further through the Tehachapi Pass. The number of birds in this area has varied between survey years from approximately 600 to 5,000. However, the data reflect no concomitant changes elsewhere in southern California which suggests that these fluctuations are local and do not impact population dynamics in the rest of southern California. The most plausible explanation for the apparent increase this year and the changes observed in Los Angeles County throughout the life of the surveys is occasional and temporary influx of birds from the Central Valley."

Currently the entire global population of Tricolored Blackbirds counted during surveys is less than half the size of a single colony that was reported in 1934 (Neff 1937, Meese 2014). The travesty is that the dire situation of the Tricolor has been known for the past two decades by state and federal agencies, and despite heroic efforts of several dedicated individuals, the trajectory towards extinction has not been reversed. It is time for immediate regulatory action under the California Endangered Species Act to ensure the conservation of nesting and foraging areas known to be important to Tricolored Blackbirds, to prevent the direct killing of blackbirds at rice paddies, and to provide funding for habitat improvement projects such as those proposed by Lowell Young and the Yosemite Area Audubon Society (see "Recommended Management and Recovery Actions.") If such action is not taken, the Tricolored Blackbird will follow the Passenger Pigeon into the dark abyss of extinction.

7.2 Request for Emergency Action

For the reasons provided above, petitioner requests that the Commission take immediate action on this petition and issue emergency regulations to list the Tricolored Blackbird. The California Fish and Game Code Section 2076.5 permits the Commission to issue emergency listing rules to provide imperiled species with immediate substantive protection. As discussed above, the Tricolor is in immediate need of protection from the severe nesting failures caused each year by agriculture harvesting and plowing activities.

8.0 Impacts of Existing Management Efforts

8.1 Silage Buy-outs and Harvest Delays

The two main grain-field specific conservation actions include silage buy-outs or harvest delays (Meese 2009b). Silage buy-outs involve the payment to landowners of the full market value of the triticale in the portion of the field occupied by nesting Tricolors. Harvest delays are financial

compensation to landowners for the reduction in the value of their crop from the delay in its harvest until the young Tricolors have fledged from their nests. Meese (2009b) explains that the key difference between a harvest delay and a silage buy-out is the timing of the harvest of the crop following the fledging of the young Tricolors. In the silage buy-out, the farmer agrees to wait until essentially all birds, including the breeding adults plus the newly fledged young, have departed and are fully independent of the field. In a harvest delay, the farmer agrees to delay the harvest only until the young have fledged (left the nests). Thus, in a harvest delay, the young are still present in the field on the day of harvest, being fed by adults during the day and roosting there at night. This difference may be due to the desire to minimize the impact of the harvest delay on the yield and nutritional quality of the crop.

The practice of buying out farmers or delaying harvest of silage to prevent nest destruction during active breeding undoubtedly has saved hundreds of thousands of birds. From 2005 to 2009, these efforts resulted in the conservation of the breeding efforts of a low of 16% in 2007 to a high of 86% in 2005 of the birds nesting in silage fields, thus contributing to Tricolor productivity (Meese 2009b:5). Over the five years from 2005 to 2009, payments totaling $331,921 were made to conserve 11 breeding colonies consisting of 546,000 birds which subsequently produced 396, 025 young (Meese 2009b:6). However, this practice has not always been reliable and depends upon the volunteer cooperation of the farmer and available funds. As evidenced in Figure 4 below (from Meese 2009b:4), in some years the vast majority of breeding effort was not conserved.

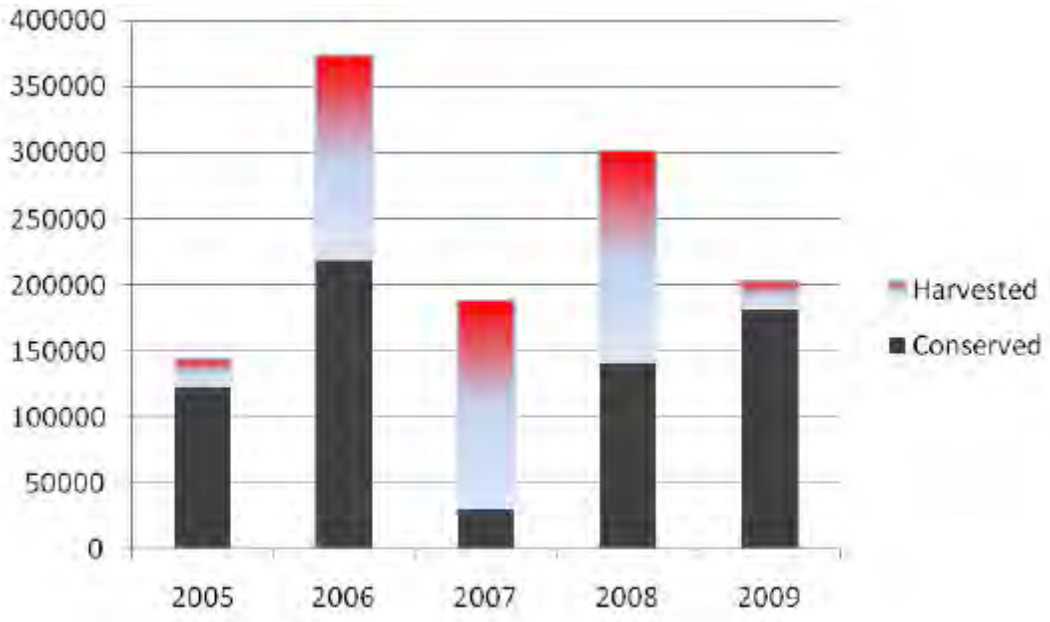


Figure 4: Fates of Tricolored Blackbirds in Silage Fields, 2005 to 2009

Many of the most important recent colonies have been destroyed before it was too late to save them, despite concerted efforts to do so by Tricolor biologists and the FWS. For example,

Meese (2006:5-6) noted: "Deer Creek Dairy, Tulare County, was destroyed days after the owner told Scott Frazer, USFWS biologist, that he would not cut the field until after the birds had fledged. This harvest was reported to the Fresno Field Office, Enforcement Division of the USFWS, and harvest was halted by direct intervention by the USFWS officer but not until an estimated 60% of the colony had been harvested, including a single pass through the center of the colony."

In 2011, the year for which the most recent data are available on the Tricolor portal regarding specific colony fates, many instances of nest destruction by crop harvesting were documented, with many colonies destroyed, seemingly willfully:

> "Colonies from Kern County to Merced County were destroyed by harvest or the cutting of the nesting substrate in 2011. The West Poso colony in Kern County was destroyed by harvest just as the young had begun to fledge from their nests. The Producer's Dairy colony in Fresno County was destroyed a week after it was discovered. The owner had preferentially harvested the portion of his triticale field that was occupied by the breeding tricolors as only this portion of this field had been harvested when the site was observed on April 12. The Owens Creek and South of Childs colonies in Merced County were destroyed when the weedy fields in which they were situated were cut. The Sandy Mush and Highway 99 colony, also in Merced County, was cut in half despite on-going conversations with the farmer that sought to conserve the colony through a harvest delay whereby the farmer was to be compensated for his lost revenue that would have resulted from the delay in the harvest of his field of fava beans. Only 10-15,000 birds out of an original colony of 50,000 birds remained after half of the field was harvested." (Meese 2011:12)

Efforts to protect partial colonies have failed to save the nesting effort, even with the cooperation of the farmer, such as this example from 2007: "[n]egotiations between the Service and the landowner, who had prior experience with nesting tricolors and the silage buy-out process, resulted in the signing of a contract to sell the silage occupied by the nesting birds while allowing the farmer to harvest the triticale not occupied. The harvest of the unoccupied triticale proceeded as scheduled, but the day following harvest in excess of 90% of the tricolors deserted the site. The landowner was immediately contacted to inform him of the departure of the birds and to request that the contract be canceled." (Meese 2007:17).

In 2013, four silage colonies were destroyed due to harvest, including the largest colony in southern California in Riverside County. This harvest occurred despite the fact that the landowner had been contacted and an agreement for financial compensation apparently was in its final stages, yet he harvested his field without informing anyone (R. Cook, pers. comm). In 2014, at least two silage colonies were lost to harvest in Merced County, and an additional is suspected (Bob Meese, pers. comm).

Meese (2009b:6) noted that "a permanent solution to the dilemma between the needs of the nesting birds and the needs of the farmers does not consist of annual negotiations between U.S. Fish & Wildlife Service staff and San Joaquin Valley farmers; rather, it consists of the provision

of permanent nesting habitats surrounded by productive foraging habitats that provide a secure alternative to nesting in triticale fields (Tricolored Blackbird Working Group 2007). Previous attempts to create such alternative nesting habitats (e.g., ECLA Pond in Kern County, Toledo Pit in Tulare County) have met with limited success, but unless the tricolor modifies its breeding distribution, this is the only realistic resolution to the conflicts. Recent changes including intense predation by cattle egrets (*Bubulcus ibis*) and the loss of formerly productive alfalfa foraging habitats to conversion to orchards and vineyards may be reducing the suitability of the southern San Joaquin Valley to tricolor breeding (Meese 2009a), only complicating future attempts to increase the abundance of the species."

Clearly, however any such voluntary measures to buy-out silage crops or delay harvest over the past decade have not worked. The Tricolor population has declined precipitously despite all efforts to date, and the global population is currently less than half that of a single colony that was reported in 1934 in Glenn County. The species unequivocally warrants immediate listing under the California Endangered Species Acts.

8.2 Tricolored Blackbird Working Group and Conservation Plan

The Tricolored Blackbird Working Group is a voluntary group of state and federal agency biologists, non-governmental organizations, industry representatives, and academic scientists who "share concern for the Tricolored Blackbird and a desire to work cooperatively to help to enhance and sustain the birds and their habitats."

The Tricolored Blackbird Working Group meets twice per year to discuss both long-term, strategic efforts as well as short-term immediate actions necessary to conserve Tricolors. The Working Group (1) assesses the needs for and effectiveness of strategies and efforts that are already implemented, and (2) identifies steps yet to be taken that are necessary to conserve breeding colonies and surrounding foraging habitats. Generally, a spring meeting emphasizes the needs for the upcoming breeding season, while the fall meeting reviews results of the breeding season and sets priorities for next steps. The Working Group crafted the *Conservation Strategy for the Tricolored Blackbird* from 2004 to 2007 (Tricolored Blackbird Working Group 2007), and designed and prepared for distribution a pamphlet describing the Tricolored Blackbird and efforts underway to try to conserve it. Numerous, less formal communications and meetings occur among Working Group members year-round.

The Tricolored Blackbird Working Group includes: Audubon California; California Association of Resource Conservation Districts; California Farm Bureau Federation; California Cattlemen's Association; California Department of Fish and Game; California Department of Food and Agriculture; Central Valley Bird Club; Central Valley Joint Venture; Natural Resources Conservation Service; Pacific Gas and Electric Company; PRBO Conservation Science; Sonoran Joint Venture; Sustainable Conservation; University of California, Agriculture and Natural Resources; Western Riverside County MSHCP; U.S. Fish and Wildlife Service; U.S. Geological Survey; and the Western United Dairymen.

There are a number of scientific efforts underway by agency and non-agency groups that are part of the Tricolored Blackbird Working Group to monitor the population of Tricolored Blackbirds and understand natural and anthropogenic factors correlated to breeding-site selection and reproductive success. These efforts include:

- annual field work to detect and monitor (i.e. document the fates of) the largest colonies in the Central Valley and Southern California to help to prioritize colonies for conservation actions, to estimate the numbers of breeding adults, to estimate the numbers of young produced (i.e. derive an estimate of colony productivity), and to attempt to identify the factors responsible for observed patterns of productivity
- annual banding of primarily adults birds at several breeding colonies to help to document spatial and temporal movements, estimate life history parameters, and to evaluate patterns of site fidelity
- education and outreach, including the production and distribution of a brochure to describe the efforts being made on behalf of the tricolored blackbird and to encourage agency field personnel and birders to report observations of banded birds
- development of the web portal to provide information on the Tricolored Blackbird and to accumulate, document, and disseminate data on colonies and observations of banded birds and aggregations, both breeding and non-breeding.

These scientific efforts have provided a vast literature documenting population size by region, colony locations and fates, and variables correlated with reproductive success and selection of breeding sites. These intensive scientific efforts have provided clear and unequivocal evidence of severe population declines and confirm the significant adverse effects of silage harvest, water management, depredation by rats and Cattle Egrets, and other factors that are implicated in the Tricolor's current predicament.

Science is important but on-the-ground action is needed. However, it is abundantly clear that volunteer efforts to save active nesting colonies have failed in recent years. The *Conservation Plan* was developed in 2007 and updated in 2009, but few conservation efforts to actually improve habitat on the ground have been implemented, and as noted above, numerous efforts to save colonies from silage harvest were shunned by the landowners and the nestlings were brutally mowed down despite funding available to prevent it. Meese (2013) emphasized the importance of high-quality foraging habitats close to nesting colonies that provide abundant insect prey for high reproductive success, but these habitats have continued to be eliminated, which likely led to the chronic very low reproductive success of colonies documented in recent years (Meese 2013). Habitat-improvement efforts including ideas to lure birds to protected high-quality nesting sites have been suggested, but no funding has been provided to support these efforts.

9.0 Recommended Management and Recovery Actions

Meese (2014) provided the following recommendations for management and recovery of the Tricolored Blackbird:

1. Eliminate all known sources of mortality, including the losses of eggs and young via harvest of their nesting substrate and adults in autumn when causing depredations in rice.

2. It is essential to develop a mechanism for conserving at-risk colonies. A mechanism is required that consists of 1) field workers who *detect settlements* of birds in ephemeral nesting substrates (e.g., triticale fields), 2) a person or persons to whom the field worker *reports the presence of birds in ephemeral, at-risk locations* and who has the responsibility of contacting landowners and informing them of the protected status of the birds and of funding available to compensate them, 3) a cooperative extension specialist or other independent expert who *estimates the loss in value* of the crop as a result of the harvest delay, 4) a field worker who *monitors and documents the results* of conservation actions (successful delay until a week past average date of fledging, an estimate of the number of young fledged, a description of the process of harvest in those cases where fledglings are still present in the field when it is being harvested with an emphasis on the effects on the behavior of the fledglings post-harvest). 5) All of these *actions should be documented and then be reported* to a meeting of the Working Group and provided in a report that is posted to the Portal.

3. A legislative fix to eliminate exemption of protection under the MBTA is needed for red-winged blackbirds in California. If red-wings cannot be shot and shooting stops in autumn in rice, this will also save the lives of an unknown number of post-breeding adult tricolors that are shot by "mistake" as tricolors and red-wings are superficially nearly identical in appearance and flock together during autumn.

4. Better document conditions which result in relatively high reproductive success. Examine patterns in RS to determine whether, on a time-averaged basis, there is relatively higher RS in colonies in some geographic regions or that are established in different nesting substrates. Use these insights to make recommendations for management actions.

5. Study the effects of harvest on populations of fledglings in crèches that persist on nesting substrates until moments before they're harvested to best document effects on birds. In some situations, fledglings persist on the original nesting substrates until moments before the substrates are harvested. Study these colonies and document where the birds go when the harvester shows up and what do they do when they return to the just-harvested field.

6. Take an 'all hands on deck' approach to tricolored blackbird conservation that includes representation by all industries that may be affected by a listing and all systems of protected areas, including the National Wildlife Refuge System, State Wildlife Areas, DOD installations, and private preserves.

7. Work with landowners in foothill and other locations with extensive rangelands where the availability of nesting substrate may be limiting reproduction; add nesting substrates where they are lacking, enhance nesting substrates where they are limiting, and protect nesting substrates where necessary. Fund landowners who want to conserve tricolors but who incur a cost in doing so.

8. Provide supplemental insect foods (meal worms, possibly others) to investigate whether supplemental feeding may increase RS.

9. Provide meal worms or other insects to settling birds at desired locations to see whether the supplemental foods may influence breeding site selection.

10. Focus efforts on regions with a recent history of successful reproduction (e.g., Sierra Nevada foothills) and, where appropriate, seek to create additional breeding sites.

11. Expand monitoring and research into regions which have historically been under-studied (central Sierra foothills, coastal locations) and suggest strategies to sustain or increase reproductive output in these regions. Perhaps fund a volunteer effort by reimbursing volunteers for food and mileage costs for monitoring efforts.

12. Encourage and/or provide monetary incentives to farmers to grow alfalfa, sunflowers, and rice within 3 miles of active tricolored blackbird colonies without insecticides or to delay their use until after the young have fledged and left the area.

13. Investigate the relative abundance of insects in rice paddies under organic culture to that in commercial rice paddies to document whether organic rice provides a better foraging substrate than does commercial rice (as has been suggested by relatively high RS at the Conaway Ranch in Yolo County, where both organic and commercial rice is grown).

14. Provide additional funding and guidance for landowners to provide essential resources for nesting tricolors on private property.

15. Actively maintain all wetlands recently used by breeding tricolors, and especially those in coastal locations, to provide the youthful conditions preferred by nesting birds.

16. Develop and disseminate via the Portal handbooks that illustrate best practices for maintaining wetlands and other nesting substrates for breeding by tricolored blackbirds.

17. Conduct threat assessments of all areas currently used by breeding tricolors and work with local officials to identify these threats and seek ways to reduce or eliminate them.

18. Assess the concentrations of neonicotinoid insecticides in regions with the lowest insect abundances and highest rates of decline in tricolored blackbirds.

Beedy (2014) offered additional suggestions specifically regarding cattle ranching:

1. Recognize that cattle ranching and most other range management activities have mostly beneficial effects on this species and do not result in incidental take;

2. Consider authorizing limited incidental take consistent with typical cattle ranching and range management activities;

3. Establish financial incentive programs to encourage ranchers and farmers to voluntarily create and manage suitable habitats in the context of their normal operations;

4. Educate ranchers, farmers, and other members of the public about the benefits of this species in the control of harmful insect pests that damage agricultural crops.

The Tricolored Blackbird Action Group of the Yosemite Area Audubon Society has created a database of shovel-ready projects to lure Tricolored Blackbirds to secure breeding habitat. These sites include an assessment of the availability of insect-rich foraging habitat and water sources. Similar projects could be expanded to other areas as well outside of the Sierra Nevada foothills.

In addition, efforts are needed by the State and Federal agencies to enhance breeding habitat on wildlife areas and other public lands.

The Center strongly encourages funds to be made available for the highest-priority of these projects, along with funding for scientific monitoring of results.

10.0 Availability and Sources of Information

Literature cited in this petition is listed below. A disk with many of the critical documents cited will be send via U.S. Mail to the Commission along with a paper copy of the petition.

Allee, W. C. 1931. Animal aggregations. A study in general sociology. Chicago, IL: University of Chicago Press.

Beedy, E. C., S. D. Sanders, and D. Bloom. 1991. Breeding status, distribution, and habitat associations of the tricolored blackbird (*Agelaius tricolor*) 1850-1989. Prepared by Jones & Stokes Associates for U. S. Fish and Wildlife Service, Sacramento, CA.

Beedy, E. C., and A. Hayworth. 1992. Tricolored Blackbird nesting failures in the Central Valley of California: general trends or isolated phenomena? Pp. 33-46 in Endangered and sensitive species of the San Joaquin Valley, California. California Energy Commission, Sacramento, California.

Beedy, E. C. 2014. Comments in Support of the Emergency Listing of the Tricolored Blackbird. August 2, 2014 letter to the California Fish and Game Commission.

Beedy, E. C. and W. J. Hamilton III. 1997. Tricolored Blackbird Status Update and Management Guidelines. Prepared for the U. S. Fish and Wildlife Service, Portland, Oregon, and the California Department of Fish and Game, Sacramento, California.

Beedy, E. C. and W. J. Hamilton III. 1999. Tricolored Blackbird (*Agelaius tricolor*). In A. Poole and F. Gill, eds. The Birds of North America, Number 423.

Bent, A. C. 1958. Life histories of North American blackbirds, orioles, tanagers, and allies. Dover Publications, Inc., New York, NY.

Berg, E.C., Pollinger, J.P. and Smith, T.B. 2010. Population structure of the Tricolored Blackbird (*Agelaius tricolor*) in California: are northern and southern populations genetically distinct? Calif. Dept. Fish and Game, Nongame Wildlife Program Rpt. 2010-05 and Audubon California, Sacramento, CA. 25 pp.

California Department of Pesticide Regulation (CDPR). 2002 data available at http://www.cdpr.ca.gov/docs/pur/purmain.htm (See also 2010 data and 2010 summary report at: http://www.cdpr.ca.gov/docs/pur/pur10rep/10sum.htm#pestuse

Collier, G. 1968. Annual cycle and behavioral relationships in the Red-winged and Tricolored Blackbirds of southern California. Ph.D. diss., Univ. of California, Los Angeles.

Cook, L. 1996. Nesting adaptations of Tricolored Blackbirds (*Agelaius tricolor*). Master's thesis, University of California, Davis, California.

Cook, L. and C. A. Toft. 2005. Dynamics of extinction: Population decline in the colonial Tricolored Blackbird (*Agelaius tricolor*). Bird Conservation International 15:73-88.

Cook, R. 2014. Statement in Support of an Emergency Listing of the Tricolored Blackbird (*Agelaius tricolor*) under the California Endangered Species Act, July 31, 2014.

Crase, F. T. and R. W. DeHaven. 1978. Food selection by five sympatric California blackbird species. Calif. Fish Game 64:255-267.

DeHaven, R. W. 2000. Breeding Tricolored Blackbirds in the Central Valley, California: A Quarter-Century Perspective. U.S. Fish and Wildlife Service, June 2002.

DeHaven, R. W., F. T. Crase, and P. D. Woronecki. 1975. Breeding status of the Tricolored Blackbird, 1969-1972. California Fish and Game 61:166-180.

EXTOXNET (The Extension Toxicology Network, U. C. Davis). 2004. EXTOXNET web site data visited 2004.

Feenstra, J. S. 2013. Breeding Survey of Tricolored Blackbirds in Baja California, Mexico, 2013.

Graves, E. E., M. Holyoak, T. R. Kelsey, and R. J. Meese. 2013. Understanding the contribution of habitats and regional variation to long-term population trends in tricolored blackbirds. Ecology and Evolution. doi: 10.1002/ece3.681

Hamilton, W. J. III. 1993. Tricolored Blackbird. Final Report, CF&G, USFWS, 1993 Report prepared for the U. S. Fish and Wildlife Service, Portland, Oregon and the California Department of Fish and Game.

Hamilton, W. J. III. 1998. Tricolored Blackbird itinerant breeding in California. The Condor 100:218-226.

Hamilton, W. J. III. 2000. Tricolored Blackbird Status Report 2000. Report prepared for the U. S. Fish and Wildlife Service, Portland, Oregon.

Hamilton, W. J. III and R. J. Meese, 2006. Habitat and population characteristics of Tricolored Blackbird colonies in California. Final Report to California Department of Fish and Game.

Hamilton, W. J. III, L. Cook and R. Grey. 1995. Tricolored Blackbird Project 1994. Report prepared for the U. S. Fish and Wildlife Service, Portland, Oregon, and California Department of Fish and Game, Sacramento, California.

Hamilton, W. J. III, L. Cook and K. Hunting. 1999. Tricolored Blackbird 1999 status report. Report prepared for the U. S. Fish and Wildlife Service, Portland, Oregon, and California Department of Fish and Game, Sacramento, California.

Heermann, A. L. 1859. Report upon birds collected on the survey. In E. G. Beckwith, ed. Reports of Explorations and surveys 1953–6, vol x. Washington, D. C.: Beverley Tucker, Printer, 1855–1859, US War Department.

Hosea, R. C. 1986. A population census of the Tricolored Blackbird, *Agelaius tricolor* (Audubon), in four counties in the northern Central Valley of California. Master's thesis, Calif. State Univ., Sacramento.

Humple, D. and R. Churchwell. 2002. Tricolored Blackbird Survey Report 2001: Draft. Prepared for U. S. Fish and Wildlife Service, April 2002.

Kelsey, R. 2008. Results of the Tricolored Blackbird 2008 Census. Audubon California.

Kyle, K, and R. Kelsey. 2011. Results of the 2011 Tricolored Blackbird Statewide Survey. Audubon California.

McCabe, T. T. 1932. Wholesale poison for the Red‐wings. The Condor 34:49-50.

Meese, R. J. 2006. Settlement and Breeding Colony Characteristics of Tricolored Blackbirds in 2006 in the Central Valley of California. Final Report to U.S. Fish and Wildlife Service and Audubon California.

Meese, R. J. 2007. Settlement, Breeding, Productivity, and Color-banding of Tricolored Blackbirds in 2007 in the Central Valley of California. Final Report to U.S. Fish and Wildlife Service and Audubon California.

Meese, R. J. 2008. Detection, Monitoring, and Fates of Tricolored Blackbird Colonies in 2008 in the Central Valley of California. Final Report to California Department of Fish and Game and U.S. Fish and Wildlife Service.

Meese, R. J. 2009a. Detection, Monitoring, and Fates of Tricolored Blackbird Colonies in 2009 in the Central Valley of California. Final Report to California Department of Fish and Game and U.S. Fish and Wildlife Service.

Meese, R. J. 2009b. Contribution of the Conservation of Silage Colonies to Tricolored Blackbird Conservation from 2005-2009. Final Report to U.S. Fish and Wildlife Service.

Meese, R. J. 2010. Detection, Monitoring, and Fates of Tricolored Blackbird Colonies in 2010 in the Central Valley of California. Final Report to California Department of Fish and Game and U.S. Fish and Wildlife Service.

Meese, R. J. 2011. Reproductive Success of Tricolored Blackbird Colonies in 2011 in the Central Valley of California. Final Report to California Department of Fish and Game.

Meese, R.J. 2013. Chronic low reproductive success of the colonial Tricolored Blackbird from 2006 to 2011. Western Birds 44: 98-113.

Meese, R. J. 2014. Results of the 2014 Tricolored Blackbird Statewide Survey. U.C. Davis.

Meese, R. J., E. C. Beedy and W. J. Hamilton, III. 2014. Tricolored Blackbird (Agelaius tricolor), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/423 doi:10.2173/bna.423

Neff, J. A. 1937. Nesting distribution of the Tri-colored Red-wing. The Condor 39:61-81.

Neff, J. A. 1942. Migration of the Tri-colored Red-wing in central California. The Condor 44:45-53.

Orians, G. H. 1960. Autumnal breeding in the Tricolored Blackbird. The Auk 77:379-398.

Orians, G. H. 1961a. The Ecology of Blackbird (*Agelaius*) social systems. Ecological Monographs 31:285-312.

Orians, G. H. 1961b. The Social stimulation within blackbird colonies. The Condor 63:330-337.

Orians, G. H. and G. Collier. 1962. Competition and blackbird social systems. Evolution 17:449-459.

Payne, R. 1969. Breeding seasons and reproductive physiology of Tricolored Blackbirds and Rewinged Blackbirds. University of California Publications in Zoology, Volume 90. University of California Press, Berkeley, California.

Picman, J., Milkes Maynard, L. and Leptich, M. 1993. Patterns of predation on passerine nests in marshes: effects of water depth and distance from edge. The Auk 110:89-94.

Shuford, W. D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Stephens, P. A. and Sutherland, W. J. 1999. Consequences of the Allee effect for behavior, ecology and conservation. Trends in Ecology and Evolution 14:401-405.

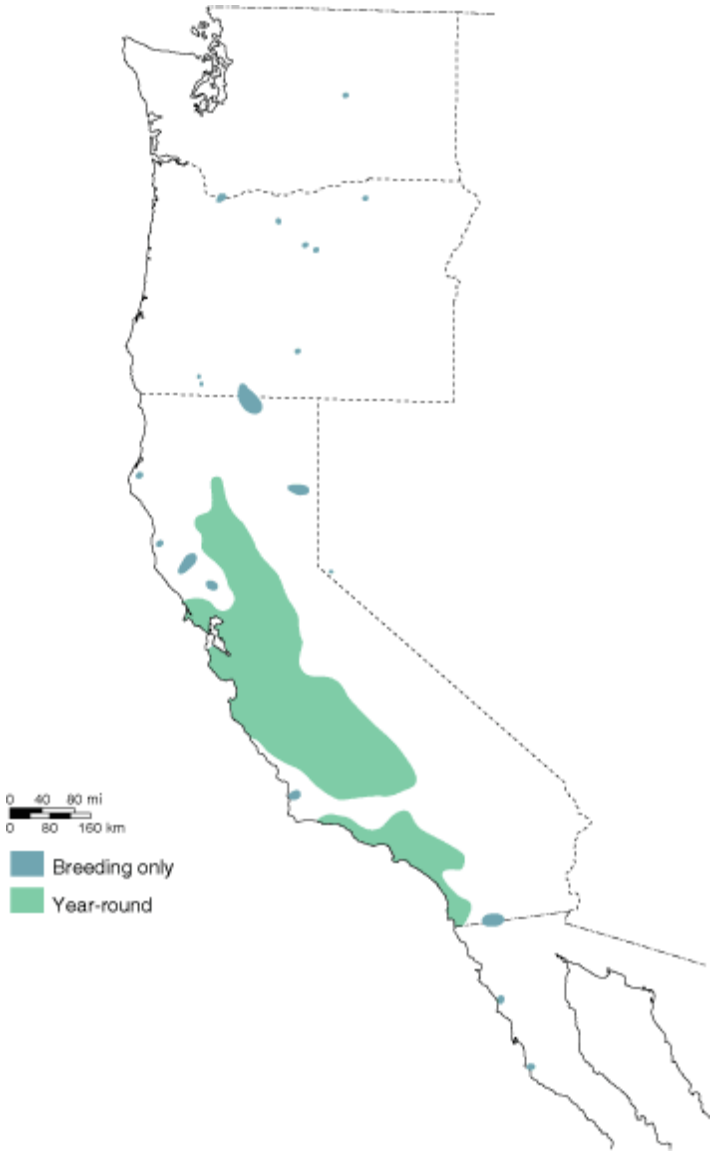
Tricolored Blackbird Working Group. 2007. Conservation Plan for the Tricolored Blackbird (*Agelaius tricolor)*. Susan Kester (ed.). Sustainable Conservation. San Francisco, CA.

Unitt, P. 2004. San Diego County bird atlas. Proceedings of the San Diego Society of Natural History 39.

U. S. Fish and Wildlife Service (USFWS). 2000. Strategy for Exit from the Dilemma of Tricolored Blackbirds Nesting in Dairy Silage Fields in the San Joaquin Valley, California.

Weintraub, K. A and T. L. George. 2012. Nest Survival of Tricolored Blackbirds in California's San Joaquin Valley 2011 Annual Report to U. S. Fish and Wildlife Service.

11. Detailed Distribution Map



Distribution of Tricolored Blackbirds (Meese et al. 2014)

2015 Addendum to
Petition to List the Tricolored Blackbird (*Agelaius tricolor*) as Endangered under the California Endangered Species Act and Request for Emergency Action to Protect the Species

In response to the Center for Biological Diversity's 2014 petition, the Commission provided Emergency Listing Protections for the species from December 29, 2014 through June 30, 2015. With the expiration of those emergency protections, Tricolored Blackbird remains at significant threat of extinction.

Two new relevant studies are attached hereto as an addendum to the petition and incorporated by reference. Holyoak et al. 2014 analyzed declines in breeding success of the Tricolored Blackbird and Meese 2015 reviews and evaluates efforts to document the status of the Tricolored Blackbird since 1931.

Holyoak M., Meese R.J., Graves E.E. 2014. Combining Site Occupancy, Breeding Population Sizes and Reproductive Success to Calculate Time-Averaged Reproductive Output of Different Habitat Types: An Application to Tricolored Blackbirds. PLoS ONE 9(5): e96980. doi:10.1371/journal.pone.0096980

Meese R.J. 2015. Efforts to Assess the Status of the Tricolored Blackbird from 1931 to 2014. Central Valley Bird Club Bulletin. No. 2-4. Special Issue on the Status, Ecology, and Conservation of the Tricolored Blackbird. 17:37-50.

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Combining Site Occupancy, Breeding Population Sizes and Reproductive Success to Calculate Time-Averaged Reproductive Output of Different Habitat Types: An Application to Tricolored Blackbirds

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Abstract

In metapopulations in which habitat patches vary in quality and occupancy it can be complicated to calculate the net time-averaged contribution to reproduction of particular populations. Surprisingly, few indices have been proposed for this purpose. We combined occupancy, abundance, frequency of occurrence, and reproductive success to determine the net value of different sites through time and applied this method to a bird of conservation concern. The Tricolored Blackbird (*Agelaius tricolor*) has experienced large population declines, is the most colonial songbird in North America, is largely confined to California, and breeds itinerantly in multiple habitat types. It has had chronically low reproductive success in recent years. Although young produced per nest have previously been compared across habitats, no study has simultaneously considered site occupancy and reproductive success. Combining occupancy, abundance, frequency of occurrence, reproductive success and nest failure rate we found that that large colonies in grain fields fail frequently because of nest destruction due to harvest prior to fledging. Consequently, net time-averaged reproductive output is low compared to colonies in non-native Himalayan blackberry or thistles, and native stinging nettles. Cattail marshes have intermediate reproductive output, but their reproductive output might be improved by active management. Harvest of grain-field colonies necessitates either promoting delay of harvest or creating alternative, more secure nesting habitats. Stinging nettle and marsh colonies offer the main potential sources for restoration or native habitat creation. From 2005–2011 breeding site occupancy declined 3x faster than new breeding colonies were formed, indicating a rapid decline in occupancy. Total abundance showed a similar decline. Causes of variation in the value for reproduction of nesting substrates and factors behind continuing population declines merit urgent investigation. The method we employ should be useful in other metapopulation studies for calculating time-averaged reproductive output for different sites.

Citation: Holyoak M, Meese RJ, Graves EE (2014) Combining Site Occupancy, Breeding Population Sizes and Reproductive Success to Calculate Time-Averaged Reproductive Output of Different Habitat Types: An Application to Tricolored Blackbirds. PLoS ONE 9(5): e96980. doi:10.1371/journal.pone.0096980

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Competing Interests: The authors have declared that no competing interests exist.

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Introduction

A common conservation aim is to understand the relative roles of altered habitat characteristics versus fragmentation in population declines. Armstrong [1] stated this as the need to distinguish between the habitat and metapopulation paradigms. Specifically, that we needed to identify how population declines and dynamics are influenced by habitat characteristics (e.g., in species' distribution or niche models [2]), and the metapopulation processes of extinction and colonization [3,4]). Here we tackle the question of how to evaluate the contribution to long-term regional dynamics of breeding populations in habitat patches of different types when patches do not remain continuously occupied. Our focus is on breeding populations because our study species, the Tricolored Blackbird (*Agelaius tricolor*), is widely dispersed when it is not breeding, and consequently it is difficult to census outside of the breeding season. Spatial concentration of numbers during the breeding season is also observed in a variety of organisms, including various land birds, pond-breeding amphibians and aquatic insects. Additionally in our study species, Tricolored Blackbirds, low breeding success has been highlighted as a problem during 2006–2011 [5]. We calculate a time-averaged index of reproduction that we believe will be of interest to those studying metapopulations of other organisms that do not use the same sites in all breeding seasons.

The Tricolored Blackbird, a medium-sized songbird that is geographically restricted to California and small portions of adjacent states in the western United States, experienced declines in total abundance on the order of 89% from the 1930's to 1980's [6] and average colony size declines of over 60% between the 1930's and 1970's [7]. The species receives legal protection under the Migratory Bird Treaty Act and is classified as a bird species of conservation concern by the US Fish and Wildlife Service [8], and California Species of Special Concern since 1990 [9]. Additionally,

it is treated as a sensitive species by the Bureau of Land Management since 1999 [10], and it has been listed on the IUCN red list of endangered species since 2006 [11]. The Tricolored Blackbird is the most colonial extant songbird in North America [12], and historically breeding colonies consisting of up to 200000 nests were recorded [13]. The species historically nested primarily in cattail (*Typha* spp.) or tule (*Schoenoplectus* spp.) marshes, but was observed to nest in a wide variety of wetland and upland habitats [13]. From the 1970's onwards the species was increasingly recorded nesting in invasive Himalayan blackberry (*Rubus armeniacus* [9], and silage crops, especially "triticale" [14,15]. The largest recently recorded colonies have mostly occurred in triticale, a wheat [*Triticum*] x rye [*Secale*] hybrid grain grown for dairy cows, and are at risk of being destroyed when the fields are harvested before the young have fledged [5,14,15]. Recently, a federally funded program has paid farmers to delay the harvest of triticale fields occupied by breeding tricolors until after the young have fledged and left the area [16]; however, participation in this program is voluntary and not all eligible farmers participate. We previously showed that long-term (1930's to 1980's) trends in the average size of breeding colonies (numbers of birds) varied both among geographical regions and nesting substrates [7]. Cook and Toft [15] also reported that reproductive success (number of 7–9 day old chicks per nest) was greater for colonies nesting in Himalayan blackberry than for those in native cattail or tule marshes. Additionally, silage colonies had low average reproductive success because of harvest before young birds fledged [15]. Considering only non-harvested colonies, Cook and Toft [15] found that silage colonies produced more offspring per nest than cattail or tule marsh colonies. Meese [5] found no differences in reproductive success among nesting substrate types in a sample of 47 colonies. Weintraub [17] also examined whether reproductive success of colonies in silage differed from that in marsh colonies as part of a Master's thesis study, but found no differences for the 14 colonies studied. Overall, while there have been several studies of population trends (or size) and some studies of reproductive success, no study has simultaneously considered occupancy of sites and reproductive success to determine the time-averaged net value of different habitats for conservation and management.

The occupancy of breeding habitat areas, the sizes of breeding populations, and the reproductive success of breeding efforts are often readily documented, but demographic data for the rest of the life cycle are much harder to obtain. This is especially the case for species that are more widely dispersed in the non-breeding season than when breeding, such as many imperiled birds, amphibians, and aquatic insects. We often lack a good understanding of both the dispersal between populations and survival outside of the breeding season. This arises because dispersal and survival are difficult to measure (e.g., [18,19,20]). These data gaps are typically found in imperiled species where low abundances or restricted distribution may limit study or present ethical considerations. Consequently, conservation biologists have adopted a variety of techniques to look at habitat effects on population dynamics.

One common method is to calculate finite growth rates and apply a source-sink approach [21,22]. However, without information about movement there is a risk of confusing habitat-specific demography with movement [23]. A source-sink approach can also be applied by using available information for reproduction in different habitats and assuming that survival has a constant value [24] and that movement does not confound measurement of finite growth rates. Such additional assumptions (about survival and dispersal) are frequently masked and increase uncertainty in the predictions made about population status. More directly, data on reproductive success is often used to identify ecological traps (e.g., [25]), although such an approach usually ignores data on the occupancy and population size in different habitats (e.g., reviewed by [26]). Of course there are studies of both source-sink dynamics and ecological traps for cases where more complete year-round data are available and movement was quantified, but this is often not the case for imperiled species. We here use a simple parsimonious method for calculating the net value for reproduction of sites in different breeding habitats by combining occupancy, abundance and reproductive data. We believe that our time-averaging approach will be useful for other species for which occupancy, abundance, and reproductive success data are available but where survival or movement data are lacking. Our approach has a more direct connection to existing data and avoids using additional assumptions to make conservation and management recommendations.

We evaluated the net value of typical sites in different breeding habitats for reproduction of Tricolored Blackbirds. Our focus was on the nesting substrate rather than the habitat surrounding nesting sites, which is used for foraging [14], and within which insect abundance at foraging locations is related to reproductive success [5]. We evaluated the net value of different nesting habitats for production of offspring by looking at the following questions: (1) Does frequency of occupancy, site extinction, or site recolonization vary by nesting substrate? (2) Does the duration of occupancy vary by nesting substrate? (3) Does reproductive success vary by nesting substrate? (4) Statewide, how frequently are breeding colonies recorded in different substrates, what are their sizes, and have their frequencies and sizes changed in recent decades? (5) Is it useful to combine the above information to obtain an overall idea of the net value of colonies in different nesting substrates in a typical year? Answering these questions allows us to provide new conservation recommendations for Tricolored Blackbirds and a methodology that is likely of broader interest to those studying the value of different breeding habitats for imperiled species.

Methods

Ethics

No animals were handled as a part of this study and no permits were required. The study species is not currently protected by the state or federal Endangered Species Acts which would require such permits. Some study sites are privately owned and the landowners of these sites provided access or they were viewed from nearby public rights of way without accessing the land.

Data sources and availability

We use data from three different sources that are all publicly available:

Dataset 1. For colony occupancy and reproductive success from 2006 to 2011 we used data collected by RJM together with 2005 data collected jointly by RJM and William J. Hamilton, III. These data are already available through the public Tricolored Blackbird Portal (http://tricolor.ice.ucdavis.edu) and the explicit dataset will be made available and archived through *Dryad* (http://datadryad.org/) when this manuscript is published. This dataset includes 26 distinct sites and a total of 45 records for which reproductive success values were estimated [5].

Dataset 2. For a broader view of reproductive success we used data collected during extensive fieldwork by the late William J. Hamilton, III (WJH) between 1992 and 2005 (a few colonies were sampled jointly with RJM in 2005). These data are available in a public archive, the Knowledge Network for Biocomplexity [27]. WJH's data represent the most extensive source of information on

reproductive success available for this species: it includes assessment of 128 distinct breeding sites containing colonies, and 191 records including repeated annual measurements at the same colonies, during 1992-2005. There were 2–30 colonies per year. These data up to 2000 are also discussed by Hamilton [28] but were not then formally analyzed or summarized. We have not included WJH as a coauthor since we have no way of knowing whether he would have agreed with the messages in our paper and instead directly cite the data source [27]. We did not use this dataset for occupancy analyses because it is not always clear which colonies were checked when reproductive success data were not collected.

Dataset 3. We used statewide survey data to obtain a broader view of the frequency of colonies in different breeding substrates and the size of such colonies. These data were used by Graves et al. [7] and are available in the public *Dryad* data archive ([29], file "Graves_et_al_data1.csv").

Empirical evaluations of reproductive success

Fieldwork generally began in late March in the southern San Joaquin Valley, where breeding commences earliest in the Central Valley, and progressed to the Sacramento Valley as the season progressed and birds move to breed again [30]. A full description of field methods are given by Meese [5], and these reflect general protocols as used by WJH. For example, the number of breeding birds in a colony was estimated either visually at the time of nesting and/or by nest sampling following the breeding season. Nest numbers were multiplied by 1.5 to estimate the number of breeding birds, which reflects that on average each male nests with two females [14]. If visual estimates of the numbers of breeding birds differed from estimates derived from direct counts of nests, the estimate derived from the direct count of nests was used because it was thought to be more accurate.

Analyses of Occupancy, Cessation of Use, Colonization and Survival of Breeding Colonies

Breeding colonies can be treated in analogous ways to populations within a metapopulation [3] with rates of patch occupancy resulting from extinction and colonization. However, because the breeding birds using colonies do not in most cases die, we avoid referring to extinction of colonies and instead refer to "cessation of use" for breeding each year. It should however be noted that in metapopulations when a local population experiences an extinction the individuals may also have moved to another habitat patch, so the metapopulation analogy is quite strong. Analyses in this section used occupancy information from Dataset 1.

We scored nesting sites as "occupied" when birds were present and breeding, and "unoccupied" when sites were visited but breeding birds were not found at any point during the annual monitoring period (the species' breeding season); hence sites with no information were not recorded as either unoccupied or occupied. Occupancy was analyzed using linear mixed effects models (using *lmer* in the *lme4* package in *R* [31]) with a logit link function and binomial error distribution, which are appropriate for binary data (occupied or not). In this analysis and all similar analyses, p-values ("pMCMC") were calculated using Markov-chain Monte Carlo sampling using the function pvals.fnc from R library language [32]. Models used year as a random factor to account for repeated measures in the error structure (we also investigated using site identity as a random factor but model fit was not improved, as measured using AICc, and results were similar). We excluded substrates that had less than five total records because the sample sizes were too small to provide reliable estimates of occupancy; these included colonies situated in *Arundo donax*, buttonbush (*Cephalanthus occidentalis*), mesquite (*Prosopis* sp.), and oats (*Avena sativa*). Sample sizes for included substrates are given as the numbers above the bars in Figure 1A. We attempted to include models with the number of breeding birds as a covariate (including interactions with breeding substrate type), or the same for the area of occupied habitat prior to extinction, but neither improved model fit and we therefore do not report the results further. Because preliminary analyses indicated substantial variation in occupancy from year to year we included year as a fixed effect in the model (in addition to as a random effect to allow for repeated measures; removing the random effect of year also did not produce substantial changes in the fixed effect for year, indicating that temporal autocorrelation was weak).

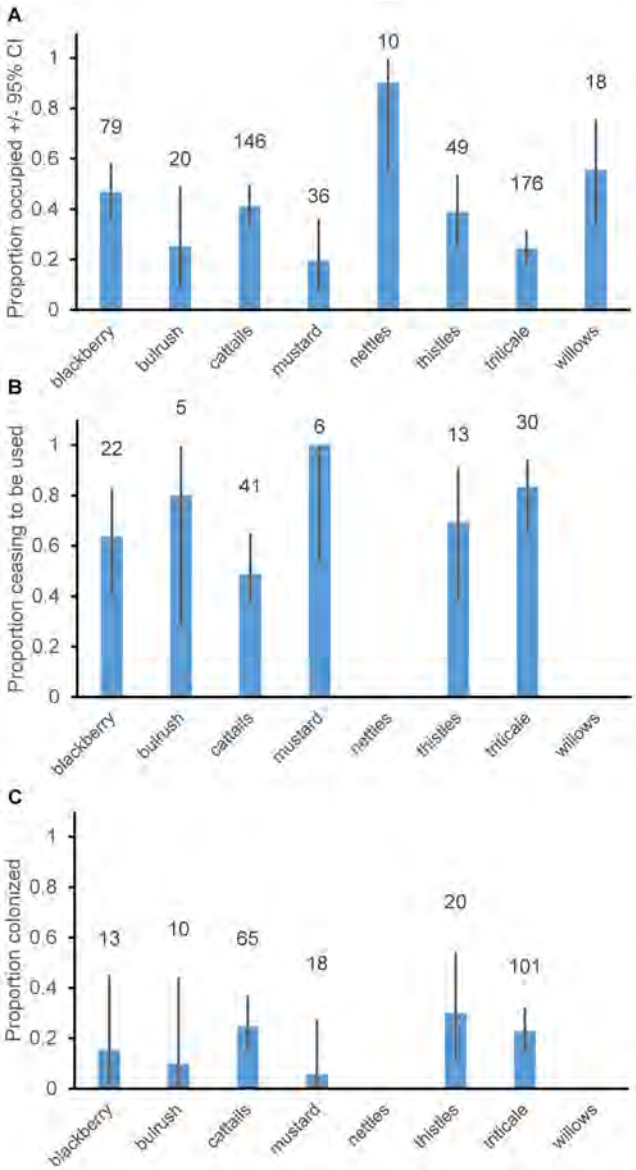

Figure 1. Mean proportion of breeding sites A. occupied, B. showing extinction or C. colonization per year. Numbers above bars indicate sample sizes. Error bars show 95% confidence intervals from a binomial distribution. Nettles and willows are not shown in b and c because sample sizes were less than 5.
doi:10.1371/journal.pone.0096980.g001

Table 1. ANOVA-style results of linear mixed effects models testing for differences in occupancy.

Fixed Effects:	SS	DF	MS	F	p	h^2
Substrate	8.52	7	1.22	5.79	0.001	0.07
Year	4.33	6		38.46	0.003	0.04
Error	109.55	520	0.21			

The whole model adjusted R^2-value was 11%. Random effects were: Year (Intercept) variance = 0.11423, standard deviation = 0.33798, from 534 observations in 7 groups (years). Effect size is given as the proportion of variance explained by explanatory variables, partial eta-squared (h^2) = (SS_{effect})/(SS_{effect}+SS_{error}).
doi:10.1371/journal.pone.0096980.t001

A "cessation of use" event was recorded as occurring when a site was occupied by breeding birds in year *t*-1 and was not occupied in year *t*, which could have occurred either because the habitat became unsuitable (e.g., many triticale fields) or because the habitat was present and suitable, but birds no longer used it for breeding. Cessations of use were recorded as possible when a site was occupied in year *t*-1 and was monitored for nesting birds in year *t*; this procedure avoided censoring of the data. For the probability of cessation-of-use analyses we used linear mixed effects models in the same way as for occupancy listed above including covariates and year as a fixed effect. Only nesting substrate improved model fit based on delta AIC values and for brevity we do not report the factors and covariates that did not improve model fit. We included nesting substrates if there were at least 5 possible extinctions within each (sample sizes in Figure 1B), and this restriction resulted in exclusion of *Arundo*, bulrush, buttonbush, mesquite, nettles, oats, and willow substrates.

A "colonization" was recorded for sites from 2006 onwards if a site was unoccupied in year *t*-1 and became occupied in the current year *t*. Our data represent a mix of colonizations of sites that were likely unoccupied during our study and recolonizations of sites that had experienced cessations of use during our study period. Analysis was conducted in the same way as for occupancy and cessations of use, and sample sizes for included substrates are reported in Figure 1C.

We also analyzed for how many years colonies remained occupied in common breeding substrates (blackberry, cattails, thistle and triticale), and refer to this as "colony longevity." (We use the term as a shorthand while recognizing that colonies may relocate rather than dying, hence colony longevity represents the duration of occupancy of a site.) The analysis was formerly a survival analysis using the *survreg* function from library *Survival* in *R* [33]. Preliminary analyses showed that parametric survival analyses were more informative than non-parametric (Cox's proportional hazards) analyses, and that models with a Weibull hazard function (describing instantaneous risk of death) were a significantly better fit to the data than those with an exponential hazard function. The analysis recognized that data are censored both because some colonies remained occupied by breeding birds during the breeding seasons throughout the study period and we do not know when some sites were colonized.

Analyses of Reproductive Success

Datasets 1 and 2 were used to assess reproductive success (RS) of colonies. RS was defined as the number of chicks alive per nest at c. 7–9 days after hatching of the first egg. RS was estimated either by visual estimates or by sampling. Visual estimates of RS were derived from the estimates of the number of breeding birds obtained during monitoring and the number of fledglings observed at the end of the breeding season. Because one male breeds, on average, with two females [14], each two nests have three birds

Table 2. Parameter values from linear mixed effects models testing for differences in occupancy.

Parameter type	Group	Parameter	SE	z	p
Mean	cattails, 2005	0.058	0.30	0.19	0.85
difference in mean	mustard	-1.11	0.46	−2.40	0.02
difference in mean	blackberry	0.34	0.29	1.16	0.25
difference in mean	bulrush	−0.78	0.55	−1.42	0.16
difference in mean	nettles	2.98	1.08	2.74	0.006
difference in mean	thistle	−0.02	0.35	−0.06	0.95
difference in mean	triticale	−0.82	0.25	−3.32	0.001
difference in mean	willow	0.69	0.53	1.31	0.19
difference in mean	2006	−0.44	0.38	−1.17	0.24
difference in mean	2007	−0.37	0.39	−0.96	0.34
difference in mean	2008	0.12	0.35	0.34	0.73
difference in mean	2009	−0.34	0.36	−0.96	0.34
difference in mean	2010	−0.48	0.38	−1.27	0.20
difference in mean	2011	−1.23	0.36	−3.46	0.001

The mean value of logit-transformed occupancy is given for cattails in 2005, and then other rows of the table give the difference (in logit-transformed mean occupancy) from this value for the groups indicated.
doi:10.1371/journal.pone.0096980.t002

Table 3. ANOVA-style results of linear mixed effects models testing for differences in the proportion of colonized sites where occupancy for breeding ceased per year.

Fixed Effects:	SS	DF	MS	F	P	h^2
Substrate	2.93	5	0.59	2.82	0.019	0.11
Error	23.07	111	0.21			

Random effects were: Year (Intercept) variance = 3.8×10^{-13}, standard deviation = 6.2×10^{-7}, from 117 observations in 6 groups (years). Effect size is given as the proportion of variance explained by explanatory variables, partial eta-squared (h^2) = (SS_{effect})/(SS_{effect}+SS_{error}).
doi:10.1371/journal.pone.0096980.t003

associated with them, so the product of the number of breeding birds multiplied by 2/3 (0.67) provides an estimate of the number of nests constructed. The number of young fledged divided by the estimate of the number of nests constructed yields an estimate of the number of young fledged per nest (RS).

Average reproductive success (RS) combines the numbers of offspring in successful nests with zero values that come from failed nests. Nests may fail entirely because of physical conditions (destruction during high winds, extreme temperatures, etc.) as well as predation [9]. It is therefore useful to separately consider rates of nest failure from reproduction in nests that were successful. To this end Hamilton calculated the reproductive rate for the subset of nests that were successful up to 7–9 days old, termed RSS (reproductive success of successful nests).

Because of differences in timing and observers we initially analyzed the two datasets separately. However, both visual plots and individual *lmer* models failed to find differences between the datasets, and so here we report a combined analysis. We used linear mixed effects models with colony identity as a random factor to allow for repeated measurements from individual colonies. Year, substrate and collector identity (Hamilton or RJM) were factors with fixed effects, and we also assessed year by substrate interactions but found no significant ($P<0.1$) effects for such interactions and do not report these results further. Collector identity (and interactions with other factors) also produced an increase in the AICc value of the model indicating that a simpler model without this variable was preferred and we therefore do not report this effect further.

Analyses of Colonies in Different Substrates and Colony Size

We used Dataset 3 and specifically records from 1980 through 2011. We summarized the proportion of records in each breeding substrate per decade and average colony size (number of birds ln-transformed) by decade (1980–1989, 1990–1999, 2000–2009, and 2010–11). Recent colony sizes were calculated using ln(birds) per colony from 2000 to 2011 inclusive.

Recent colony sizes and reproductive success (RS) estimates from either Datasets 1 or 2 were used to estimate the total predicted production of chicks (to day 8) for average size colonies in each of the common substrates. To give an idea of variation in chick production per spring breeding per colony in each substrate we calculated a standard deviation: Standard deviations of the numbers of chicks produced were calculated as $x.\sqrt{(s_1^2+s_2^2)}$, where x is the estimated number of chicks produced for a particular substrate, s_1 is the proportional standard deviation for colony size (standard deviation of colony size/mean colony size), and s_2 is the proportional standard deviation for reproductive success in the same substrate. Lastly, to allow for the fact that not all sites are occupied in all years we multiplied chick production by occupancy to calculate chick production across an average site of each substrate. A measure of variation could not easily be calculated for this measure but the standard deviation would likely encompass zero values (no chicks produced) for all substrates because variation in RS, colony size, and occupancy are all relatively large.

Results

Occupancy, Cessation of Use, Colonization and Longevity of Colonies

Average proportional occupancy of breeding sites varied widely across sites and substrates (Figure 1A). Average breeding site occupancy was significantly lower for triticale and mustard growing as a weed within grain fields, than for other breeding substrates with sufficient sample sizes (cattails, blackberry, bulrush, nettles, thistle and willow). Cattails, blackberry, bulrush, nettles, thistle and willow were similar (at $P>0.1$) to one-another in their levels of site occupancy (Figure 1A for differences and Tables 1, 2

Table 4. Parameter values from linear mixed effects models testing for differences in the proportion of colonized sites where occupancy for breeding ceased per year.

Parameter type	Group	Parameter	SE	z	p
Mean	cattails	−0.049	0.31	−0.16	0.88
difference in mean	mustard	16.6	1615	0.01	0.99
difference in mean	blackberry	0.61	0.54	1.12	0.26
difference in mean	bulrush	1.44	1.16	1.24	0.22
difference in mean	thistle	0.86	0.68	1.27	0.20
difference in mean	triticale	1.66	0.58	2.85	0.004

The mean value of logit-transformed proportion of sites with cessation of breeding is given for cattails, and then other rows of the table give the difference (in logit-transformed mean proportion) from this value for the groups indicated.
doi:10.1371/journal.pone.0096980.t004

Table 5. ANOVA-style results of linear mixed effects models testing for differences in the proportion of vacant sites with colonizations per year.

Fixed Effects:	SS	DF	MS	F	P	h^2
Substrate	0.86	5	0.17	1.01	0.41	0.02
Error	37.6	221	0.17			

Random effects were: Year (Intercept) variance = 0.004, standard deviation = 0.066, from 227 observations in 6 groups (years). Effect size is given as the proportion of variance explained by explanatory variables, partial eta-squared (h^2) = (SS_{effect})/(SS_{effect}+SS_{error}).
doi:10.1371/journal.pone.0096980.t005

for statistics). Nettle sites had higher than average occupancy, and showed significantly higher occupancy than other substrates except willows (Figure 1A and Tables 1, 2).

The rate of cessation of breeding at sites that were used for breeding in previous years was generally frequent, with an average of 66% of sites per year ceasing to be occupied by breeding birds. This rate was significantly higher for triticale fields (83% of sites per year) than for cattail sites (49%; Figure 1B; Tables 3, 4). Data on cessation of use of breeding sites were sparse for blackberry, bulrush, mustard, nettle and willow sites (Figure 1B), which might account for a lack of any statistical differences (at $P<0.1$) in the frequency of cessation of use of sites in these substrates compared to other substrates. Although with a small sample size it is noteworthy that like triticale sites, mustard sites showed a high average rate of extinction (100%). This likely reflects either that annual crops were not planted in the same place each year or that weeds in such fields were removed by herbicide application, forcing extinction through a lack of habitat in the form of both the crop itself and mustard as a weed within such crops.

For the six substrates with calculable rates at which they ceased to be used for breeding, these rates were strongly negatively correlated with occupancy (Pearson's $r = -0.87$, $P<0.025$ in a 1-tailed test). The overall pattern is that the two temporary habitats, triticale and mustard, showed lower occupancy (Figure 1A) and higher observed rates of cessation of use (Figure 1B) than other types of breeding site. This likely reflects habitat loss either through herbicide use on weeds that Tricolored Blackbirds frequently nest in (e.g., mustard) or because of crop rotations. The two substrates for which rates of cessation of use could not be calculated (because $n<5$) were nettles and willows, both of which showed very high occupancy (Figure 1A) and thus experienced very few cessations of use.

Colonization rates were generally low, with only 21.1% of sites per year being colonized each year. *LMER* models showed no significant difference (at $P<0.1$) for any substrate or overall (Tables 5, 6). Across the full suite of sites for which we had occupancy data the low colonization rates (21%/year) relative to cessation rates (66% sites/year) could either reflect a declining (nonequilibrium) metapopulation or that colonizations are under-recorded.

Analysis of the numbers of years for which sites remained in use by breeding colonies using survival analysis revealed that the slope of survivorship versus age of colonies declined with colony age (scale parameter = 0.436, Table 7). Hence colonies that were occupied for more than 1 year were less likely to cease being occupied during their second year than their first year (Figure 2). Continued use of sites in cattail marshes was more likely than for triticale sites (Figure 2, Table 7). This accords with the high per year cessation-of-use rates of triticale colonies compared to cattail marsh colonies (Figure 1B, Tables 3, 4). Survivorship slope declining less sharply in older colonies can most clearly be seen in cattail colonies (Figure 2), whereas triticale colonies frequently ceased to be used after one year, and sample sizes were small because there were few uncensored records for blackberry and thistle colonies.

Reproductive Success

Reproductive success (RS) varied substantially among nesting substrates, and for habitats with at least 5 RS values substrate accounted for 59% of the variation in RS values (Tables 8, 9). Himalayan blackberry colonies had a greater average reproductive success than marshes, grain fields, and thistle habitats (Tables 8, 9; Figure 3A). The sample size for RS estimates from nettles was low (Figure 3A) and statistically there was no difference from other substrates (Tables 8, 9), but RS values were high and grouped together with blackberry. There were only 4 RS estimates from colonies in willows and the RS values were low and seemed similar to thistle, marsh and grain field colonies. The analysis reported in

Table 6. Parameter values from linear mixed effects models testing for differences in the proportion of vacant sites colonized per year.

Parameter type	Group	Parameter	SE	z	P
Mean	cattails	−1.12	0.29	−3.87	0.001
difference in mean	mustard	−1.72	1.07	−1.61	0.11
difference in mean	blackberry	−0.59	0.82	−0.71	0.48
difference in mean	Bulrush	−1.08	1.09	−0.99	0.32
difference in mean	Thistle	0.27	0.57	0.48	0.63
difference in mean	triticale	−0.10	0.37	−0.27	0.79

The mean value of logit-transformed proportion colonized is given for cattails, and then other rows of the table give the difference (in logit-transformed mean proportion colonized) from this value for the groups indicated.
doi:10.1371/journal.pone.0096980.t006

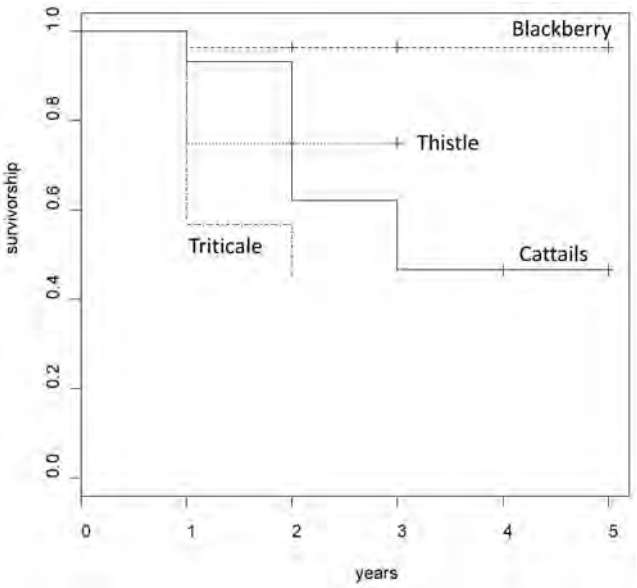

Figure 2. Survivorship for breeding colonies in different substrates. The vertical crosses (plus symbols) indicate that datapoints were constrained by censoring of the data. Note that for Blackberry there was only one non-censored event and so the survivorship values are limited by sample size and are likely not reliable.
doi:10.1371/journal.pone.0096980.g002

Tables 8, 9 did not find any significant ($P<0.1$) effects of observer (Hamilton or Meese) or year on RS values and so the above results represent a compilation of the datasets. Colony size (estimated number of birds) did not have any statistical effects on RS in the linear mixed effects models, nor did colony area (square meters) in the Meese data (and was not collected for the Hamilton data).

Reproductive success results in part from complete failure of nests, from sampled nests in which eggs were never laid, and in part from reduced numbers of chicks in nests that survive to the time of recording (day 7–9). Figure 3C shows that a low proportion of nests was successful at rearing young in marsh habitats compared to those in Himalayan blackberry and grain field sites. Stinging nettle sites appeared intermediate and variable (likely because of small sample sizes; Figure 3C). Interestingly nesting substrate accounted for only 15% of variance in RSS compared to the 54% in RS, indicating that nesting substrate had a more predictable effect on whether nests failed or succeeded in raising some chicks rather than on the numbers of chicks produced. As with RS, RSS was relatively high for Himalayan blackberry colonies (Tables 10, 11, Figure 3B). Grain fields had lower RSS than Himalayan blackberry colonies, and nettle colonies had higher RSS than Himalayan blackberry colonies (and grain fields; Tables 10, 11, Figure 3B). Marsh colonies had lower reproductive success than Himalayan blackberry colonies but significance was marginal (pMCMC = 0.056; Tables 10, 11), reflecting small sample size for RSS from marshes. RSS for marsh colonies was similar to that from grain field colonies (Figure 3B).

Frequencies of Colonies in Different Substrates and Colony Size

Figure 4A shows that colonies were most frequent in marsh habitats (cattails and bulrush) followed by blackberries and thistles. Records in grain fields (primarily triticale but also mustard within triticale) have grown steadily to represent 8.6% of colonies in 2010–2011. The proportion of records grew through time for both nettles (reaching 10.2% of records in 2010–11) and thistle (12.7% of records in 2010–11). Conversely the proportion of records in marsh habitats declined steadily through time (Figure 4A), from 51.7% in the 1980's to 33% in 2010–11. With the exception of thistle colonies, the average size (number of birds) of colonies in common substrates was smaller in 2010–11 than in previous decades (Figure 4B). The decline was most dramatic for grain crops (Figure 4B). For the period 2000 to 2011 inclusive, representing recent records (without putting too much emphasis on 2010–11) Figure 4C shows average colony sizes. Grain field colonies were by far the largest on average size, with a mean of 995 birds. Other colonies on average had 312 birds in blackberry, 290 for thistle (and milk thistle, *Silybum marianum*), 224 birds for nettle, 215 birds in marsh substrates and the few willow sites were smallest of all (135 birds).

Predictions of the numbers of chicks that would have been produced by average size colonies were in general highly variable, reflecting that both the RS estimates and colony size estimates were also variable. Putting together RS estimates and average (2000–2011) colony sizes leads to the prediction that blackberry and grain field colonies produced the most chicks on average (Figure 4D). This was followed by stinging nettle colonies and then thistle colonies (Figure 4D). Marsh sites produced smaller numbers of chicks on average but they were still about twice as productive as willow sites (Figure 4D). Incorporating occupancy into our analysis across the years shows that nettle sites were the most productive (with a mean of 221 chicks per site per year; Figure 4D) because they have high occupancy, followed by blackberry sites (174 chicks/site/year). (An average grain field in an average year produced 65 chicks, but this figure is not very relevant because grain fields are generally not conserved from year to year). Thistle sites produced an average of 44 birds/site/year, and surprisingly marsh sites produced an average of only 34 birds/sites/year reflecting that their occupancy was low. The few willow sites produced an average of 26 birds per year. Clearly conserving triticale (grain) fields when they are occupied is especially valuable and this is possible because the habitat is not permanent. Apart

Table 7. Results of parametric survival analysis for breeding colonies using a Weibull hazards function.

Parameter type	Group	Parameter	SE	z	p
Mean	Cattails	1.355	0.169	8.03	0.001
difference in mean	blackberry	0.582	0.476	1.22	0.21
difference in mean	Thistles	−0.334	0.301	−1.11	0.27
difference in mean	Triticale	−0.805	0.202	−3.99	0.001

The model was significantly preferred over an intercept-only model (Chi-squared = 22.44 with 3 degrees of freedom, $p<0.001$). Weibull scale parameter = 0.436. The mean value of survival is given for cattails, and then other rows of the table give the difference from this value for the groups indicated.
doi:10.1371/journal.pone.0096980.t007

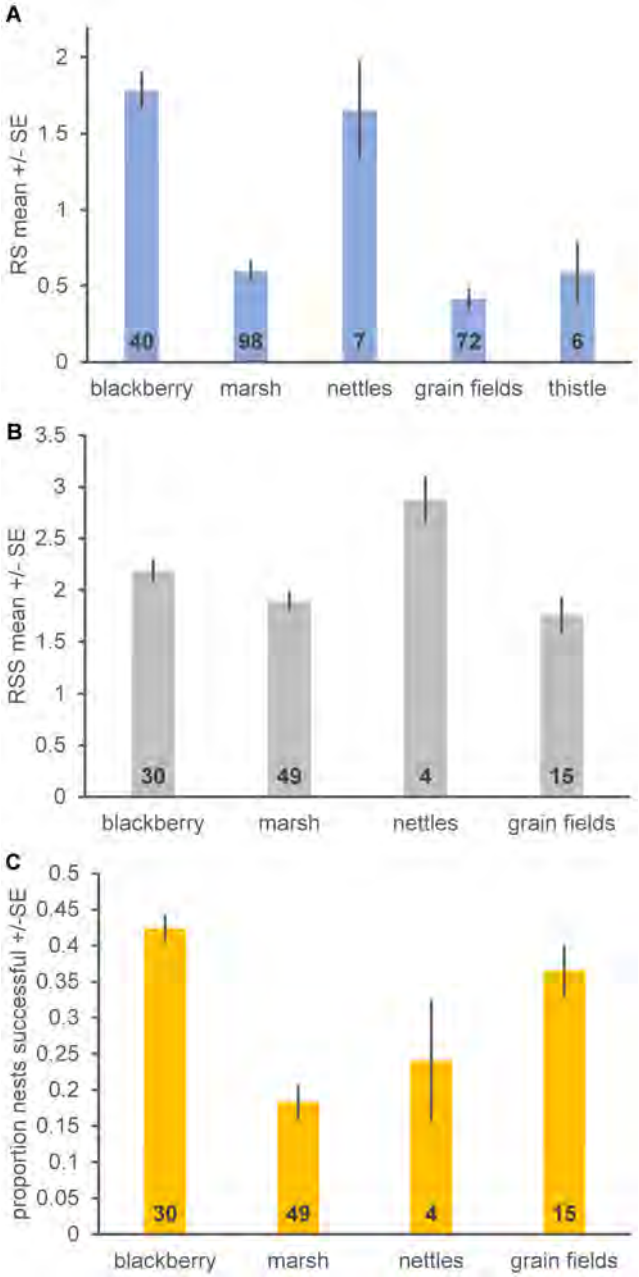

Figure 3. Reproductive success estimates for different breeding substrates. Estimates of **A**, reproductive success (RS), defined as the average number of chicks per nest at c. 8 days after the first egg hatched, **B** reproductive success of nests that were successful in rearing some young to day 8 (RSS), and **C** the proportion of nests that were successful in rearing some young to 7–9 days-old. Data in **A** come from Hamilton and RJM, and those in **B** and **C** come from Hamilton. Bars indicate standard errors. Numbers inside the base of bars indicate sample sizes (colonies x years, reflecting that these data include some repeated measurements).
doi:10.1371/journal.pone.0096980.g003

from this, considering occupancy leads to the prediction that average nettle sites are disproportionately important in chick production, as are blackberry sites, whereas thistle sites are less important and marsh sites are close to least important of the nesting substrates commonly used by Tricolored Blackbirds.

Discussion

Our analyses demonstrate a simple direct method for combining data on breeding site occupancy, breeding population sizes and reproductive success to calculate the net metric for the value of different habitats for reproduction. In our case because we had time series of occupancy values for each site, we calculated time-averaged values for reproductive success, but such calculations could also be made using one-time (snapshot) estimates of occupancy, abundance and reproduction. Such direct calculations avoid making additional assumptions about survival (outside of the breeding season) and dispersal that would be required to apply a source-sink model (e.g., [21]) to species where we have data only on breeding populations. We believe that such calculations would also benefit studies of other imperiled bird species, as well as other taxa where we can readily obtain data only on breeding success and breeding populations because individuals are more widely dispersed when not breeding. It is surprising that previously (as far as we can determine) such an index has not been described. Our calculations assume that there is turnover of occupancy in sites, as is usually the case in fragmented populations and metapopulations [20].

Calculation of the average number of offspring produced per site in an average year provides a method of assessing the conservation value of different breeding substrates (Figure 4D). An assessment of the components making up this number, like that in Table 12, helps us understand multiple components of the value of colonies, in particular breeding substrates, average breeding colony size, occupancy, nest failure rates, and numbers of young surviving to a given point in time. It is useful to consider each substrate in turn, which we do below from highest to lowest time-averaged total estimated number of chicks produced for an average colony.

We showed the following for Tricolored Blackbirds: (1) The frequency of occupancy and site extinction (cessation of use) varied substantially among different nesting substrates, but we found no differences in rates of site recolonization by nesting substrate. (2) As predicted by different frequencies of extinction (cessation of use), the duration of occupancy varied among nesting substrates. (3) Reproductive success showed substantial differences among nesting substrates. (4) Statewide average sizes of breeding colonies in different substrates and frequency of occurrence in different substrates (number of sites) changed through time. The pattern was generally with traditional marsh sites being used less frequently and supporting smaller colonies relative to colonies in native nettles and invasive thistles. Himalayan blackberry colonies are fairly typical in size, occupancy and longevity, and occur with a typical frequency. However Hamilton's data indicate that these colonies have a low failure rate and a higher reproductive success and lower rates of nest failure than other breeding substrates (Figure 3). Consequently long-term breeding productivity of an average blackberry site is expected to be high (Figure 4D). This accords with the findings of Cook and Toft [15], who recorded higher reproductive success for nests in Himalayan blackberry than in other substrates. Unfortunately, Himalayan blackberry is a high risk nonnative invasive species [34] and so it cannot be planted as a component of many federally-funded conservation programs and is frequently removed or attempted to be removed [35]. Himalayan blackberry is problematic because of competition with native plant species, reducing soil moisture and as a potential fire hazard [34]. As Cook and Toft [15] point out there is a conflict between this invasive weed and habitat for Tricolored Blackbirds.

Table 8. ANOVA-style results for linear mixed effects model analyses of reproductive success (RS) for both the Hamilton and Meese datasets.

Fixed Effects:	SS	DF	MS	F	p	h^2
Substrate	58.3	4	14.6	31.6	<0.001	0.59
Error	98.8	214	0.46			

The analysis was limited to breeding substrates with at least 5 measurements. Collector identity and year of collection were removed in model simplification and are not reported further. Effect size is given as the proportion of variance explained by explanatory variables, partial eta-squared (h^2) = (SS_{effect})/(SS_{effect}+SS_{error}). Random effects were: Colony identity (intercept) variance = 0.136, standard deviation = 0.368, from 219 observations in 138 groups (colony identities).
doi:10.1371/journal.pone.0096980.t008

Stinging nettle sites had high occupancy, longevity and reproductive success, and low rates of failure. Consequently nettle sites on average have high long-term breeding productivity (Figure 4D). Stinging nettle sites are however infrequent in occurrence (Figure 4A). Previous studies of reproductive success have lacked sufficient data to evaluate nettle sites. Stinging nettles are native and could be planted to provide breeding substrate for Tricolored Blackbirds but require a reliable supply of fresh water before and during the tricolor's breeding season so may be limited as a conservation tool due to water scarcity.

Marsh colonies (cattails and bulrushes) are the most frequent colony type yet are average compared to other colony types in all aspects measured, including occupancy, longevity, size, reproductive success, and rate of nest failure. The lack of any more positive aspects to marsh sites relative to other colony types makes the net breeding productivity of an average site relatively low (Figure 4D), and consequently their conservation value for Tricolored Blackbirds is more limited than blackberry and nettle sites. Cook and Toft [15] found similar results. Tricolored blackbirds prefer marshes containing vegetation that is young, lush, and rapidly growing, and will avoid older cattail and bulrush marshes containing much thatch and many lodged, dead stems. Hence, marsh management consisting of actions designed to remove old, dead stems and encourage regrowth of new vegetation is needed to promote the use of marsh habitats. In most cases, annual burning is required to rejuvenate marshes and to provide the conditions preferred by breeding tricolors. Water levels are also critical to reducing predator access, as raccoons (*Procyon lotor*), the tricolor's most serious predator in freshwater marshes, prefer to wade than to swim, and typically will not cross deep channels around the perimeter of cattail stands. To this end, the management of marshes for Tricolored Blackbirds by private duck clubs is a potentially important component of a comprehensive conservation strategy since Tricolored Blackbirds and a host of wetland-dependent species may benefit from the springtime availability of water.

Cereal grain fields, including triticale, wheat, and mustard (*Brassica* spp.) growing as a weed within such fields, have since the 1980's held by far the largest colonies (Figure 4C) but have relatively low net reproductive success because of a high rate of colony destruction through harvest (Table 12; Figures 3, 4D). Triticale colonies are frequently destroyed through harvest because the crop ripens before the young fledge and farmers harvest their fields when the seed heads reach maturity [14]. The fact that grain field occupancy is low (even replanted sites are frequently not reused; Figure 1A) and reproductive success is moderate means that a more dynamic conservation strategy is needed (and used) for cereal grain crops; temporary large breeding colonies in grain crops are best targeted when they are present. Cook and Toft [15] also found that colonies in triticale crops that were not harvested had relatively high reproductive success (mean RSS = 1.0), but not as high as the larger dataset used here (mean RSS = 1.76; Figure 3B). Overall the findings for triticale crops accord with both the recommendations of the Tricolored Blackbird Working Group [16] and the use of federal funds to encourage farmers to volunteer to delay harvest of triticale crops containing Tricolored Blackbird breeding colonies. It is not clear that a more permanent preservation of repeatedly planted sites are especially valuable for Tricolored Blackbird conservation because they have a low occupancy by breeding colonies through time. While we recognize that birds breeding in farmers' fields contains great inherent risks, given the relatively large number of birds that breed in grain fields adjacent to dairies and the absence of nearby alternative nesting substrates, it is essential as a core component of a comprehensive conservation strategy that all of these colonies be protected until the young have fledged. In the longer term, additional protected breeding substrates must be provided to give birds secure nesting habitats while ensuring the farmer's right to harvest his crop.

Table 9. Parameter values from linear mixed effects model analyses of reproductive success (RS) for both the Hamilton and Meese datasets.

Mean	Blackberry	1.78	0.12	15.2	0.0001
difference in mean	Marsh	−1.16	0.14	−8.25	0.0001
difference in mean	Nettles	−0.10	0.29	−0.34	0.66
difference in mean	Grain fields	−1.32	0.15	−8.46	0.0001
difference in mean	Thistle	−1.19	0.30	−3.93	0.0001

The analysis was limited to breeding substrates with at least 5 measurements. P-values ("pMCMC") were obtained using Markov-chain Monte Carlo sampling using the function pvals.fnc from R library language [32]. Collector identity and year of collection were removed in model simplification and are not reported further. The mean value of reproductive success is given for marsh habitat, and then other rows of the table give the difference from this value for the groups indicated.
doi:10.1371/journal.pone.0096980.t009

Table 10. ANOVA-style results for linear mixed effects model analyses of reproductive success of nests that were successful in rearing at least one chick to day 8 after first egg hatch (RSS) for the Hamilton dataset.

Fixed Effects:	SS	DF	MS	F	p	h^2
Substrate	5.53	3	1.84	4.56	0.005	0.15
Error	37.6	93	0.40			

The analysis was limited to breeding substrates with at least 5 measurements. Effect size is given as the proportion of variance explained by explanatory variables, partial eta-squared (h^2) = (SS_{effect})/(SS_{effect}+SS_{error}). Random effects were: Colony identity (intercept) variance = 0.006, standard deviation = 0.08, from 97 observations in 74 groups (colony identities).
doi:10.1371/journal.pone.0096980.t010

Colonies in thistle (e.g., bull thistle, *Cirsium vulgare* and milk thistle, *Silybum marianum*) substrates are relatively infrequent but are typical in occupancy, longevity, reproductive success (but data on failure rates are lacking), and size; consequently they have a typical net long-term productivity per site that is similar to that for grain fields despite the much smaller colony size in thistle sites. In one year (2010) the largest known colony was in milk thistle and had an estimated 83000 birds, which also illustrates that year-to-year variation is high. Again there is the problem that both of these plant species are invasive, although the impacts of milk thistle are limited [34]. Hence a conservation strategy preserving sites and maintaining vegetation type would likely be effective for thistle and milk thistle sites, but nettle substrate is both native and more valuable. Lastly, although data were sparse for willow sites, colonies were small and infrequent, making their net breeding productivity relatively low and consequently their conservation value also low.

A question that arises from our analyses is what is the mechanism (or mechanisms) by which nesting substrate influences reproductive success. Meese [5] showed a clear correlation between insect abundance (food) in habitats around nesting colonies and RS of those colonies in the same year, and only colonies with abundant insects were successful at rearing some young. Meese's analysis produced a correlation between ranked values of 0.74, and hence accounted for 54% of the variation in ranked RS values. It is possible that nesting substrates reflect neighborhood insect abundances, although other effects are also possible. In our analyses breeding substrate accounted for 54% of variation in RS (the same as insects in Meese's study [5]). More importantly, breeding substrate accounted for only 15% of variation in RSS (reproductive success of successful nests), which is consistent either with nesting substrate having greater predictive ability for whether nests succeed or fail, rather than in the number of chicks that produced, or with there being a threshold effect such that RS is more likely to become zero in certain breeding substrates. Beedy, and Beedy and Hamilton [9,14] report that the basic requirements for successful breeding are nesting substrates that are protected by virtue of being flooded, or possess thorny or spiny leaves or stems, and that occur in proximity to foraging habitats. Other studies have reported colony failures because of both predation (e.g., [5,9,17,36,37]), loss of standing water in marsh sites (which also may increase predation, (e.g., [38])) harvest of grain crops (above), and habitat destruction (e.g., [39])). Hence we expect that breeding substrate could have a direct role on colonies by reducing rates of predation. Large losses from colonies have been reported due to predation by Black-crowned Night-herons (*Nycticorax nycticorax*), Cattle Egrets (*Bubulcus ibis*), White-faced Ibis (*Plegadis chihi*), Common Ravens (*Corvus corax*), Coyotes (*Canis latrans*) [5,9,17,36,27]. Avian predators can access nests even in flooded habitats, whereas terrestrial predators can more easily access dried out marshes or terrestrial habitats. Thorny and spiny terrestrial habitats and nests sufficiently far above the ground (e.g., 3-m above the ground in willows [9]) may offer some protection from most predators. The degree to which different habitats differ in predation rates needs more systematic study (as also suggested by [9]). In the central coast of California numbers of some predatory herons and egrets have increased since 1991 [40], and although data are sparse for the Central Valley of California (the area containing most Tricolored Blackbirds), some species have increased nationally (see references in [40]). Beyond the obvious effect of harvesting of colonies in grain fields, the relative extent of disturbance in different habitats requires further evaluation. The kinds of effects are exemplified by Meese [39] who reported a Himalayan blackberry colony that was defoliated causing the birds to abandon the site, and two milk thistle colonies that were destroyed by cutting. Weintraub [17] also reported that some more terrestrial sites (Tamarisk and mesquite) were only used when they were flooded, and hence flooding of sites and conditions more generally might affect site at the time of habitat selection, prior to nesting.

Table 11. Parameter values from linear mixed effects model analyses of reproductive success of nests that were successful in rearing at least one chick to day 8 after first egg hatch (RSS) for the Hamilton dataset.

Parameter type	Group	Parameter	SE	t	pMCMC
Mean	Blackberry	2.19	0.12	18.681	0.0001
difference in mean	Marsh	−0.29	0.15	−1.958	0.056
difference in mean	Nettles	0.69	0.34	2.035	0.046
difference in mean	Grain fields	−0.43	0.20	−2.124	0.038

The analysis was limited to breeding substrates with at least 5 measurements. The mean value of RSS is given for marsh habitat, and then other rows of the table give the difference from this value for the groups indicated. P-values ("pMCMC") were obtained using Markov-chain Monte Carlo sampling using the function pvals.fnc from R library language [32].
doi:10.1371/journal.pone.0096980.t011

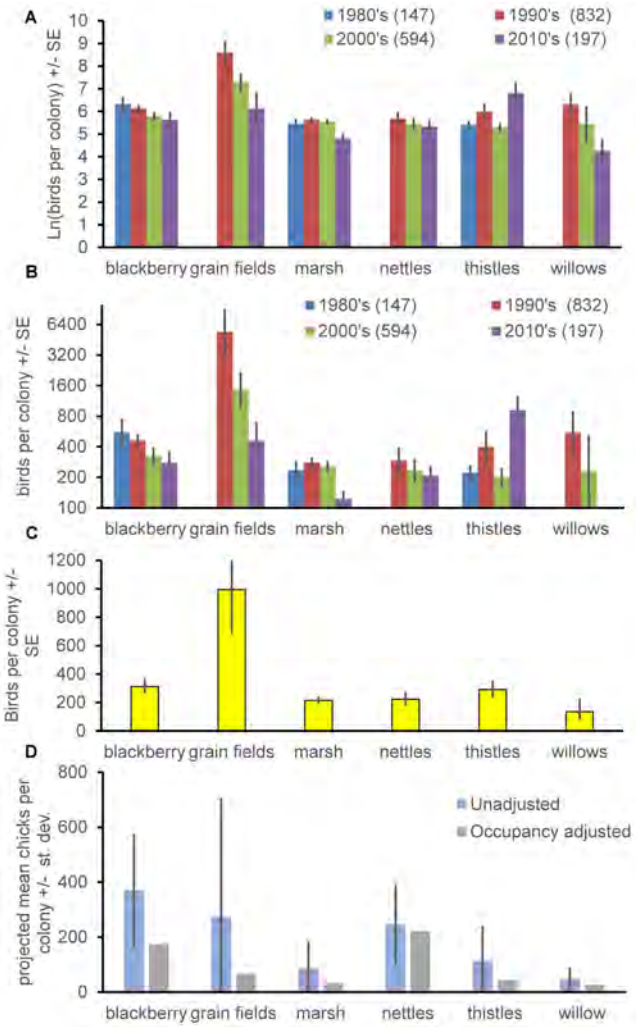

Figure 4. Frequency of colonies, colony size and projected net chick production per colony. A. Proportion of colonies in different substrate types by decade, with total sample sizes in parentheses. **B**. Size of colonies in different substrates by decade (color key same as in a). **C**. Size of recent (2000–2011) colonies. **D** Projected number of chicks produced per colony of average size using reproductive success estimates from Figure 3A and also the same estimates adjusted for the fact that an average site is not occupied in every year (using analyses in Figure 1A). In B and C error bars show +/− 1 SE to facilitate comparison, whereas in D error bars are +/− 1 standard deviation to give an idea of variation. Error bars (standard deviations) are not readily calculable for the occupancy-adjusted projected chicks per colony but likely overlap zero because they represent the summation of at least 3 sources of error (compared to 2 for the other two estimates in D).
doi:10.1371/journal.pone.0096980.g004

Our results in conjunction with Meese's [5] study of food availability in areas surrounding breeding sites indicate that we need to disentangle the effects of nesting substrate, habitats available within the foraging area of breeding Tricolored Blackbirds, and food availability. All three of these things may be correlated or they may be independent. They may also not be mutually exclusive. The problem of analyzing the foraging habitats is made difficult by birds traveling up to 5 to 9km from their nesting sites [5,14,41,42], but as Hamilton and Meese [43] point out, only a small fraction of the total possible area may be suitable foraging habitat. Beedy [9] also suggested investigation of foraging habitat availability near colonies, and habitat selection. Investi-

Table 12. Summary of the differences between colonies in different substrates.

Substrate	Occupancy	Colony longevity	RS	RSS	Frequency of colony failure	Frequency of substrate type	Colony size 2000–2011	Predicted long-term average site productivity
Himalayan blackberry	0	0	+	0	-	0	0	+
Marsh	0	0	0	0	0	+	0	-
Nettles	+	+	+	+	-	-	0	+
Grain fields	-	-	-	0	+	-	+	0
Thistle	0	0	0	0?	0?	0/-	0	0
Willows	0/+?	+?	0?	0?	0?	-	-	-

Colony longevity was inferred from a mixture of survival analyses and extinction analyses. + indicates above average, 0 indicates average, and - indicates below average. A question mark indicates that sample sizes were especially small.
doi:10.1371/journal.pone.0096980.t012

gating habitat selection mechanisms and relative use of different substrates is particularly difficult but it may be that year-to-year variation in the availability of different habitats would provide the best evidence of (correlative) shifts in habitat use, perhaps in conjunction with potential driving variables like rainfall (e.g., [17]).

The suggested conservation strategies for Tricolored Blackbirds of providing alternative habitats and luring birds from grain fields [9] are consistent with our findings of the use and reproduction of different habitats. However, stinging nettle sites seem like the most widely used native habitat type that is productive and may represent the best opportunity for native habitat creation, conservation and restoration. The management of cattail marshes, as the most frequently used marsh type, needs more research linking marsh state to nest success and predation, and may represent a realizable habitat management strategy because protected lands often contain wetland areas. In the short term the voluntary payment of farmers to encourage them to delay harvest of grain crops (triticale) for silage needs to be continued and other strategies of alleviating pressures such as water restrictions on dairy farms that regularly support Tricolored Blackbird merit investigation by management agencies.

The lack of balance between cessation of use ("extinction") and colonization of breeding sites 66% sites/year vs. 21% sites/year reflects that Meese's fieldwork took place during 2005–2011 and that 2007 onwards was a period when reproductive success was chronically low [5]. Population sampling has been more thorough than ever and so these data are unlikely to represent changes in sampling effort. Statewide surveys suggested populations declined by 35% between 2008 and 2011 [44,45], and declines in average colony size are apparent over a longer period in Figure 4B. Both colony sizes and declines in occupancy during 2005–2011 are consistent with a metapopulation that is in steep decline. However, the timespan is short and it remains to be determined whether the 2014 survey (and beyond) will show sustained declines. Neither total abundances nor colony sizes were correlated with rate of (re)colonization of sites or probability of cessation of use of sites for breeding (or reproductive success, RS). In this way the system does have the feedbacks expected of a typical metapopulation [4], which might reflect the species being in decline during 2005–2011: our analyses looked at these factors in conjunction with nesting substrate types so heterogeneity in substrates is unlikely to mask such a pattern.

Future studies should attempt to (1) estimate rates of predation from site to site and between substrate types, which is made complicated by the large number of sites needed; (2) understand whether nesting substrate type is linked to landscape composition and food availability, or whether these are independent drivers of reproductive success; (3) evaluate whether marsh management for Tricolored Blackbirds results in predictable increases in RS, abundance and occupancy; and (4) investigate the potential for habitat creation and restoration involving stinging nettles. There is an urgent need to also ascertain whether the species is continuing in sharp decline across all habitat types and to discover the causes of this decline beyond those identified here. Climate, agricultural changes, and land-use changes all merit investigation as potential causes.

Author Contributions

Conceived and designed the experiments: MH RJM EEG. Performed the experiments: MH RJM EEG. Analyzed the data: MH RJM EEG. Contributed reagents/materials/analysis tools: MH RJM EEG. Wrote the paper: MH RJM EEG.

References

1. Armstrong DP (2005) Integrating the metapopulation and habitat paradigms for understanding broad-scale declines of species. Conserv Biol 19: 1402–1410.
2. Guisan A, Thuiller W (2005) Predicting species distribution: offering more than simple habitat models. Ecol Lett 8: 993–1009.
3. Levins R (1969) Some demographic and genetic consequences of environmental heterogeneity for biological control. Bulletin of the Entomological Society of America 15: 237–240.
4. Hanski IA, Gilpin ME (1997) Metapopulation biology: ecology, genetics and evolution. San Diego, California, Academic Press.
5. Meese RJ (2013) Chronic low breeding success in the tricolored blackbird from 2006–2011. Western Birds 44: 98–113.
6. Beedy EC, Sanders SD, Bloom D (1991) Breeding status, distribution, and habitat associations of the Tricolored Blackbird (*Agelaius tricolor*) 1850–1989. Sacramento, CA, Jones & Stokes Associates, Inc. pp 88–197. Report to US Fish and Wildlife Service.
7. Graves EE, Holyoak M, Kelsey TR, Meese RJ (2013) Understanding the contribution of habitats and regional variation to long-term population trends in tricolored blackbirds. Ecol Evol Available: doi:10.1002/ece3.681. Accessed 17 April 2014.
8. United States Fish and Wildlife Service (USFWS) (2008) Birds of conservation concern 2008. Washington, DC. U.S. Fish and Wildlife Service.
9. Beedy EC (2008) California bird species of special concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California In: Shuford WD, Gardali T, editors. Studies of Western birds 1. Camarillo, California, Allen Press. pp. 437–443.
10. Bureau of Land Management (2006) Updated animal sensitive species list, Updated September 2006. Sacramento, California, Bureau of Land Management.
11. IUCN (2013) The IUCN red list of threatened species. Available: http://www.iucnredlist.org. Accessed 27 August 2013.
12. Bent AC (1958) Life histories of North American blackbirds, orioles, tanagers, and their allies. US Natl Mus Bull 211.
13. Neff JA (1937) Nesting distribution of the tri-colored red-wing. Condor 39: 61–81.
14. Beedy EC, Hamilton WJ, III (1999) Tricolored blackbird (Agelaius tricolor), no. 423. In: Poole A, editor. The birds of North America, Ithaca, NY, Cornell Lab of Ornithology.
15. Cook LF, Toft CA (2005) Dynamics of extinction: population decline in the colonially nesting tricolored blackbird Agelaius tricolor. Bird Conserv Int 15: 73–88.
16. Tricolored Blackbird Working Group (2007) Conservation plan for the tricolored blackbird (Agelaius tricolor). Kester, S, editor. San Francisco, CA, Sustainable Conservation.
17. Weintraub K (2013) Nest survival of tricolored blackbirds in California's San Joaquin Valley. MSc in Wildlife. Humboldt State University.
18. Stearns SC (1992) The evolution of life histories. Oxford, U.K., Oxford University Press.
19. Ims RA, Yoccoz NG (1997) Studying transfer processes in metapopulations: emigration, migration and colonization. Editors: Hanski I, Gilpin, ME. Metapopulation dynamics: Ecology, genetics and evolution. New York: Academic Press. pp. 247–265.
20. Prugh LR, Hodges KE, Sinclair ARE, Brashares JS (2008) Effect of habitat area and isolation on fragmented animal populations. Proc Natl Acad Sci U S A 105: 20770–20775.
21. Pulliam HR (1988) Sources, sinks, and population regulation. Am Nat 132: 652–661.
22. Peery MZ, Becker BH, Beissinger SR (2006) Combining demographic and count-based approaches to identify source-sink dynamics of a threatened seabird. Ecol Appl 16: 1516–1528.
23. Brawn JD, Robinson SK (1996) Source-sink population dynamics may complicate the interpretation of long-term census data. Ecology 77: 3–12.
24. McCoy TD, Ryan MR, Kurzejeski EW, Burger LW Jr. (1999) Conservation reserve program: Source or sink habitat for grassland birds in Missouri? J Wildl Manage 63: 530–538.
25. Battin J (2004) When good animals love bad habitats: ecological traps and the conservation of animal populations. Conserv Biol 18: 1482–1491.
26. Robertson GA, Hutto RL (2006) A framework for understanding ecological traps and an evaluation of existing evidence. Ecology 87: 1075–1085.
27. Hamilton WJ, III, Holyoak M, Graves EE (2013) Historical Tricolored Blackbird reproductive success measurements from Bill Hamilton. knb.322.1. Available http://knb.ecoinformatics.org/knb/metacat/knb.322.1/knb. Last accessed 27 July 2013.
28. Hamilton WJ III (2004) Management implications of the 2004 Central Valley tricolored blackbird survey. Bulletin of the Central Valley Bird Club 7: 32–46.
29. Graves EE, Holyoak M, Kelsey TR, Meese RJ (2013) Data from: Understanding the contribution of habitats and regional variation to long-term population

trends in tricolored blackbirds. Dryad Digital Repository. Available: doi:10.5061/dryad.8vc80 Accessed 17 April 2014.
30. Hamilton WJ III (1998) Tricolored blackbird itinerant breeding in California. Condor 100: 218–226.
31. Bates D, Maechler M, Bolker B (2013) Package LME4: linear mixed-effects models using S4 classes. https://github.com/lme4/lme4/. Accessed 17 August 2013
32. Baayen RH (2011) languageR: data sets and functions with "analyzing linguistic data: A practical introduction to statistics". R package version 1.4. http://CRAN.R-project.org/package = languageR. Accessed 17 August 2013
33. Therneau T (2013) A Package for Survival Analysis in S. R package version 2.37-4. Available: http://CRAN.R-project.org/package = survival. Last accessed 27 July 2013.
34. California Invasive Plant Council (2013) California invasive plant inventory database. Available at http://www.cal-ipc.org/paf/. Accessed 17 August 2013.
35. DiTomaso JM, Brooks ML, Allen EB, Minnich R, Rice PM, et al. (2006) Control of Invasive Weeds with Prescribed Burning. Weed Technol 20: 535–548.
36. Hamilton WJ III, Cook L, Grey R (1995) Tricolored blackbird project 1994. Portland, OR, US Fish and Wildlife Service.
37. Meese RJ (2012) Cattle egret predation causing reproductive failures of nesting tricolored blackbirds. Calif Fish Game 98: 47–50.
38. Meese RJ (2006) Settlement and breeding colony characteristics of tricolored blackbirds in 2006 in the Central Valley of California. Sacramento, CA: US Fish and Wildlife Service. pp. 40. Available: http://tricolor.ice.ucdavis.edu/files/trbl/2006%20Final%20report.pdf. Accessed 7 Oct. 2013.
39. Meese RJ (2011) Reproductive success of tricolored blackbird colonies in 2011 in the Central Valley of California. Sacramento, CA, California Department of Fish and Game. Available: http://tricolor.ice.ucdavis.edu/content/reproductive-success-tricolored-blackbird-colonies-2011-central-valley-california. Accessed 19 August 2013.
40. Kelly JP, Etienne K, Strong C, McCaustland M, Parkes ML (2007) Status, trends, and implications for the conservation of heron and egret nesting colonies in the San Francisco Bay area. Waterbirds 30: 455–478.
41. Orians GH (1961) The ecology of blackbird (*Agelaius*) social systems. Ecol Monogr 31: 285–312.
42. Crase FT, DeHaven RW (1978) Food selection by five sympatric California blackbird species. Calif Fish Game 64: 255–267.
43. Hamilton WJ III, Meese RJ (2006) Habitat and population characteristics of tricolored blackbird colonies in California. Sacramento, CA, California Department of Fish and Game.
44. Kelsey R (2008) Results of the 2008 tricolored blackbird census: population status and an analysis of statewide trends. Portland, OR, US Fish and Wildlife Service. Available: http://tricolor.ice.ucdavis.edu/files/trbl/Tricolored%20Blackbird%202008%20Status%20Report%20Final.pdf. Accessed 19 August 2013.
45. Kyle K, Kelsey R (2011) Results of the 2011 tricolored blackbird statewide survey. Sacramento, CA, Audubon California. Available: http://tricolor.ice.ucdavis.edu/content/results-2011-statewide-survey. Accessed 27 July 2013.

efforts. To that end, we are more broadly marketing this issue to a wider audience with interest in conserving this species.

We hope you enjoy this issue, but more importantly, we hope it spurs you to action on behalf of the Tricolored Blackbird. Your support of the Central Valley Bird Club has helped prepare this issue of the Bulletin. There are many other meaningful contributions that you can make: assisting with ongoing species surveys, financially supporting ongoing conservation efforts, advocating on behalf of the species, publicizing the plight of the species and gaining public support, joining action groups that are identifying and implementing conservation projects... the list goes on. Find a way to help.

Chris Conard (CVBC President) and Daniel A. Airola (CVBC Editor)

Flock of Tricolored Blackbirds. *Photo © Andrew Engilis, Jr.*

Note from Editor:

This issue was made possible through the dedication and hard work by many people. I particularly thank species experts Drs. Robert (Bob) Meese and Edward C. (Ted) Beedy who authored many papers and reviewed others. I also offer thanks to Lowell Young for his encouragement in preparing this volume and his dedication to Tricolored Blackbird conservation. Finally a huge thanks to Layout Editor, Frances Oliver; Photo Editor, Dan Brown; and proof-reader Dan Kopp for their substantial and critical efforts in bring this issue to press.

Daniel A. Airola

Efforts to Assess the Status of the Tricolored Blackbird from 1931 to 2014

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The Tricolored Blackbird (*Agelaius tricolor;* hereafter, also "tricolor"), is unique to California. Among its many salient traits, the tricolor is colonial, and often nests in large groups that place heavy demands upon the local biota. Globally, colonial species are believed to be highly vulnerable (Terborgh 1974), and many have become conservation priorities. The tricolor is among these, as it has over the past century suffered a steep population decline due to reductions in its native breeding and foraging habitats and several other factors (Beedy and Hamilton 1997). More recently, elevated rates of mortality of eggs and chicks have resulted from the destruction of breeding colonies during the harvest of their grain field nesting substrates (Meese 2009), and an unknown number of adults is shot in autumn when in mixed flocks foraging in ripening rice with red-winged and other blackbird species (USDA 2013, Meese unpub. data).

In December 2014 the tricolor was given emergency protection under the California Endangered Species Act as a result of its steep and accelerating population decline (Meese 2014). A petition for listing under the federal Endangered Species Act also has been submitted recently.

It is inherently difficult to assemble enough information on rare species to enable robust evidence-based recovery efforts. In some ways, tricolors pose particular problems in that they breed in a rather small number of large, somewhat ephemeral colonies that, over time, blink on and off across the landscape (Holyoak et al. 2014). As a result, classic random sampling is likely to miss even larger colonies, or to produce population estimates of unknown reliability. On the other hand, the future of the species may rest on the success or failure of a fairly small number of large and conspicuous colonies which are intensively monitored. Thus, the species' unusual biology makes it a unique study subject, but at the same time provides special opportunities to demonstrate that science can greatly improve conservation outcomes.

In order to address these biology-induced sampling problems and to monitor the status of the species, since the 1990's the primary means to estimate the number of tricolors in California has been the triennial Tricolored Blackbird Statewide Survey (Hamilton 2000; Holyoak et al. 2014). The purpose of this report is to review and evaluate efforts to document the status of the species, to contrast prior efforts to those of the past three Tricolored

Blackbird Statewide Surveys, and to examine the most recent trends in abundance and distribution. It excludes consideration of synthetic works (e.g., Graves et al. 2013, Holyoak et al. 2014).

METHODS

I reviewed the scientific literature and other published and unpublished reports beginning with Neff (1937) until mid-2014 to summarize and characterize efforts to determine the status and estimate the size of the Tricolored Blackbird population in California. I used the comprehensive reports of the 2008, 2011, and 2014 Tricolored Blackbird Statewide Surveys, along with the standardized methods and data management support provided by the Tricolored Blackbird Portal (http://tricolor.ice.ucdavis.edu), to compare the results of these three Statewide Surveys and to contrast these with prior efforts to assess the conservation status of the species.

I also present results by "bioregions"—large parts of the state that are relatively ecologically homogeneous and distinct, to assess regional differences (Figure 1). Previous reports (Kelsey 2008, Kyle and Kelsey 2011) have also recognized bioregions, but their boundaries were somewhat different than those recognized here. I divided the state into five bioregions that include the majority of the breeding distribution of the Tricolored Blackbird:

1. Southern California: the entire region south of the Transverse Range; includes southern Kern County, and all of Ventura, Los Angeles, San Bernardino, Orange, Riverside, San Diego, and Imperial counties.
2. San Joaquin Valley: the portions of northern Kern, Tulare, Fresno, Madera, and Stanislaus counties below 100 m elevation and all of Kings, Merced, and San Joaquin counties.
3. Central Coast: Alameda, Santa Clara, Santa Cruz, San Benito, Monterey, San Luis Obispo, and Santa Barbara counties.
4. Central Sierra Foothills: portions of Placer, El Dorado, Amador, Calaveras, and Stanislaus counties between 100-500 m elevation.
5. Sacramento Valley: Sacramento, Yolo, Sutter, Yuba, Colusa, Glenn, and portions of Butte and Tehama counties below 100 m elevation.

The Sacramento Valley is included in the analysis of bioregions although tricolors are itinerant breeders and most birds arrive to breed in this portion of their range only after having first bred in the San Joaquin Valley (Hamilton 1998, Meese unpub. data). Thus, the Statewide Survey, which occurs in the second half of April, provides an estimate of the number of tricolors in the Sacramento Valley at this time but does not provide an estimate of the total number of birds that breed there. Similarly, the Modoc Plateau is not included in this analysis because birds breed in this part of California after April, so are not recorded during the Statewide Survey, the results of which form the data sets upon which this analysis is based.

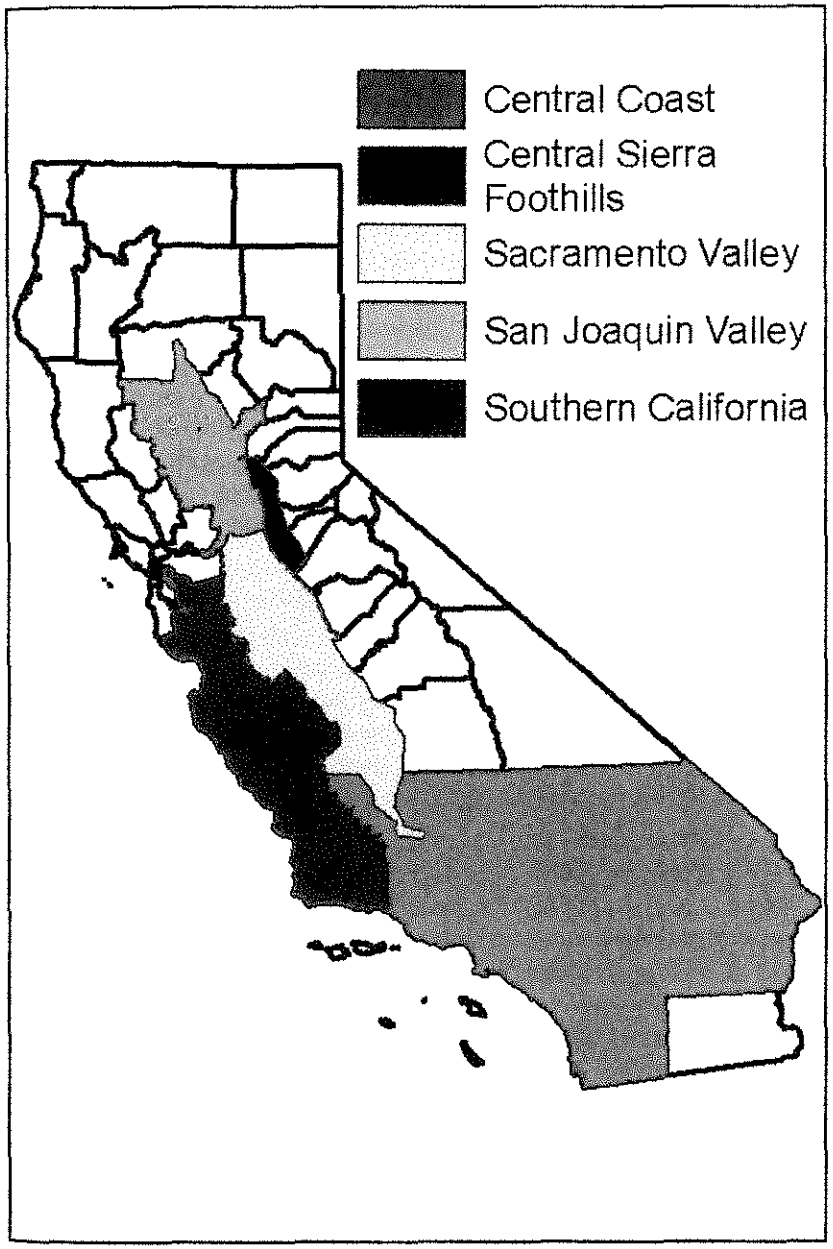

Figure 1. Bioregions used in this paper to discuss Tricolored Blackbird Status in California

RESULTS

Neff (1937) was the first to attempt to assess the status of the Tricolored Blackbird in California. Neff's work was stimulated by anecdotal observations of absences of tricolors from locations where they had previously been common and focused on nest counts in primarily very large colonies during the breeding season and on visual counts of roosting birds at a few locations in the non-breeding season. Neff's (1937) work, conducted from 1931 until 1936, did not attempt to provide a comprehensive survey of the entire range of the species because "such a survey was humanly impossible", and he did not attempt to estimate the number of birds in a brief interval of time. He concluded that the species had likely undergone a serious population decline in response to widespread habitat losses associated with the drainage and filling-in of marshes in the early 20th century. This, he believed, was followed by a population increase due to the development of irrigated agriculture and he found that the species was still quite common in many areas. Although Neff (1937) did not attempt to estimate the total number of birds in California, he provided what he described as a conservative estimate of 491,000 nests within 46 colonies in only eight counties in 1934, which would be about 736,500 birds (assuming that each male breeds, on average, with two females; Beedy and Hamilton 1999).

DeHaven et al. (1975) were the next to attempt to survey a large portion of the tricolor's breeding range. They surveyed much the same region as did Neff and his collaborators over three decades earlier. Their work, conducted from 1969 to 1972, emphasized the Central Valley, although in 1971 they attempted to survey the entire breeding range. Although they, too, studied colonies throughout the breeding season, they concluded that the number of tricolors had declined by at least 50% in the 35 years since Neff's work.

The concept of a Statewide Survey, an effort to estimate the total number of breeding birds in the entire state, was developed by Edward C. (Ted) Beedy and William J. Hamilton III in 1993 (Beedy, pers. comm., Beedy and Hamilton 1997) in response to previous, more limited surveys that suggested an on-going decline in abundance. The Statewide Survey was proposed as a voluntary effort with numerous participants that was centrally coordinated, and conducted within a 3-day interval every three years beginning in 1994. Statewide Surveys were conducted in 1994, 1997, 2000, and 2005, but due to differences in methodology, duration, level of effort, geographic completeness, inadequate data management, and incomplete documentation, the results of these surveys are not directly comparable (Hamilton 2000).

Table 1. Comparison of the first four statewide surveys. Sources: Beedy and Hamilton 1997, Hamilton 2000, EDAW 2005
Sources: Beedy and Hamilton 1997, Hamilton 2000, EDAW 2005

Year	Duration	Participants	Counties Surveyed	Sites Surveyed	Occupied Sites Identified	Birds Observed	Comments
1994	Not reported (3 days?)	68	32	Not reported	28	369,359	follow-up survey results included
1997	Not reported (3 days?)	55	34	Not reported	71	237,928	follow-up survey results included
2000	4 days	81	33	Not reported	71	162,000	pre-survey workshop held
2005	3 days	65	24	Not reported	121	257,802	No report submitted

The Statewide Survey methodology was revised in 2008 by: 1) adding county coordinators to transfer the coordination of the participants from the statewide to the county level, 2) providing training sessions for survey participants, and 3) developing and deploying a web-based Tricolored Blackbird Portal. A level of survey coordination at the county level was added to improve colony detection and geographic completeness by taking greater advantage of local knowledge (Hamilton 2000), and to share the burden of the coordination of a statewide effort among several individuals. In many cases, county coordinators were environmental consultants with extensive local experience with the species and a large pool of qualified persons from which to draw to serve as survey participants.

The Tricolored Blackbird Portal was developed to:

- enhance the management of existing data on colony locations and observations of birds at breeding colonies and in non-breeding aggregations,
- improve communication by providing controlled vocabularies that enabled Portal users to standardize on colony location and nesting substrate names,
- enhance citizen participation by providing online data entry capabilities for records of colony locations and observations of birds (including support for the Statewide Surveys),
- provide reliable natural history information,
- provide access to numerous reports and publications, and
- provide news and links to news reports.

The Portal was developed as a secure, public resource and is password-protected: a user account is required to enter records so as to reduce spam and unwanted spurious records. A small staff of content managers with extensive Tricolored Blackbird and data management experience edits records and assures quality control.

All of the Statewide Surveys since 2008 (i.e. 2008, 2011, and 2014) have used the three levels of coordination (statewide coordinator, county coordinator, participant), are more thoroughly standardized by data entry via the Portal, and are more completely documented by comprehensive reports, so the results of these three surveys are more directly comparable than are those from previous surveys. Table 2 provides a comparison of the results of the three most recent Statewide Surveys.

The results of the three most recent Statewide Surveys showed a rapid decline in abundance, from just under 395,000 birds to 145,000 birds in 6 years, a decline of 63% (Meese 2014). The rate of decline appears to be increasing: from 2008 to 2011 the number of tricolors dropped by 35%, from 395,000 to 258,000 birds (Kyle and Kelsey 2011), but from 2011 to 2014 the number of birds dropped by 44%, from 258,000 to 145,000 birds (Figure 2).

Table 2. Comparison of 2008, 2011, and 2014 Statewide Surveys. Sources: Kelsey 2008, Kyle and Kelsey 2011, Meese 2014

Year	Duration (days)	Participants	Counties Surveyed	Sites Surveyed	Occupied Sites Identified	Statewide Population Estimate
2008	3	155	38	361	155	394,858
2011	3	100	29	608	138	258,000
2014	3	143	41	802	143	145,000

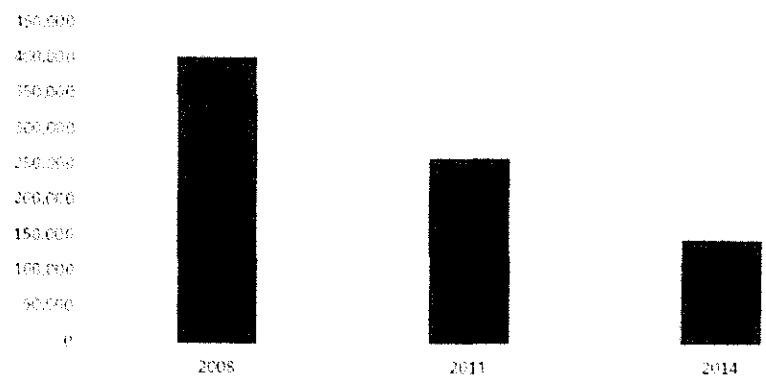

Figure 2. Estimates of the number of Tricolored Blackbirds in California in 2008, 2011, and 2014.

The decline in the statewide estimate of the number of birds occurred despite a rapid increase in knowledge of where the birds breed, as data entry via the Tricolored Blackbird Portal has allowed 77 different Portal users to enter 249 new colony location records since 2008 (Figure 3).

The 2014 Statewide Survey was the most comprehensive: 802 known locations were surveyed versus only 361 locations surveyed in 2008 (Table 2). Hence, the recorded decline cannot be attributed to a decline in the thoroughness of the surveys.

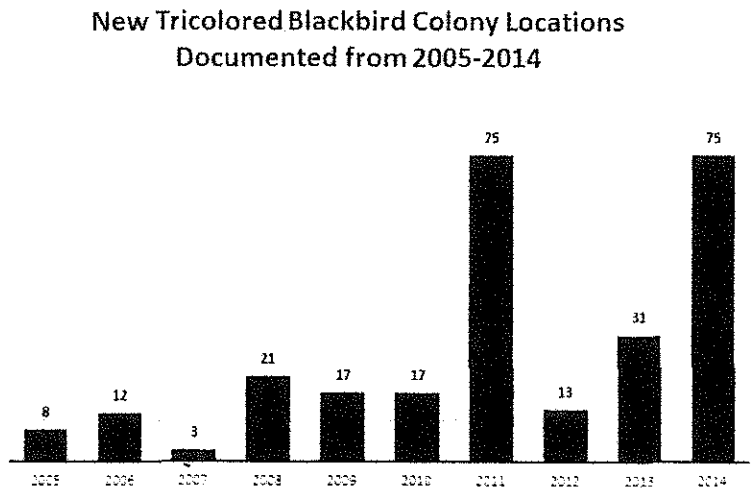

Figure 3. Number of previously unreported Tricolored Blackbird colony locations reported each year from 2005-2014.

Associated with the decline in the number of birds was a dramatic decline in the sizes of the largest colonies (Figure 4).

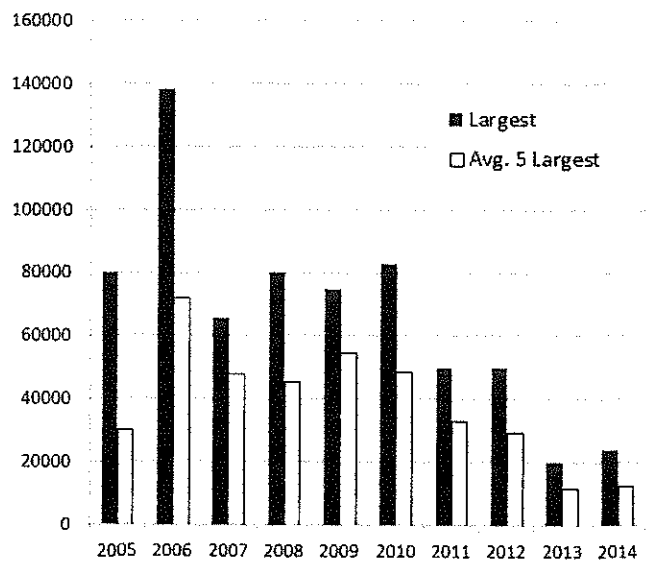

Figure 4. Ten year trend in the sizes of the largest Tricolored Blackbird colonies and averages of the five largest colonies.

The rate and intensity of the decline between 2008 and 2014 varied among bioregions. The Central Coast had the greatest proportionate decline, dropping 91%, from 7,014 birds in 2008 to 652 birds in 2014. The San Joaquin Valley had the second highest proportionate decline, dropping 78% from 340,703 birds in 2008 to 73,482 birds in 2014. The number of birds in southern California increased by 126%, from 5,487 birds in 2008 to 12,386 birds in 2014, due primarily to a single large colony of 5,000 breeding birds in Los Angeles County (Meese 2014). The number of birds in the Central Sierra Foothills also increased, from 22,586 birds in 2008 to 28,281 birds in 2014. Figure 5 summarizes the results for the three most recent Statewide Surveys by bioregion.

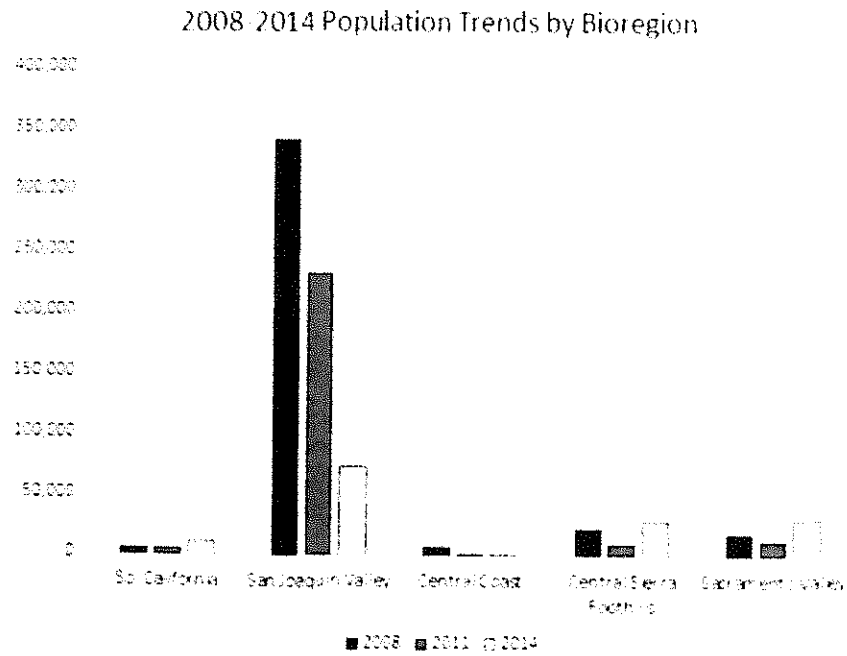

Figure 5. Results of 2008, 2011, and 2014 Statewide Surveys by Bioregion.

DISCUSSION

Early efforts to determine the status of the Tricolored Blackbird depended upon the work of a small number of individuals who tried to survey an immense geographic area and, due to logistical and time constraints, had to focus on locations concentrated in the Sacramento Valley (Neff 1937,

DeHaven et al. 1975). Neither Neff (1937) nor DeHaven et al. (1975) attempted to estimate the statewide population of the species but rather attempted to survey breeding birds during the entire breeding season. DeHaven et al. (1975) surveyed the region studied by Neff (1937) to try to determine whether the species had changed in abundance in this portion of its range. They found far fewer colonies and far fewer birds at the largest colonies than did Neff (1937) and concluded that the number of tricolors in the Sacramento Valley had declined by more than 50% in about 35 years.

Efforts to estimate the statewide population of tricolors began in 1994 with work coordinated by Beedy and Hamilton (1997) and continue to this day. Unlike previous efforts to assess the status of the species, Statewide Surveys were conducted in 3-day intervals, from Friday to Sunday, in late April. Non-breeding birds tend to be highly mobile and difficult to find and thus to count, so the Statewide Survey was designed to be conducted in the second half of April, when the maximum number of birds are breeding (Beedy and Hamilton 1999), and are thus more reliably found and easier to count. Conducting a Statewide Survey during a 3-day interval minimizes the risk of double-counting birds that have moved following first breeding attempts (Hamilton 1998). Increasing the number of persons surveying allows a much larger geographical area to be covered and enables a statewide estimate of the number of birds.

Although the 1994 Statewide Survey included only 32 counties and found only 28 occupied sites, the estimate of the number of birds seen exceed 369,000 (Hamilton et al. 1995). The 2014 Statewide Survey covered 41 counties and found birds at 143 locations yet the estimate of the number of birds in California dropped to 145,000 (Meese 2014). Thus, despite substantial increases in geographical coverage and in knowledge of where the birds nest, the estimate of the number of birds seen dropped by 61%. In the 2008-2014 interval, when the Statewide Surveys were far more directly comparable due to more standardized methodology, the estimate of the number of tricolors dropped by 63%, from 395,000 to 145,000. Unfortunately, given the differences in methods, level of effort, data management, and data documentation, it is not possible to directly compare the results of the Statewide Surveys from 1994 to those of 2014, but the small number of colonies identified and the relatively large number of birds observed in 1994 compared to 2014 suggests a serious statewide reduction in abundance during this 20 year interval, and that the extent of the decline would be greater than that estimated if the 1994 survey had been as complete as was that of 2014.

The number of birds seen during the three most recent Statewide Surveys differed greatly by bioregion, with the largest number of birds seen in all three surveys concentrated in the San Joaquin Valley (Figure 5), where the majority of breeding birds have been seen since the 1980s (Hamilton et al. 1995). A comparable survey of breeding birds in the Sacramento Valley would best occur in early June, when most of the birds have finished breeding in the San Joaquin Valley and moved north to breed again (Hamilton 1998, Beedy and Hamilton 1999, Meese unpub. data). As the tricolors that breed in the Sacramento Valley are in most cases the same birds that bred earlier in the San Joaquin Valley (Hamilton 1998, Meese unpub. data), any reduction in abundance documented in April in the San Joaquin Valley would be expected to be mirrored by a reduction in abundance of breeding birds in the Sacramento Valley the following June.

Because the vast majority of breeding birds occur in the San Joaquin Valley, the sharp drop in abundance documented there is of particular concern, as efforts to restore the species will depend disproportionately upon the results of breeding efforts at the largest colonies. Recent research has shown that reproductive success is positively correlated with both colony size and insect abundance (Meese 2013), and the results of the three most recent Statewide Surveys showed a sharp drop in total abundance and size of the largest colonies. This period coincided with a period of chronically low reproductive success (Meese 2013). A lack of insects along with the destruction of breeding colonies adjacent to dairies by the harvest of their nesting substrates (Meese 2009) are believed to be the two most important causes for the recent population decline.

There are several reasons why insect abundances may be insufficient to support breeding by the colonial and insectivorous Tricolored Blackbird. The widespread and on-going conversion of native habitats to dairies, orchards, vineyards, rice, and other forms of agriculture (Beedy and Hamilton 1997) and the use of effective and persistent insecticides (Hallmann et al. 2014) may have created unsuitable breeding conditions in much of the core area of the species' range. The relatively small number of birds that have recently bred outside of the San Joaquin Valley is insufficient to sustain a population of 700,000 birds, the suggested population target for the recovery of the species (Meese et.al. 2015a). The apparent unsuitability of much of the San Joaquin Valley to support breeding by the species suggests that future conservation actions will have to occur in strategically chosen areas of the Central Valley that have previously or may be managed to support breeding by relatively large numbers of birds. The conservation effort will require both secure, permanent nesting habitats surrounded by secure, productive, foraging habitats that may provide the insect abundance that is associated with relatively high reproductive success (Meese 2013, Meese et al. 2015a). The rapid decline in the sizes of the largest colonies (Figure 4) complicates conservation planning and reduces the options available to stem the decline because even effective conservation actions will be expected to benefit a smaller number of breeding birds.

The conservation of breeding colonies in grain fields adjacent to dairies may be ensured by the recent listing of the Tricolored Blackbird as endangered under the California Endangered Species Act (CESA). Any loss of Tricolored Blackbird eggs or nestlings would be considered "take" and is prohibited under CESA, except with explicit permit approval. Recent voluntary efforts to conserve Tricolored Blackbird breeding colonies adjacent to dairies, by compensating farmers for their costs associated with delaying the harvest of their occupied grain fields, have been only partially successful (e.g., Meese 2009, Meese 2014). Effectively conserving the efforts of all breeding birds, and especially the largest colonies, which are usually situated in grain fields (Beedy and Hamilton 1999, Kelsey 2008), will be essential if the species is to recover. A far more robust education and outreach component must be developed and implemented with industry participation (see Arthur 2015), and intensive surveys and monitoring of "silage colonies" must occur annually. These silage colony conservation measures, however, are temporary emergency reactions to an on-going conflict, and a permanent solution will require the provision of alternative nesting substrates in the San Joaquin Valley and southern California that create safe, secure breeding conditions.

The triennial Tricolored Blackbird Statewide Survey has for 20 years played a prominent role in efforts to monitor the health of tricolors in California. Recent improvements in methodology and the addition of the Tricolored Blackbird Portal have rapidly increased our knowledge of where the birds breed by providing a mechanism for concerned citizens to become actively engaged in research and monitoring efforts. The resulting increase in the number of persons looking for and reporting breeding colony locations and observations of (occupied and unoccupied) breeding colony locations has aided efforts to monitor the health of the species.

The Tricolored Blackbird is increasingly conservation-dependent, and future monitoring efforts should expand beyond a triennial statewide population estimate to include the: 1) annual monitoring of the results of breeding efforts in a variety of habitats and bioregions, 2) effects of relative insect abundance on reproductive success, and 3) results of specific conservation actions. A useful addition to the triennial Statewide Survey would be an annual effort to estimate the population size through a statistically valid sample (see Meese et al. 2015b). This monitoring tool would provide an annual population estimate with a much smaller number of volunteers and require surveys of only a sample of the total number of colony locations each year. An annual sample survey would provide an additional means to monitor the health of the population and supplement more intensive efforts to monitor the results of tricolor breeding, thereby helping to more thoroughly document the status of California's blackbird.

LITERATURE CITED

Arthur, S. 2015. Protecting, restoring, and enhancing Tricolored Blackbird habitat on agricultural lands through the Regional Conservation Partnership Program. Central Valley Bird Club Bulletin 17:122-125.

Beedy, E.C. and W.J. Hamilton III. 1997. Tricolored Blackbird Status Update and Management Guidelines. Report prepared for the U.S. Fish and Wildlife Service, Sacramento CA and California Department of Fish and Game, Sacramento, CA. Available from the Tricolored Blackbird Portal at: http://tricolor.ice.ucdavis.edu/reports.

Beedy, E.C. and W.J. Hamilton III. 1999. Tricolored Blackbird (*Agelaius tricolor*). A. Poole and F. Gill (eds.), *In:* The Birds of North America, No. 423. Philadelphia, PA: Academy of Natural Sciences and Washington, DC: American Ornithologists Union.

DeHaven, R.W., F.T. Crase, and P.D. Woronecki. 1975. Breeding status of the Tricolored Blackbird, 1969-1972. Calif. Dept. Fish and Game 61:166-180.

EDAW. 2005. 2005 TRBL data. Unpublished Excel spreadsheet. Available from the author.

Graves E.E., M. Holyoak, T.R. Kelsey, and R.J. Meese. 2013. Understanding the contribution of habitats and regional variation to long-term population trends in Tricolored Blackbirds. Ecology and Evolution. doi:10.1002/ece3.681

Hallmann, C.A., R.P.B. Foppen, C.A.M. van Turnhout, H. de Kroon, and E. Jongejans. 2014. Declines in insectivorous birds are associated with high neonicotinoid concentrations. Nature doi:10.1038/nature13531.

Hamilton, W.J. III. 1998. Tricolored Blackbird itinerant breeding in California. Condor 100:218-226.

Hamilton, W.J. III. 2000. Tricolored Blackbird 2000 Breeding Season Census and Survey-Observations and Recommendations. Unpublished report available from the Tricolored Blackbird Portal at: http://tricolor.ice.ucdavis.edu/reports.

Hamilton, W.J. III, L. Cook, and R. Grey. 1995. Tricolored Blackbird Project 1994. Unpublished report available from the Tricolored Blackbird Portal at: http://tricolor.ice.ucdavis.edu/reports.

Holyoak, M., R.J. Meese, and E.E. Graves. 2014. Combining site occupancy, breeding population sizes and reproductive success to calculate time-averaged reproductive output of different habitat types: an application to Tricolored Blackbirds. PLos ONE 9(5):e96980.doi:10.1371/journal.pone.0096980.

Kelsey, R. 2008. Results of the Tricolored Blackbird 2008 Census. Report available from the Tricolored Blackbird Portal at: http://tricolor.ice.ucdavis.edu/reports.

Kyle, K. and R. Kelsey. 2011. Results of the 2011 Tricolored Blackbird Statewide Survey. Report available at the Tricolored Blackbird Portal at: http://tricolor.ice.ucdavis.edu/ reports.

Meese, R.J. 2009. Contribution of the Conservation of Silage Colonies to Tricolored Blackbird Conservation from 2005-2009. Report submitted to the U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, Sacramento, CA. Report available at the Tricolored Blackbird Portal at: http:// tricolor.ice.ucdavis.edu/reports.

Meese, R.J. 2013. Chronic low reproductive success of the colonial Tricolored Blackbird from 2006 to 2011. Western Birds 44: 98-113.

Meese, R.J. 2014. Results of the 2014 Tricolored Blackbird Statewide Survey. Report available from the Tricolored Blackbird Portal at: http:// tricolor.ice.ucdavis.edu/reports.

Meese, R.J., E.C. Beedy, D.A. Airola, and R. Cook. 2015a. Recovering the Tricolored Blackbird in California. Central Valley Bird Club Bulletin 17:97-109.

Meese, R.J., J.L. Yee, and M. Holyoak. 2015b. Sampling to estimate population size and detect trends in Tricolored Blackbirds. Central Valley Bird Club Bulletin 17:51-56.

Neff, J.A. 1937. Nesting distribution of the Tricolored Red-wing. Condor 39:61-81.

Terborgh, J. 1974. Preservation of natural diversity: The problem of extinction prone species. BioScience 24: 715-722.

Tricolored Blackbird Working Group. 2007. Conservation Plan for the Tricolored Blackbird. (*Agelaius tricolor*). Susan Kester (Ed.). Sustainable Conservation. San Francisco, CA. Document available from the Tricolored Blackbird Portal at: http://tricolor.ice.ucdavis.edu/ reports.

U.S. Department of Agriculture. 2013. California Wildlife Services Annual Report Required by 50 CFR 21.43: Depredation Order for Blackbirds, Cowbirds, Grackles, Crows, and Magpies.

Sampling to Estimate Population Size and Detect Trends in Tricolored Blackbirds

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The Tricolored Blackbird (*Agelaius tricolor*) is a medium-sized passerine that nests in the largest colonies of any North American landbird since the extinction of the passenger pigeon (*Ectopistes migratorius*) over 100 years ago (Beedy and Hamilton 1999). The species has a restricted range that occurs almost exclusively within California, with only a few hundred birds scattered in small groups in Oregon, Washington, Nevada, and northwestern Baja California, Mexico (Beedy and Hamilton 1999). Tricolored Blackbirds are itinerant breeders (i.e., breed more than once per year in different locations) and use a wide variety of nesting substrates (Hamilton 1998), many of which are ephemeral. They are also insect dependent during the breeding season, and reproductive success is strongly correlated with relative insect abundance (Meese 2013). Researchers have noted for decades that Tricolored Blackbird's insect prey are highly variable in space and time; Payne (1969), for example, described the species as a grasshopper follower because they are preferred food items, and high grasshopper abundance is often associated with high reproductive success (Payne 1969, Meese 2013). Thus, the species' basic reproductive strategy is tied to rather infrequent periods of relatively high insect abundance in some locations followed by much longer periods of range -wide relatively low insect abundance and poor reproductive success. Of course, anthropogenic factors such as habitat loss and insecticide use may be at least partly responsible for these patterns (Hallman et al. 2014, Airola et al. 2014).

The Tricolored Blackbird was formerly considered to be one of the most abundant land birds in California (Beedy and Hamilton 1999), and it is likely that 2-3 million birds remained into the 1930s (estimated by extrapolation of Neff 1937, see Meese 2015). The alarming decline in abundance, especially in the past decade, to only 145,000 birds in 2014 (Meese 2014) led to an emergency listing of the species as endangered under the California Endangered Species Act (CESA) in December 2014 (State of California 2014).

CENTER *for* BIOLOGICAL DIVERSITY *Because life is good.*

Working through science, law and creative media to secure a future for all species, great or small, hovering on the brink of extinction.

VIA ELECTRONIC MAIL

September 10, 2015

Fish and Game Commissioners
c/o Sonke Mastrup, Executive Director
1416 Ninth Street, Room 1320
Sacramento, CA 95814
fgc@fgc.ca.gov

Re: Request to Continue Reconsideration of 2014 Petition to List the Tricolored Blackbird (*Agelaius tricolor*) as a threatened or endangered species may be warranted (Pursuant to Fish and Game Code Section 2074.2) to December.

Dear Commissioners and Executive Director Mastrup,

I am writing on behalf of the Center for Biological Diversity ("Center") to request that the Commission calendar consideration of our request for reconsideration of the 2014 Tricolor Blackbird petition for the December 2015 meeting agenda. On June 19, 2015, the Center requested that, at its August meeting, the Commission reconsider the June 11, 2015 (Item #28 on the June 11, 2015 Agenda) decision denying the Center's 2014 Petition to List the Tricolored Blackbird (Agelaius tricolor) as a Threatened or Endangered species. At the August meeting, the Commission discussed the item and continued it until the October meeting (Item #21 on the August 5, 2015 Agenda).

In the interim, on August 19, 2015, the Center filed its 2015 Petition to List the Tricolored Blackbird and request for emergency action, consideration of that matter is now set for possible action at the Commission's December 10, 2015 meeting. (California Regulatory Notice Register 2015, Vol. No. 36-Z, at 1514.) The Center believes that the process will be best served if the Commission first takes action on the 2015 Petition at the December meeting before turning to the request for reconsideration of the June 2015 decision regarding the 2014 Petition.

Please do not hesitate to contact me if you have any questions about this request.

Sincerely,

Lisa T. Belenky, Senior Attorney
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Oakland, CA 94612
lbelenky@biologicaldiversity.org

400 Capitol Mall, Suite 1535
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September 24, 2015

California Fish and Game Commission
1416 Ninth Street, Room 1320
Sacramento, CA 95814
fgc@fgc.ca.gov

RE: Tricolored Blackbird Listing Review Process. October 8, 2015 Agenda Item 27.

Dear Commissioners:

Audubon California writes on behalf of its members to urge the California Fish & Game Commission to provide full protections for the Tricolored Blackbird by making the species a candidate for listing under the California Endangered Species Act and initiating a scientific review by the California Department of Fish and Wildlife. This letter is offered in addition to Audubon's previously-submitted letters and public testimony in support of increased conservation of the Tricolored Blackbird.

Accepting the petition would initiate a year-long scientific-based review of the species by the Department. At the end of that year, the Commission would then consider the available scientific evidence, the Department's recommendation, and the input of stakeholders to make a final determination as to whether or not the species ought to be listed. The threshold to accept a petition and advance a species to candidacy is low.

Audubon California understands that listing a species demands a further commitment from the Department and can impose significant responsibilities on some private landowners. We do not advocate for this listing lightly and only do so after decades of other efforts that have not stemmed the species' decline. The listing does not represent an end to collaborative efforts, including partnerships with the agricultural industry and members of the Tricolored Blackbird Working Group, which are more necessary than ever if the species is to remain viable.

For this reason and those listed below, the Commission should follow the Department's recommendation and advance the species to candidacy. Such action would be consistent with previous Commission rulings, would allow the Department to complete a year-long scientific review, and would provide the Commission with an opportunity to review all evidence so that the Commission can make an informed, final determination regarding this species. It would be a decision that demonstrates the Commission's commitment to relying on clear, transparent processes and the best available science.

Tricolored Blackbird Population Decline

Nearly ninety percent of Tricolored Blackbirds are located in California with smaller breeding colonies occurring in Nevada, Oregon, Washington, and Baja California (Beedy and Hamilton 1999). Tricolored Blackbirds are the last North American landbird that breeds in large colonies. The Passenger Pigeon and the Carolina Parakeet are two colonial North American bird species that, notably, were lost to extinction due to human activities. Tricolored Blackbirds nest predominantly in California's Central Valley, historically in native wetlands, but more recently in agricultural fields due to lack of available natural habitat. This combination of narrow geographic range and highly colonial breeding make Tricolored Blackbirds particularly susceptible to disturbance and habitat loss. Over ninety percent of the species' historic habitat, wetlands in the Central Valley, have been replaced with agriculture or urbanization. As a result of this large-scale habitat loss and ongoing mortality, Tricolored Blackbirds have declined significantly in the last 80 years.

Once numbering in the millions (Hamilton et al. 1995; Neff 1937), the Tricolored Blackbird population has declined to approximately 145,000 birds according to the 2014 statewide survey (Meese 2014). The triennial survey was developed and employed to track the Tricolored Blackbird population abundance and distribution. The most extensive and replicable surveys – conducted in 2008, 2011, and 2014 – show a steep decline in Tricolored Blackbird abundance. The Tricolored Blackbird population declined by 64 percent between 2008 and 2014, despite an increase in the number of sites surveyed (Meese 2014). Additionally, Graves et al. (2013) identified a 63 percent decline in mean breeding colony size from 1935 to 1975.

The Commission has been made aware of disparate interpretations of the data and criticism of survey methods. However, by any measure, the species has suffered very significant declines from its historic numbers and recent losses are a source of immense concern for the species' continued viability.

State and Federal Listing Process and Actions

Advancing Tricolored Blackbirds to candidacy would be consistent with the recommendation from the Department, the Commission's prior findings, and the U.S. Fish and Wildlife Service's 90-day findings. The following outline of recent California Fish and Game Commission and U.S. Fish and Wildlife Service actions show that making the Tricolored Blackbird a candidate for listing is appropriate.

1. A petition to list the Tricolored Blackbird was submitted to the Commission by the Center for Biological Diversity on October 8, 2014, which also requested emergency action to protect the species.
2. After the Commission acknowledged receipt of this petition the Department initiated a petition evaluation to determine whether there is sufficient information to indicate that the petitioned action "may be warranted." The Department determined that listing may be warranted and recommended that the Commission advance the Tricolored Blackbird as a candidate species and initiate the one-year scientific review period.

3. The Commission adopted emergency regulation to add the Tricolored Blackbird to the list of endangered species (pursuant to Section 2076.5, Fish and Game Code) at its December 3, 2014 meeting. The regulation was in effect for a six-month term from December 29, 2014 to June 30, 2015.
4. The Center for Biological Diversity submitted a petition to the United States Fish and Wildlife Service to list the Tricolored Blackbird as an endangered species pursuant to the Endangered Species Act (ESA), 16 U.S.C. §1531 et seq. The petitioner also requested that the species be considered for emergency listing.
5. At its June 2015 meeting, the Commission voted to reject advancing the Tricolored Blackbird as a candidate for listing, reversing course from its December 2014 emergency listing of the species. The Commissioners who voted to not proceed with the listing evaluation disregarded the California Department of Fish & Wildlife's (Department) findings and recommendation and the broad scientific consensus that the species is imperiled and that listing may be warranted.
6. The Center for Biological Diversity resubmitted to the Commission its petition and request for emergency action with a 2015 Addendum on August 19, 2015.
7. On September 18, 2015, the U.S. Fish and Wildlife Service announced its 90-day finding for the petition to list the Tricolored Blackbird, stating that listing under the Endangered Species Act may be warranted. The Service's 12-month review will result in a listing decision.

Both the Commission's Emergency Listing Findings and the Department's Petition Evaluation Support Making Tricolored Blackbird a Candidate for Endangered Species Listing

At its December 3, 2014 meeting in Van Nuys, California, the Commission voted to take emergency action to list the Tricolored Blackbird as an endangered species pursuant to Fish and Game Code section 2076.5. The Commission determined a biological emergency existed that justified their immediate action to list the Tricolored Blackbird as endangered under CESA based on the following findings of fact:

1. Rapid population decline despite increased survey effort.
2. Diminishing colony size.
3. Habitat destruction particularly in the San Joaquin Valley.
4. Voluntary programs were ineffective to eliminate mortality because not all farmers with tricolored blackbird colonies on their lands elected to participate.
5. Other potential threats exist from insecticide use that diminishes Tricolored Blackbird's insect food source and mortality from shooting of blackbirds on rice fields in early fall.
6. Listing provides needed protections and will direct agency focus towards Tricolored Blackbird recovery.

(Commission Statement of Proposed Emergency Regulatory Action, at 1-2)

After more than five months of reviewing all available information, the Department determined that listing "may be warranted" and recommended that the Commission advance the Tricolored Blackbird as a candidate species and initiate the one-year scientific review period. The Department came to this recommendation after preparing a petition evaluation in response to the October 8, 2014 petition submitted to the Commission by the Center for Biological Diversity. Their evaluation, in accordance with CESA, "delineat[ed] the categories of information required in the petition, evaluat[ed] the sufficiency of information in the petition, and incorporate[ed] additional relevant information that the Department possessed or received during the review period" (Memorandum from Charlton H. Bonham, May 13, 2015). The Department is to be commended for taking a deliberative approach that followed established procedures and law.

The Department determined that the petitioned action may be warranted based on the degree and immediacy of the threats faced by the species, including:

1. Historical and continuing loss of nesting substrate, including wetlands, Himalayan blackberry (*Rubus discolor*) patches, upland weedy vegetation, and marsh vegetation in reservoirs and ponds.
2. Historical and continuing loss of uplands used for foraging.
3. Declines in tricolored blackbird populations in the past 80 years, including ongoing declines documented since 2008.
4. Significant, large-scale reproductive failures in tricolored blackbird colonies nesting in agricultural areas of the San Joaquin and Sacramento valleys.
5. Limited, inconsistent, and sometimes ineffective protection of colonies nesting in agricultural settings.
6. Ineffectiveness of existing regulatory mechanisms to protect tricolored blackbird breeding habitat and nesting colonies on privately-owned land.
7. Predation by the black-crowned night heron (*Nycticorax nycticorax*), cattle egret (*Bubulcus ibis*), common raven (*Corvus corax*), coyote (*Canis latrans*), and other predators, especially in areas in which predator populations may be artificially high due to concentrated food sources.

(CDFW Evaluation of the Petition, at 2)

The Department provided an objective scientific analysis and recommendation in its petition evaluation consistent with the consensus of researchers. When the Commission voted not to move the Tricolored Blackbird to candidacy at its June 2015 meeting it did not make any findings that contravened the Department's evaluation.

Uninterrupted Protections for Tricolored Blackbirds Are Needed

As discussed above, the Commission contravened its own prior findings and the recommendation of the Department when it failed to find that listing may be warranted at its June meeting. Moreover, the Commission appeared to undervalue the protections provided by CESA, which this year alone prevented the unnecessary destruction of two sizeable colonies. If the Commission's mission is truly to safeguard California's fish and wildlife for future

generations, then it must act to follow the best available science that the species warrants a one-year review and then consideration for full listing.

The goal of Audubon California, along with the researchers, agencies, conservation organizations and industry groups in the Tricolored Blackbird Working Group, is population recovery. Listing is a tool to protect vulnerable breeding colonies and direct agency efforts towards providing safe, long-term habitat. Audubon and our partners remain committed to collaboration to achieve recovery. Please give the Department an opportunity to fully review the scientific information on this species to recommend whether or not full listing is needed. This would also give the Commission the opportunity to consider full information on the species and input from a wide range of stakeholders.

Thank you for consideration of our comments. Our prior comment letters are attached hereto for additional reference. If you would like to discuss this matter further, please do not hesitate to contact me at (916) 737-5707 or via email at mlynes@audubon.org.

Respectfully submitted,

Michael Lynes
Director of Public Policy
Audubon California

Literature Cited

Beedy, E. C. and W. J. Hamilton III. 1999. Tricolored Blackbird (*Agelaius tricolor*). Account no. 423, 24 pp, *in* A. Poole and F. Gill (eds.), The Birds of North America, Philadelphia PA.

California Department of Fish and Wildlife. March 2015. Evaluation of the Petition from the Center for Biological Diversity to List Tricolored Blackbird (*Agelaius tricolor*) as Endangered under the California Endangered Species Act. Report to the Fish and Game Commission.

California Fish and Game Commission. December 2014. Statement of Proposed Emergency Regulatory Action: Emergency Action to Amend Section 670.5, Title 14, California Code of Regulations, Re: Animals of California Declared to be Endangered or Threatened.

Graves, E.E., M. Holyoak, R.T. Kelsey, and R.J. Meese. 2013. Understanding the contribution of habitats and regional variation to long-term population trends in tricolored blackbirds. Ecology and Evolution 2013; 3(9): 2845-2858.

Hamilton, W. J., III, L. Cook, and R. Grey. 1995. Tricolored blackbird project 1994. Report prepared for U. S. Fish and Wildlife Service, 69 pp + append.

Neff, J. 1937. Nesting distribution of the tricolor-colored redwing. Condor 39(2):61-81.

Meese, R. J. 2014. Results of the 2014 Tricolored Blackbird Statewide Survey. U.C. Davis.

Memorandum from Charlton H. Bonham to California Fish and Game Commission. March 13, 2015. Petition from the Center for Biological Diversity to list the Tricolored Blackbird as Endangered under the California Endangered Species Act.

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July 23, 2015

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RE: Tricolored Blackbird Listing Review Process. August 5, 2015 Agenda Item 21. Receive request from Center for Biological Diversity to reconsider decision on whether listing tricolored blackbird (*Agelaius tricolor*) as a threatened or endangered species may be warranted.

Dear Commissioners:

Audubon California writes on behalf of its members to urge the California Fish & Game Commission to reconsider its June 2015 decision to deny the petition to list the Tricolored Blackbird as an endangered or threatened species under the California Endangered Species Act (CESA). The Commission's decision defied its prior findings and was not made in accordance with the law.

At its June 2015 meeting, the Commission voted to reject advancing the Tricolored Blackbird as a candidate for listing, reversing course from its December 2014 emergency listing of the species. The Commissioners who voted to not proceed with the listing evaluation ignored the California Department of Fish & Wildlife's (Department) objective findings and recommendation and the broad scientific consensus that the species is imperiled.

Prior to the June vote, Commission staff explained that the threshold to accept a petition and advance a species to candidacy is low. Accepting the petition would initiate a year-long, scientific-based review of the subject species. At the end of that year, the Commission would consider the available scientific evidence, the Department's recommendation, and the input of stakeholders to then make a final determination as to whether or not the species ought to be listed.

Audubon California understands that listing a species demands a further commitment from the Department and can impose significant responsibilities on some private landowners. We do not advocate for this listing lightly and only do so after decades of other efforts that have not stemmed the species' decline. The listing does not represent an end to collaborative efforts, including partnerships with the agricultural industry and members of the Tricolored Blackbird Working Group, which are more necessary than ever if the species is to remain viable.

For this reason and those listed below, the Commission should reconsider its June decision, follow the Department's recommendation, and advance the species to candidacy. Such action would be consistent with previous Commission rulings, would allow the Department to complete a year-long scientific review, and would provide the Commission with an opportunity to review all evidence so that the Commission can make an informed, final determination regarding this species. It would be a decision that demonstrates the Commission's commitment to relying on clear, transparent processes and the best available science.

Tricolored Blackbird Population Decline

Nearly ninety percent of Tricolored Blackbirds are located in California with smaller breeding colonies occurring in Nevada, Oregon, Washington, and Baja California (Beedy and Hamilton 1999). It is the last North American landbird that breeds in large colonies. The Passenger Pigeon and the Carolina Parakeet are two colonial North American bird species that, notably, were lost to extinction due to human activities. Tricolors nest predominantly in California's Central Valley, historically in native wetlands, but more recently in agricultural fields due to lack of available natural habitat. This combination of narrow geographic range and highly colonial breeding make Tricolored Blackbirds particularly susceptible to disturbance and habitat loss. Over ninety percent of the species' historic habitat, wetlands in the Central Valley, have been replaced with agriculture or urbanization. As a result of this large-scale habitat loss and ongoing mortality, Tricolored Blackbirds have declined significantly in the last 80 years.

Once numbering in the millions (Hamilton et al. 1995; Neff 1937), the Tricolored Blackbird population has declined to approximately 145,000 birds according to the 2014 statewide survey (Meese 2014). The triennial survey was developed and employed to track the Tricolored Blackbird population abundance and distribution. The most extensive and replicable surveys – conducted in 2008, 2011, and 2014 – show a steep decline in Tricolored Blackbird abundance. The Tricolored Blackbird population declined by 64 percent between 2008 and 2014, despite an increase in the number of sites surveyed (Meese 2014). Additionally, Graves et al. (2013) identified a 63 percent decline in mean breeding colony size from 1935 to 1975. By any measure, the species has suffered very significant declines from its historic numbers and recent losses are a source of immense concern for the species' continued viability.

The Commission Findings Supported Emergency Protections

At its December 3, 2014 meeting in Van Nuys, California, the Commission voted to take emergency action to list the Tricolored Blackbird as an endangered species pursuant to Fish and Game Code section 2076.5. The Commission determined a biological emergency existed that justified their immediate action to list the Tricolored Blackbird as endangered under CESA based on the following findings of fact:

1. Rapid population decline despite increased survey effort.
2. Diminishing colony size.
3. Habitat destruction particularly in the San Joaquin Valley.

4. Voluntary programs were ineffective to eliminate mortality because not all farmers with tricolored blackbird colonies on their lands elected to participate.
5. Other potential threats exist from insecticide use that diminishes Tricolored Blackbird's insect food source and mortality from shooting of blackbirds on rice fields in early fall.
6. Listing provides needed protections and will direct agency focus towards Tricolored Blackbird recovery.

(Commission Statement of Proposed Emergency Regulatory Action, at 1-2)

There was no new information between the Commission's findings in December 2014 and its June 2015 vote to reject the petition and not advance the species to candidacy. Moreover, the Commission did not make any findings to support its June 2015 decision, let alone findings that cast doubt upon its prior findings that supported the emergency listing.

The Department of Fish and Wildlife Petition Evaluation Recommended that the Commission Accept the Petition

After more than five months of reviewing all available information, the Department determined that listing "may be warranted" and recommended that the Commission advance the Tricolored Blackbird as a candidate species and initiate the one-year scientific review period. The Department came to this recommendation after preparing a petition evaluation in response to the October 8, 2014 petition submitted to the Commission by the Center for Biological Diversity. Their evaluation, in accordance with CESA, "delineat[ed] the categories of information required in the petition, evaluat[ed] the sufficiency of information in the petition, and incorporate[ed] additional relevant information that the Department possessed or received during the review period" (Memorandum from Charlton H. Bonham, May 13, 2015). The Department is to be commended for taking a deliberative approach that followed established procedures and law.

The Department determined that the petitioned action may be warranted based on the degree and immediacy of the threats faced by the species, including:

1. Historical and continuing loss of nesting substrate, including wetlands, Himalayan blackberry (*Rubus discolor*) patches, upland weedy vegetation, and marsh vegetation in reservoirs and ponds.
2. Historical and continuing loss of uplands used for foraging.
3. Declines in tricolored blackbird populations in the past 80 years, including ongoing declines documented since 2008.
4. Significant, large-scale reproductive failures in tricolored blackbird colonies nesting in agricultural areas of the San Joaquin and Sacramento valleys.
5. Limited, inconsistent, and sometimes ineffective protection of colonies nesting in agricultural settings.
6. Ineffectiveness of existing regulatory mechanisms to protect tricolored blackbird breeding habitat and nesting colonies on privately-owned land.
7. Predation by the black-crowned night heron (*Nycticorax nycticorax*), cattle egret (*Bubulcus ibis*), common raven (*Corvus corax*), coyote (*Canis latrans*), and other

> predators, especially in areas in which predator populations may be artificially high due to concentrated food sources.

(CDFW Evaluation of the Petition, at 2)

The Department provided an objective scientific analysis and recommendation in its petition evaluation consistent with the consensus of researchers. Again, the Commission did not make any findings at its June 2015 meeting that contravene the Department's evaluation.

The Commission's June 2015 Vote Is Invalid

The Commission's vote to reject the petition did not follow the standards set forth in *Center for Biological Diversity v. California Fish and Game Commission* (2008) 166 Cal.App.4th 597 (CBD) or *Natural Resources Defense Council v. California Fish and Game Commission* (1994) 28 Cal.App.4th 1104, 1114. The requisite standard of proof to be used by the Commission in deciding whether listing may be warranted (i.e. whether to accept or reject a petition) was described in CBD as such:

> As we explained in *Natural Resources Defense Council* [citation], "the term 'sufficient information' in section 2074.2 means that amount of information, when considered with the Department's written report and the comments received, that would lead a reasonable person to conclude the petitioned action may be warranted." The phrase "may be warranted" "is appropriately characterized as a 'substantial possibility that listing could occur.'" [citation] "Substantial possibility," in turn, means something more than the one-sided "reasonable possibility" test for an environmental impact report but does not require that listing be more likely than not.

(*Center for Biological Diversity*, at pp. 609-10 (internal citations omitted))

If the Commission's decision is challenged, a reviewing court will apply a "substantial evidence" test; given that the Commission failed to make any new findings and contravened its own prior findings, the best available scientific evidence, and the Department's recommendation, the Commission's vote will not survive scrutiny in court.

Moreover, the Commissioners appeared to misunderstand the item before them on the June 2015 calendar. The vote before the Commission in June was whether or not the listing may be warranted and if a full year review of the scientific information by the Department was warranted; however it is clear from remarks made by Commissioners who voted against candidacy during the hearing that they based their vote on potential impacts of the listing on farmers and a general antipathy toward listing under CESA. The absence of a statement of findings that supports the June vote also indicates that the Commissioners had no basis for their vote to reject the Department's recommendation to advance the species to candidacy.

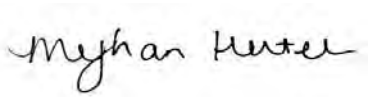
The Commission Should Reconsider its June 2015 Ruling and Advance the Tricolored Blackbird to Candidacy

Audubon California requests that the Commission reconsider the Department's recommendation to advance the Tricolored Blackbird to candidacy. As discussed above, the Commission contravened its own prior findings and the recommendation of the Department. Moreover, the Commission appeared to undervalue the protections provided by CESA, which this year alone prevented the unnecessary destruction of two sizeable colonies. If the Commission's mission is truly to safeguard California's fish and wildlife for future generations, then it must act to follow the best available science that the species warrants a one-year review and then consideration for full listing.

The goal of Audubon California, along with the researchers, agencies, conservation organizations and industry groups in the Tricolored Blackbird Working Group, is population recovery. Listing is a tool to protect vulnerable breeding colonies and direct agency efforts towards providing safe, long-term habitat. Audubon and our partners remain committed to collaboration to achieve recovery. Please give the Department an opportunity to fully review the scientific information on this species to recommend whether or not full listing is needed. This would also give the Commission the opportunity to consider full information on the species and input from a wide range of stakeholders.

Thank you for consideration of our comments. If you would like to discuss this matter further, please do not hesitate to contact me at (916) 737-5707 or via email at mhertel@audubon.org.

Respectfully submitted,



Meghan Hertel
Director Working Lands

Literature Cited

Beedy, E. C. and W. J. Hamilton III. 1999. Tricolored Blackbird (*Agelaius tricolor*). Account no. 423, 24 pp, *in* A. Poole and F. Gill (eds.), The Birds of North America, Philadelphia PA.

California Department of Fish and Wildlife. March 2015. Evaluation of the Petition from the Center for Biological Diversity to List Tricolored Blackbird (*Agelaius tricolor*) as Endangered under the California Endangered Species Act. Report to the Fish and Game Commission.

California Fish and Game Commission. December 2014. Statement of Proposed Emergency Regulatory Action: Emergency Action to Amend Section 670.5, Title 14, California Code of Regulations, Re: Animals of California Declared to be Endangered or Threatened.
Graves, E.E., M. Holyoak, R.T. Kelsey, and R.J. Meese. 2013. Understanding the contribution of habitats and regional variation to long-term population trends in tricolored blackbirds. Ecology and Evolution 2013; 3(9): 2845-2858.

Hamilton, W. J., III, L. Cook, and R. Grey. 1995. Tricolored blackbird project 1994. Report prepared for U. S. Fish and Wildlife Service, 69 pp + append.

Neff, J. 1937. Nesting distribution of the tricolor-colored redwing. Condor 39(2):61-81.

Meese, R. J. 2014. Results of the 2014 Tricolored Blackbird Statewide Survey. U.C. Davis.

Memorandum from Charlton H. Bonham to California Fish and Game Commission. March 13, 2015. Petition from the Center for Biological Diversity to list the Tricolored Blackbird as Endangered under the California Endangered Species Act.

Audubon CALIFORNIA

November 20, 2014

Via Email and for Delivery by Hand
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RE: Emergency Listing of the Tricolored Blackbird

Dear Commissioners:

Audubon California writes on behalf of its members in California to strongly support the petition ("Petition") to list the Tricolored Blackbird (*Agelaius tricolor* or "tricolor") as endangered under the California Endangered Species Act (CESA), Cal. Fish & Game Code § 2051 *et seq*. The species has been in a well-documented decline for decades and warrants the legal protections provide by the CESA.

In rejecting the 2004 petition to list the Tricolored Blackbird, the California Fish & Game Commission ("Commission") found that petition lacked "sufficient information in the categories of population trend, abundance, and degree and immediacy of threat to find that the petitioned action may be warranted." (California Fish & Game Comm'n Findings, May 4, 2005, at 7 ("2005 Commission Findings")) The Commission further found that the existing regulatory framework provided adequate protection for the species. (*Id*.)

As discussed further below, the Petition includes results from the best available science, including a population estimate of 145,135 tricolors remaining in California and a population decline off 44% since 2011 and 63% overall since 2008. (*See* Petition, at 11-12, 14; *see also* Meese, R. 2014. *Results of the Tricolored Blackbird Statewide 2014 Survey*. UC Davis, at 6-7) The Petition also describes the degree and immediacy of the threat by including information about the significant challenges to the species' survival, namely the lack of necessary habitat, threats to large nesting colonies, and other factors that are resulting in tricolor mortality outpacing its reproductive success. Moreover, the Petition demonstrates that the existing statutory framework has failed to conserve the species and that CESA will provide new tools to ensure the species does not go extinct.

Opponents to the petition may argue that the steep decline in the population in recent years may be attributed to a normal population cycle or impacts from the drought. However the population has dwindled from millions to approximately 150,000 within less than a century, which cannot be accounted for by natural population cycles. Moreover, it is reasonable to expect the Commission to find that the causes of the tricolor's decline—primarily habitat loss and disturbance, which may be exacerbated by other factors such as drought—are going to persist or

worsen with time and that the smaller tricolor population is likely to be less resilient to these adverse impacts.

Current voluntary efforts and the existing regulatory framework have failed to prevent the steep decline of the species. Unless further, rigorous action is taken the species will continue to be pushed toward extinction.

I. THE PETITION PROVIDES CREDIBLE DATA REGARDING THE TRICOLORED BLACKBIRD POPULATION DECLINE TO SUPPORT LISTING.

The Commission determines whether a species should be listed as endangered on a "case-by-case basis after evaluating and weighing all the biological and management information before it." (2005 Findings, at 1). The Commission weighs available information in the petition and other sources for and against listing and should list the species if a reasonable person would find that there is a "substantial possibility" that the listing should occur. (*See Natural Resources Defense Council vs. Cal. Fish & Game Comm'n* (1994) 28 Cal. App.4th 1104, 1126; *see also* 2005 Findings, at 3) A fundamental question that a successful petition for listing must answer is whether there is "sufficient scientific information" to estimate the species' population size and, thereby, assess the extinctions risks. (*See* 2005 Findings, at 4)

The Petition includes a thorough review of past and recent studies of the tricolor's population abundance and trends. (*See* Petition, at 6-14) It improves upon the data available at the time of the 2004 petition because it includes the studies conducted in 2008, 2011, and 2014, which were substantially more rigorous and comparable than previous efforts. Based on the results of those studies and ancillary information, a reasonable person would conclude that "sufficient scientific information" exists to estimate the needed population metrics to establish that there is a "substantial possibility" that the listings should occur.

A. The 2008, 2011, and 2014 Surveys Indicate a Steep and Unsustainable Decline in the Tricolored Blackbird Population.

As the Petition reports, the Tricolored Blackbird population in California has declined by approximately 44% since 2011 and approximately 63% since 2008. (Petition, at 11-12; Meese, R. 2014. *Results of the Tricolored Blackbird Statewide 2014 Survey*. UC Davis)[1] Overall, the species has declined in the Central Valley by 68% from 2008 to 2014. (*Id.*, at 9) In 2014, observers counted 145,135 tricolors at 802 locations throughout California, a decline from 258,000 birds in 2011 and 395,000 in 2008. (*Id.*, at 6-7). By any measure, the species has declined dramatically since the 1930s, when it was estimated to breed in California in the millions. (*Id.*, at 3, citing Neff, J. A. 1937. *Nesting distribution of the tri-colored red-wing*. Condor 39:61–81).[2]

[1] Available at http://tricolor.ice.ucdavis.edu/content/results-2014-tricolored-blackbird-statewide-survey.
[2] Early population estimates in the 1930s were conducted by Johnson A. Neff, a biologist with the U.S. Bureau of Biological Survey, with state and county wildlife and agricultural biologists. From 1930 to 1936, Neff studied the distribution, population, economic status and control of Tricolored Blackbirds throughout the Central Valley (The

Opponents to the petition are likely to argue that survey methods are inadequate to fully capture all occurrences of the tricolor throughout the state. While all scientific study must acknowledge some inherent uncertainty, the 2008, 2011, and 2014 surveys represent an impressive and comprehensive effort that included, most recently, over 180 trained observers visiting 802 sites in 41 counties.

1. Observations at the largest colonies indicate a significant population decline.

The degree of the decline is perhaps most simply illustrated with a review of the declines at the largest colonies in California. These colonies comprise the vast majority of the tricolor population and are the least likely to be missed by observers. (*See* Meese (2014), at 12-13) Moreover, given the tricolor's colonial nesting biology, the largest colonies are likely key to the species' continued survival.

According to Dr. Meese's 2014 report, the number of tricolors at California's ten largest colonies have declined steeply. In 2008, 306,000 birds, or 77% of the total count, were observed at the ten largest colonies. In 2011, that number fell to 208,800 birds, or 81% of the total count, where observed at the ten largest colonies. In 2014, those numbers fell to 93,000 birds, or 64% of the total count. (2014 Report, at 11)

The reduced number of birds at the ten largest colonies can be attributed to the overall population decline and to a wider dispersion of breeding adults, perhaps in response to the drought. While the exact reason cannot be pinpointed without further study, we do know that smaller colonies may be more susceptible to reproductive failure and that continuing fragmentation of large colonies may be an indicator of overall decline of the species. (*See* Gustafson, J. R., and D. T. Steele. 2004 (Sep 15.). Evaluation of petition from Center for Biological Diversity to list Tricolored Blackbird (*Agelaius tricolor*) as endangered. Calif. Dep. of Fish and Game, Habitat Conservation Planning Branch, Sacramento, 42 pp. + append, at 21 (noting similarities in the tricolor's decline to those of species such as the Passenger Pigeon and the Carolina Parakeet))

The Tricolored Blackbird, like the Passenger Pigeon and most colonial-nesting birds, evolved to rely on large colonies in order to subsist. It is likely that the tricolor, again like the Passenger Pigeon, could continue to decline as large colonies fragment and can no longer be formed. As Paul Ehrlich explains:

> The Passenger Pigeon once nested in colonies of billions of birds covering many square miles. **When its numbers were reduced to the point at which large colonies could no longer be formed, it declined to extinction in spite of the presence of abundant habitat and food and the absence of further human**

The Tricolored Blackbid Working Group (2009) *Conservation Plan for the Tricolored Blackbird*, available at http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/FocalSpecies/Plans/TCBL.pdf. Neff (1937) estimated a population of 2-3 million Tricolored Blackbirds, residing in wetlands in coastal and Central Valley locations. Large breeding colonies were observed in the 1930s that contained Tricolor adults numbering greater than the current global population.

> **molestation.** In large colonies, the birds presumably saturated local predators; nests of scattered survivors simply may have been too vulnerable to predation.

(Erhlich, at al. 1988. *Coloniality*. Birds of Stanford, Stanford University. Available at http://web.stanford.edu/group/stanfordbirds/text/essays/Coloniality.html, emphasis added)

At this point, we know that the tricolor lacks "abundant habitat and food" and will continue to undergo "further human molestation", which indicates that the decline of large colonies is perhaps even more worrisome than it might have been for the Passenger Pigeon. The sensitivity of the tricolor as a colonial breeder, coupled with the decline in the large colonies and ongoing stresses, underlines the immediacy of the threat to the species.

B. The 2008, 2011 and 2014 Survey Methods Are Robust and Produce Credible, Replicable Results.

At its root, the Commission's determination to reject listing the Tricolored Blackbird in 2005 appears to have rested, in large part, on its determination that the 1994, 1997, and 2000 surveys were inadequate to estimate population abundance and trend and, therefore, to assess the degree and immediacy of the threats to the species. (2005 Findings, at 5-7).Specifically, the Commission points to an observation of approximately 136,000 Tricolored Blackbirds nesting on the Delevan National Wildlife Refuge in 2004, with an estimated number of 97,000 produced young, as undermining previous estimates that put the total population of tricolors at approximately 162,000 birds in 2000 (*See id.*)

In assessing the adequacy of the 2004 survey, the Commission seemed persuaded by Green and Edson's summary of that year's survey, which acknowledged that it was inadequate to estimate the tricolor population as a whole and opined:

> A more accurate estimate would require more surveyors covering more potential tricolored blackbird nesting habitat over more of the breeding season, or using new methods combining intensive area sampling and double-observer methods[.]

(2005 Findings, at 5, quoting Green and Edson. (2004) *The 2004 Tricolored Blackbird April Survey*, Central Valley Bird Club Bulletin, Spring/Summer 2004, Vol. 7, Nos. 2 & 3)

The survey method employed in 2008, 2011, and 2014 was purposefully improved over the methods that caused confusion in the Commission's 2005 Findings. The Tricolored Blackbird Working Group—which includes the top biologists studying and conserving the species—acknowledged that better survey methods were necessary to meaningful contribute to monitoring and conserving the species. (*See* Tricolored Working Group. 2009. *Conservation Plan for the Tricolored Blackbird*, at 14-16). The survey method employed since 2008 set out to meet those goals by providing greater survey coverage over a longer period to better assess the species' population status. (Meese (2014), at 12)

Not only are the most recent surveys an improvement over prior efforts, but they have become increasingly comprehensive since 2008. Since 2008, the number of observed nesting sites

included in the survey has increased from 361 to 802. (Meese (2014), at 12). So, in the current survey period, more observers were out documenting the species in more locations than ever before. Despite the expanded effort, a worrisome decline in the population has been observed.

In other words, the surveys since 2008 improved upon the prior surveys significantly. If, at this point, opponents of the petition were to argue that the surveys since 2008 are inadequate, one must ask what, if any, protocol would meet the standard to provide adequately, credible scientific information on the tricolor population and trend. Healthy skepticism about any scientific study is necessary, but it should not give rise to an over-abundance of caution and timidity in the face of such a significant decline in a species' population size.

II. THE PETITION DESCRIBES THE DEGREE AND IMMEDIACY OF THE THREAT TO A SUSTAINABLE TRICOLORED BLACKBIRD POPULATION.

As a colonial nesting bird, the Tricolored Blackbird may be more vulnerable to extinction as its population declines than other species. (Gustafson, J. R., and D. T. Steele. 2004 (Sep 15.). Evaluation of petition from Center for Biological Diversity to list Tricolored Blackbird (*Agelaius tricolor*) as endangered. Calif. Dep. of Fish and Game, Habitat Conservation Planning Branch, Sacramento, 42 pp. + append, at 16) The declines at the largest colonies may indicate an overall degradation of the species' strongholds.

While increased reproductive success at some smaller colonies, such as those found in foothill regions, may be a source of optimism, there is no evidence those colonies are successful enough to sustain the significant population decline that is occurring in the Central Valley. (*See* Meese (2014, at 12-13; *see also* Meese (2013), at 103 (attributing high nesting success at a study site to the "extraordinary abundance" of forage insects on an adjacent rangeland) If anything, smaller colonies may be more vulnerable to predation and environmental impacts over time, more easily leading to local extirpation. (Gustafson and Steele (2004), at 21)

A. The Population Decline Presents an Immediate and Serious Threat to the Continued Viability of the Tricolored Blackbird.

In its 2005 Findings, the Commission determined that the 2004 petition did not adequately describe the degree and immediacy of the threat. (2005 Findings, at 7) Much of this determination depended on the Commission's dismissal of the 1994, 1997, and 2000 surveys as inadequate to estimate population abundance and trend, which prevented an assessment of the degree and immediacy of the extinction threat. (*Id.*, at 5-7)

As discussed above, the survey method has significantly improved since the earlier surveys. Not only is it much more comprehensive and reproducible, but it can provide a better estimate of overall population abundance. Moreover, the observed decline is so significant, it cannot be reasonably written off as an artifact of annual variation or data collection quality control.

1. The Tricolored Blackbird has already been extirpated from much of its historic range and is in danger of becoming extinct throughout a significant portion of its remaining range in California.

As an initial matter, Audubon notes that there can be no reasonable argument that the species has already suffered a very significant reduction in available habitat in California. Fish and Game Code Section 2062 states that a species is a candidate for listing if it "is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, over exploitation, predation, competition, or disease." With over 90% of the state's native wetlands lost, and the unpredictability of cultivated fields as nesting sites, the tricolor's preferred nesting sites have largely disappeared, been fragmented, or pose risks due to harvest practices. Therefore, the Commission should consider the state of the species' current range in the context of its historic span.

2. Given the Tricolored Blackbird's steep population decline, it is threatened with extinction in the foreseeable future absent special management efforts.

Fish and Game Code § 2067 states that a species is a candidate for listing if "not presently threatened with extinction [but] is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by [CESA]…" Clearly, the Tricolored Blackbird meets this criteria, given the precipitous decline recorded since 2008 and the ongoing challenges it faces, including loss of habitat, disruption of nesting sites, and climate change.

In 2005, the Commission criticized the 2004 petition for failing to demonstrate the "degree and immediacy" of the threat to the continued existence of the Tricolored Blackbird. (2005 Commission Findings, at 6-7) Specifically, the Commission found:

> Instead of demonstrating actual threats to the survival of tricolors, the petitioners provide general and vague statements that they say may have impacts to tricolor survival. There are no numbers, no facts and no actual demonstration of harm, much less a threat to the overall survival of the species.

(*Id*. at 6) The Petition offers several examples of large-scale mortality for the species, including from harvest practices, environmental contamination, and predation. Clearly, these kinds of threats—and additional challenges such as drought and storms—will persist, creating an ongoing and collective threat to the survival of the species.

B. The Tricolored Blackbird Is Vulnerable to Reproductive Failure and Lack of Recruitment to Maintain its Population.

Loss of habitat and disturbance of nesting colonies is likely the primary cause of the tricolor's overall decline. In its 2005 findings, the Commission noted that loss of nesting sites due to harvest practices could potentially be a significant problem for the species, but it largely dismissed the concern because of a lack of survivorship information which, if available, would

provide context about the threat of nesting destruction. (2005 Findings, at 7) In other words, if the species has a high rate of adult survivorship, low reproductive success may be less of a concern.

In 2013, at least one study indicated that tricolor reproductive success in the Central Valley is "chronically low". (Meese, R. 2013. *Chronic low reproductive success of the colonial tricolored blackbird from 2006 to 2011*. Western Birds 44:98–113, at 103) The 2013 study reported that several factors can contribute to large-scale reproductive failure in tricolors, including scarcity of foraging habitat, predation, and silage harvest. (*Id*., at 108) The "chronically low" reproductive success was identified as a probable contributor to the significant decline observed in tricolors between 2008 and 2011. (*Id*., at 109)

1. The Tricolored Blackbird is extremely vulnerable to significant reproductive disruption as grain fields are harvested.

It is well known that Tricolored Blackbirds often nest on grain fields associated with dairies, which may often be harvested before the tricolors' nesting efforts are complete. (Meese (2014), at 12-13) It has also been well-documented that major tricolor colonies have been destroyed by harvests. The Petition provides a sobering list of the estimated number of nests destroyed in silage fields, totally more than 1 million nests since 1993. (Petition, at 40, Table 4) These numbers warrant further investigation in order to best understand nest loss as well as the efficacy of buyout programs.

The MBTA does not provide a regulatory framework for protecting birds from habitat destruction. While CESA has an agricultural exemption for "accidental" take during regular agricultural activities, it can provide more tools for managing grain fields to avoid unnecessary impacts to nesting tricolors.

2. Other sources of mortality are poorly understood, but are likely significant and can be avoided.

The Petition recounts and provides scientific sources regarding other sources of mortality for the tricolor are known but poorly quantified. (Petition, at 42-48; Meese (2014), at 12) They are significant, however, to the Commission's consideration of the issue because (1) anthropogenic sources can be identified, better studied, and managed and (2) natural sources need to be understood so that a reasonable population target and management practices are in place to help the species survive extended, natural sources of mortality and reproductive failure.

a. Anthropogenic mortality can have significant negative impacts on tricolor populations, but management practices can reduce or eliminate many of these causes.

Herbicides and pesticides are known sources of significant direct mortality and reproductive failure for passerines, but measuring the extent of the mortality is difficult. (*See* Mineau, Pierre (2005) *Direct Losses of Birds to Pesticides – Beginnings of a Quantification*, USDA Forest

Service Gen. Tech. Rep. PSW-GTR-191. 2005, at 1065, 1069)[3] Tricolors may be particularly sensitive to pesticides and herbicides, since it could reduce forage insects and nesting substrates, respectively.

Listing pursuant to CESA would deter activities that result in take of the species. With the greater emphasis on conservation provided by CESA, stakeholders would be better motivated to identify sources of anthropogenic mortality, quantify their impacts, and avoid them whenever possible.

b. Natural sources of mortality can be significant and demonstrate the need to maintain a large, resilient population if the species is to survive.

Successful species develop reproductive strategies that permit survival during times of intense, natural stress. For the tricolor, its dependence on large, colonial nesting can provide immense benefits, but the strategy can falter if overall population size decreases to a level where it cannot absorb naturally-caused mortality or reproductive failure over an extended period of time.

For example, Storms can be the source of significant reproductive failure, with the potential to negatively affect large colonies. (Petition, at 44, citing Meese (2010), at 11)) The potential for large-scale failure due to storms underlies the need for a large, resilient population that can absorb such naturally-caused mortality or reproductive failure events.

Likewise, droughts, such as the one we are currently weathering, can depress available insect populations for forage and reduce water necessary for nesting sites. The species evolved to endure drought conditions in California, but, again, we do not know the minimum population threshold for the species to survive an extended drought. This question is even more pressing given the likelihood that drought is the "new normal" in California given climate change and the fact that the 20th century was wetter than prior periods.

Because human activities have caused such a severe depression in the tricolor's overall population, it is reasonable to conclude that we have made the species less able to persist through extended naturally-caused mortality and reproductive failure events.

III. LISTING OF THE TRICOLORED BLACKBIRD WOULD SIGNIFICANTLY CONTRIBUTE TO STABILIZING AND RECOVERY THE POPULATION.

A. The Existing Regulatory Framework Is Inadequate to Conserve the Tricolored Blackbird.

In 2005, the Commission rejected the petition, in part, because it determined that the then-current regulatory framework – primarily the Migratory Bird Treaty Act and the Fish & Game Code – provided adequate protection for the species. Given the continued destruction of major nesting

[3] Available at http://www.fs.fed.us/psw/publications/documents/psw_gtr191/psw_gtr191_1065-1070_mineau.pdf

colonies and the decline of the species' population, it can reasonably be concluded that the current legal protections are not adequate for maintaining a stable populations of tricolors.

The Ninth Circuit Court of Appeals had held that the MBTA is intended to apply to activities that directly take migratory birds, such as the "physical conduct of the sort engaged in by hunters and poachers, conduct which was undoubtedly a concern at the time of the statute's enactment in 1918." (952 F.2d 297, 302 (9th Cir. 1991)). The Ninth Circuit has declined to apply the MBTA to incidences of habitat destruction. (*Id.*)

Likewise, there is no record of the California Department of Fish & Wildlife enforcing the existing Fish & Game Code provisions to protect nesting tricolors. Given the Department's great reluctance to use existing laws to protect migratory birds that are not listed, it is unreasonable to expect that the Department will use the existing statutory framework to protect tricolors.

The tricolor has demonstrated flexibility in choosing nesting sites and can successfully reproduce in non-native areas that provide adequate nesting substrates and adjacent foraging opportunities. The species' flexibility creates conservation opportunities and a source of optimism that conservation efforts—combined with the protections provided by CESA—can successfully stabilize the species, contribute to its recovery, and ultimately meet the goal of delisting it.

CONCLUSION

For the foregoing reasons, Audubon California strongly supports the Center for Biological Diversity's petition to list the Tricolored Blackbird as endangered pursuant to CESA. The Petition reports the best available data that ably describes the population abundance, distribution, and trend of the tricolor in California. The Petition also explains the immediacy and degree of the threat, given the species' steep decline and extreme vulnerability to anthropogenic and natural sources of mortality and reproductive failure.

Audubon understands the Commission's caution in proceeding with listings under CESA. The additional statutory and regulatory framework can create burdens on private land owners, business, and state agencies. We also will continue to work with all interested stakeholders in implementing voluntary conservation measures to stabilize and recover the species.

However, given the population's vulnerability and the additional tools provided by CESA, the Commission should proceed with the listing now in order to protect birds during the 2015 nesting season.

Respectfully submitted,

Michael Lynes
Director of Public Policy
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August 5, 2014

Via Email and for Delivery by Hand
California Fish and Game Commission
1416 Ninth Street, Room 1320
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RE: Emergency listing of the Tricolored Blackbird under Fish & Game Code §2076.5

Dear Commissioners:

Audubon California and Defenders of Wildlife write to support the listing of the Tricolored Blackbird (*Agelaius tricolor*) as an endangered species under the California Endangered Species Act (CESA) and to thank the California Fish & Game Commission for considering this action at its August 6, 2014 meeting. It is time to list the species before its population declines to levels that make recovery impossible.

Audubon California and Defenders of Wildlife have worked with partners—including researchers, agencies, NGOS, and farmers—to study and conserve the Tricolored Blackbird for decades. Despite the significant efforts of so many, and progress on some fronts, the Tricolored Blackbird population has continued to decline.

Listing would provide meaningful protections to tricolors, prioritize its conservation for wildlife managers and their partners, and generate additional funding for conservation efforts. Past efforts have not sufficed and this action, while significant, is necessary if we are committed to the survival of the species.

We understands that listing a species as endangered demands a further commitment from the California Department of Fish & Wildlife and can impose significant responsibilities on some private landowners. We do not advocate for this listing lightly and only do so after decades of other efforts. The listing does not represent an end to collaborative efforts, including partnerships with the agricultural industry and those embodied by the Tricolored Blackbird

Working Group (TBWG), which are more necessary than ever if the species is to remain viable in California.

I. The Tricolored Blackbird Population Continues to Decline Precipitously Despite Prior Conservation Efforts.

The Tricolored Blackbird population in California has declined by approximately 44% since 2011 and approximately 63% since 2008. (Meese, R. 2014. *Results of the Tricolored Blackbird Statewide 2014 Survey*. UC Davis.) Overall, the species has declined in the Central Valley by 68% from 2008 to 2014. (*Id*., at 9) In 2014, observers counted 145,135 tricolors at 802 locations throughout California, a decline from 258,000 birds in 2011 and 395,000 in 2008. (*Id*., at 6-7). By any measure, the species has declined dramatically since the 1930s, when it was estimated to breed in California in the millions. (*Id*., at 3, citing Neff (1937)).[1]

While the Tricolored Blackbird once numbered in the millions, it was clear by the 1970s that the species was in trouble. The conversion of nearly 90% of California's wetlands to other uses severely limited its available breeding and foraging habitat. Moreover, though the Tricolored Blackbird has always been protected by the Migratory Bird Treaty Act (MBTA), its nests and adults were regularly destroyed by human activities with no intervention by wildlife agencies.

Wildlife agencies, researchers, and many concerned members studied and tracked the species' decline for decades. Then in 1990, the Department of Fish & Wildlife added the Tricolored Blackbird to the California Species of Special Concern. The US Fish & Wildlife Service also included it on its informal list of species of special concern and the International Union for the Conservation of Nature has categorized it as endangered. These administrative actions, most of which were non-regulatory, failed to prevent the species' continued decline.

In 1992, the Yolo County chapter of the National Audubon Society petitioned to the California Fish & Game Commission to list the Tricolored Blackbird as endangered under CESA. (Conservation Plan, at 9) On the recommendation of the Department, the Commission accepted the petition and designated the species as a candidate for listing. However, after additional research estimated the state population exceeded 300,000 birds, Yolo County Audubon withdrew its petition. (*Id*.)

In 2004, the Center for Biological Diversity petitioned for the species to be listed under CESA. While the Department recommended potential listing, the Commission rejected the petition

[1] Early population estimates in the 1930s were conducted by Johnson A. Neff, a biologist with the U.S. Bureau of Biological Survey, with state and county wildlife and agricultural biologists. From 1930 to 1936, Neff studied the distribution, population, economic status and control of Tricolored Blackbirds throughout the Central Valley (Conservation Plan 2009). Neff (1937) estimated a population of 2-3 million Tricolored Blackbirds, residing in wetlands in coastal and Central Valley locations. Large breeding colonies were observed in the 1930s that contained Tricolor adults numbering greater than the current global population.

because it found the petition lacking sufficient information to support listing. (Conservation Plan, at 9-10)

Through the 1990s and 2000s, the Tricolored Blackbird Working Group—a consortium of wildlife agencies, researchers, nonprofit organizations, and farmers—coordinated to study and conserve the species, its efforts culminating in the 2009 Tricolored Blackbird Conservation Plan. The plan set forth several specific conservation actions—mainly to be enacted by state and federal agencies—to conserve the species. While the working group remains the best collaborative venue for furthering the species' conservation, its past efforts have not succeeded in stemming the decline.

During much of this time, conservation actions have focused on scientific monitoring, habitat protection and restoration, and harvest management on properties where Tricolored Blackbirds are found to be nesting. Harvest management practices, commonly called silage buyouts, have likely saved hundreds of thousands of birds, but despite these programs, some landowners have harvested, resulting in the destruction of tens of thousands of nests. Like all state and federal funding programs, NRCS does not have permanent funding for the harvest management practice and this critical support for landowners may not be available in future years. Moreover, even in years where funding to support harvest delays is available, not all landowners are able or willing to choose this option.

Problems associated with the current approach were highlighted during the 2014 bird breeding season. A colony of tens of thousands of birds was found on a single farmer's fields. The farmer was under significant pressure to harvest his crop in order to feed his dairy cattle. He stated that his cattle would potentially starve or have to be sold without the ability to harvest his crops and because of the lack of available feed on the market. Because of these pressures, he indicated that he would have to harvest the field, despite the potential to destroy the nests of over one-third of the remaining Tricolored Blackbirds in California.

Thankfully, agencies and other stakeholders were able to negotiate a resolution with the landowner to compensate the farmer for the delay of harvest and save the colony. However, there is no guarantee that a similar deal can be reached next breeding season. Moreover, it is widely believed that this approach is impractical as the primary conservation tool for the species.

Funding for harvest management to support Tricolored Blackbirds is a critical, yet incomplete strategy because agencies have extremely limited budgets that often depend on appropriations from Congress and private funds for buyouts are extremely limited. Clearly, additional protections for the species are needed, as well as additional long-term solutions and support for the bird and landowners.

Despite the conservation efforts described above, as well as numerous administrative actions, most of which were non-regulatory, the Tricolored Blackbird population continues to decline precipitously.

II. The Tricolored Blackbird Should Be Listed Now to Prevent Further Declines and Conserve a Viable Population.

We support the listing under Fish and Game Code §2076.5 because it will activate protections under the California Endangered Species Act before the next breeding season. This is essential in order to prevent further declines of the species to the point where it can no longer form adequately large colonies to persist.

The Tricolored Blackbird, like most colonial-nesting birds, requires large colonies in order to subsist as a species. The Passenger Pigeon, one of the most tragic stories in American bird conservation, disappeared because large colonies could no longer be formed. As Paul Ehrlich explains:

> The Passenger Pigeon once nested in colonies of billions of birds covering many square miles. **When its numbers were reduced to the point at which large colonies could no longer be formed, it declined to extinction in spite of the presence of abundant habitat and food and the absence of further human molestation.** In large colonies, the birds presumably saturated local predators; nests of scattered survivors simply may have been too vulnerable to predation.

(Erhlich, at al. 1988. *Coloniality*. Birds of Stanford, Stanford University. Available at http://web.stanford.edu/group/stanfordbirds/text/essays/Coloniality.html, emphasis added) Our goal—which we believe is shared by the Commission, Department, and other stakeholders—is that the Tricolored Blackbird not go the way of the Passenger Pigeon.

Dr. Meese presents an excellent and succinct overview of contributors to the Tricolored Blackbird's decline in his 2014 report. (*See* 2014 Report, at 2-3, 12-13) Factors affecting a healthy population include: amount and quality of suitable habitat; adequate prey abundance; predation; human disturbance and shooting; and destruction of breeding colonies. (*Id*.) These stressors are aggravated by drought conditions and growing human population and disturbance in California, both of which are likely to persist and worsen in the future.

The Commission and Department should act now because:

- Tricolored Blackbird population has clearly declined at a precipitous rate despite state and federal agencies providing special but limited designations and collaborative conservation planning efforts. Waiting is no longer a viable, responsible option.
- Like many colonial breeders, the Tricolored Blackbird is extremely vulnerable to wide-scale, colony-wide failures and needs large colonies to make use of the benefits

provided by a colonial nesting strategy.[2] Today, less than ten large Tricolored Blackbird colonies typically form in California during the breeding season. A loss of any of these colonies can have dire consequences for the overall health and sustainability of the population.

- Drought intensifies stressors on Tricolored Blackbird survivability. It results in fewer food resources, less water for potential breeding sites, and greater demands for silage. Drought is expected to continue next year, cumulatively adding to impacts from prior years. Moreover, drought is expected to become the "new normal" in California, due to climate change and increasing demands on water.
- Finally, the conditions which have contributed to the species decline over the past decades will persist and worsen in the future. Until there is adequate habitat for the species, it will be reliant on dairy farms, which currently do not provide stable, consistently safe breeding areas. While dairy lands are essential for maintaining the species, it is not possible to rely solely on farms to maintain the species in perpetuity with current harvest management funding.

It is particularly important that the Commission act quickly to give all stakeholders time to prepare before next year's breeding season. Doing so now will minimize conflicts and allow agencies, farmers, and other stakeholders ample opportunity to develop plans, funding, and the lines of communication needed to steward the species during next year's breeding and harvest season.

III. Conclusion

Listing under the CESA can provide several opportunities and benefits to the effort to conserve Tricolored Blackbirds with little impact on dairy operations in the vast majority of situations. First, it can improve efforts to reduce illegal forms of mortality – particularly destruction of nests and losses of adults due to shooting. Second, it prioritizes the species for additional funding from state and local sources for conservation efforts.

We therefore urge the Commission to vote to list the Tricolored Blackbird and to direct the Department to work actively with all stakeholders to conserve the species.

[2] *See* Picman, J. et al. 2002. *Antipredation Value of Colonial Nesting in Yellow-headed Blackbirds*. Auk 119: 461-472.

Thank you for considering our comments. If you would like to discuss our concerns further, please do not hesitate to contact me at (415) 505-9743 or mlynes@audubon.org.

Respectfully Submitted,

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Kim Delfino
California Program Director
Defenders of Wildlife

State of California
Department of Fish and Wildlife

Memorandum

Date: ~~March 5~~ April 2, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Agenda Item for the April 8-9, 2015 Fish and Game Commission Meeting Regarding the Recovery Strategy for California Coho Salmon Progress Report 2004-2012.**

Please find enclosed a report describing progress made by the California Department of Fish and Wildlife (Department) in implementing the Recovery Strategy for California Coho Salmon. This report covers the time period 2004-2012, following the Fish and Game Commission approval in February 2004.

The Progress Report provides an extensive description of the recovery actions implemented by the Department, through and with substantial assistance by many cooperators. The status of coho salmon populations within each recovery unit is provided as well.

If you have any questions regarding this item, please contact Stafford Lehr, Chief, Fisheries Branch at Stafford.Lehr@wildlife.ca.gov or (916) 327-8840.

Attachment

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Recovery Strategy for California Coho Salmon
Progress Report
2004 – 2012

A Report Prepared for
California Fish and Game Commission
by
California Department of Fish and Wildlife

ACKNOWLEDGEMENTS

The information in this report was provided by numerous people, both within California Department of Fish and Wildlife and also in many other agencies and organizations.

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Front cover photo credit: Derek Acomb, CDFW

EXECUTIVE SUMMARY

Coho salmon (*Oncorhynchus kisutch*) in the Central California Coast Evolutionarily Significant Unit (CCC ESU) and the Southern Oregon Northern California Coast Evolutionarily Significant Unit (SONCC ESU) are listed as endangered and threatened, respectively, under both the federal Endangered Species Act and the state California Endangered Species Act. This report summarizes progress made in implementing the *Recovery Strategy for California Coho Salmon (Recovery Strategy)* since it was produced in 2004 by California Department of Fish and Wildlife (Department)[1].

The *Recovery Strategy* provides a list of recovery goals, delisting criteria, and a detailed list of range-wide and watershed restoration recommendations to achieve recovery of coho salmon populations. The document includes over 85 range-wide recommendations, 320 watershed recommendations for the SONCC coho salmon ESU, 205 watershed recommendations for the CCC coho salmon ESU, and 145 watershed recommendations for the Shasta-Scott Pilot Program.

The restoration and enhancement of suitable habitat conditions for juvenile rearing and survival and adult reproduction in both freshwater and estuarine environments has been the main focus for coho salmon recovery programs in both the CCC and SONCC ESUs. The Department has funded and also undertaken extensive habitat restoration for coho salmon recovery throughout their geographic range. In addition, many other agencies and organizations have been involved with habitat restoration projects for the recovery of California coho salmon populations.

Since 1981, the Department, together with NOAA Fisheries, has administered the Fisheries Restoration Grants Program (FRGP), funded through the Pacific Coastal Salmon Recovery Fund (PCSRF). The program has approved and funded anadromous salmonid restoration and recovery projects in coastal watersheds throughout northern and central California. The FRGP is a collaborative effort involving more than 600 stakeholders that focuses on restoring fish habitat conditions in order to ensure the survival and protection of anadromous salmon and steelhead trout in California's coastal watersheds.

From 2004 to 2012, FRGP has allocated a total expenditure of approximately $100 million to coho salmon recovery projects in California. During this period a total of 433 FRGP-funded projects benefiting coho salmon recovery was completed, addressing 287 recovery tasks, listed in the 2004 *Recovery Strategy*. These projects include a wide range of recovery activities carried out in both ESUs over the reporting period. The main types of recovery actions undertaken include; i) restoration of suitable freshwater and estuarine habitat conditions for both juveniles and adults, ii) improvements in permitting and regulatory enforcement, iii) continued operation of captive rearing programs at Warm Springs and Kingfisher Flat conservation hatcheries, and iv) implementation of

[1] Formerly California Department of Fish and Game

range-wide and watershed-wide recommendations listed in the *Recovery Strategy*. The following table summarizes the types and amounts of restoration activities performed through FRGP funded projects from 2004 to 2012.

Table ES1. FRGP Funded Projects from 2004 to 2012

Project Type	Metric	Quantity
Fish Passage Improvement	Number of blockages removed	118
Fish Passage Improvement	Miles of stream opened	209
Fish Screening Projects	Number of fish screens installed/replaced	92
Instream Habitat Improvement	Total miles of stream treated	223
Riparian Habitat Improvement	Miles of riparian bank treated	149
Riparian Habitat Improvement	Acres of riparian area treated	1,467
Upland Habitat Improvement	Acres of upland area treated	4,117
Upland Habitat Improvement	Miles of road treated	462
Monitoring	Miles of stream monitored	1,578
Fish rearing	Number of hatchery fry/smolt released	182,675
Organizational Support	Number of watershed plans/assessments completed	196

Coho salmon habitat restoration and species recovery work is also undertaken in California by a wide range of other agencies and organizations. Examples include landowners and watershed groups, sport fishing organizations, non-governmental environmental groups (NGOs), Native American Tribes, timber companies, and Resource Conservation Districts (RCDs).

Recovery of coho salmon requires monitoring their population numbers at critical life stages in selected streams throughout the two ESUs. Juvenile and adult coho salmon are monitored in 23 streams and tributaries (10 in CCC ESU and 13 in the SONCC ESU) by the Department and other organizations. Juveniles are generally monitored by

trapping, electrofishing or direct observation (snorkeling), while adults may be monitored by trapping, video or sonar monitoring at weirs, carcass or redd counts, and direct observation.

Despite considerable restoration efforts and expenditures, the numbers of adult coho salmon in monitored streams in the SONCC and CCC ESUs have declined since 2004. However, since 2009 many streams have experienced a slight increase in coho numbers from the low points during the reporting period. Coho salmon in northern coastal streams are relatively more numerous than in southern streams, but northern populations are also experiencing declines in population size.

The overall picture of coho salmon in California is one of severely depleted populations. The main factors and threats affecting population viability of coho salmon, as listed in the *Recovery Strategy*, have not changed substantially over the reporting period. The ongoing population declines are thought to be largely attributable to human causes, such as water diversions, stream flow regulation, forestry and man-made barriers affecting migration. Of particular concern is the loss and degradation of suitable freshwater and estuarine habitat conditions for juvenile rearing and adult reproduction.

However, in recent years, the primary causes of population decline have been compounded by natural environmental factors, specifically poor ocean conditions in 2005 and 2006, which led to low adult survival in the marine environment and poor returns in both 2006-07 and 2007-08. In addition, recent ongoing drought conditions have further hampered population recovery through the adverse effects of low flow conditions on adult spawning and juvenile survival in coastal watersheds.

The degradation of coho salmon habitat and the resulting decline in population numbers has occurred over many decades. The positive effects of habitat restoration, as measured by increased fish distribution and abundance, are usually associated with a time lag of several years, even for robust populations, and probably longer where populations are at low numbers. Therefore, one should expect ongoing restoration efforts and the accompanying results to be a long-term process.

Of more immediate concern is the prevention of further population extirpations of coho salmon in California coastal watersheds. In this regard, range and watershed-wide recovery activities need to be expanded, and implementation of recovery efforts intensified and accelerated, especially in critical watersheds.

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Chapter 1. Introduction

1.1 Coho Salmon Status Reviews, California Endangered Species Act and Federal Endangered Species Act Listings

In 1995, the California Department of Fish and Wildlife (Department)[2] submitted to the California Fish and Game Commission (Commission) the *Status Review of Coho Salmon (Oncorhynchus kisutch) in California South of San Francisco Bay* (Anderson, 1995). The Department concluded that coho salmon south of San Francisco Bay were in danger of extinction because these southern populations had declined by over 98 percent from historical levels. Additionally, these populations would continue to decline near a point of extinction in the near future due to numerous factors.

The Department's status review indicated that uplisting from *threatened* to *endangered* was warranted. This determination was based on the best available scientific information regarding the distribution, abundance, biology and threats to coho salmon south of San Francisco Bay.

In April 2002, the Department submitted to the Commission, the *Status Review of California Coho Salmon North of San Francisco* (CDFG 2002). This review provided a detailed overview of the status of coho salmon populations, factors affecting their viability and influences of existing management efforts. The report concluded that California coho salmon had experienced significant declines in the past 40 to 50 years and that populations have been individually and cumulatively depleted or extirpated. It was further concluded that connectivity between populations was fragmented or severed.

The 2002 *Status Review* concluded that the listing of the California portion of the Southern Oregon Northern California Coast (SONCC) coho salmon Evolutionarily Significant Unit (ESU) as *endangered* was not warranted, but a listing as *threatened* was warranted. The Department recommended that the Commission add coho salmon north of Punta Gorda to the list of *threatened* species.

In 2005, the Commission, under the California Endangered Species Act (CESA), listed coho salmon in the California Central Coast (CCC) ESU as *endangered* and coho salmon in the SONCC ESU as *threatened*. In 2005, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) under the Federal Endangered Species Act (ESA) uplisted coho salmon in the CCC ESU from *threatened* status to *endangered*, while retaining the 1997 ESA listing of coho salmon in the SONCC ESU as *threatened*.

[2] Formerly the California Department of Fish and Game.

1.2 The Recovery Strategy for California Coho Salmon

In February 2004, the Department, in response to a directive from the Commission, produced the *Recovery Strategy for California Coho Salmon* (*Recovery Strategy*) (CDFG 2004). The *Recovery Strategy* provides a list of recovery goals, delisting criteria, and a detailed list of range-wide and watershed restoration recommendations to achieve recovery of coho salmon populations. The document includes over 85 range-wide recommendations, 320 watershed recommendations for the SONCC coho salmon ESU, 205 watershed recommendations for the CCC coho salmon ESU, and 145 watershed recommendations for the Shasta-Scott Pilot Program (see Section 1.5).

The primary objective of the *Recovery Strategy* is to identify tasks that when implemented will return coho salmon to a level of sustained viability, while protecting the genetic integrity of coho salmon in both ESUs. The ultimate goal of the *Recovery Strategy* is to delist the species so that protections under CESA will not be necessary. The Department defines “sustained viability” as a condition when naturally producing coho salmon are adequately abundant and occupy a sufficient range and distribution to ensure against extinction due to environmental fluctuations, stochastic events, and human land and water-use impacts.

A second objective of the *Recovery Strategy* is to achieve harvestable populations of coho salmon for Tribal, recreational, and commercial fisheries for the cultural and economic well-being of California. The *Recovery Strategy* states that improving coho salmon populations and habitat is the means to achieve these two objectives.

Since the *Recovery Strategy* was submitted to the Commission, the Department has progressed in implementing many of the range-wide and watershed recommendations. This report summarizes the recovery efforts made in the watersheds of the SONCC and CCC ESUs since the *Recovery Strategy* was produced in 2004. Additionally, this report also briefly describes the current status of coho salmon populations in both ESUs, provides updated information on coho salmon geographic range, distribution and biology, and lists the factors and threats currently affecting population viability.

1.3 Federal Coho Salmon Recovery Plans and Status Reviews

NOAA Fisheries has prepared recovery plans for coho salmon in both the CCC and SONCC ESUs. The final Coho Salmon Recovery Plan for the CCC ESU was released in September 2012 (NMFS 2012a), while a Public Review Draft of the SONCC Coho Salmon Recovery Plan was released in January 2012 (NMFS 2012b), with the final plan being anticipated for release in 2014.

In 2007, NOAA Fisheries published a coho salmon recovery plan for the Klamath River under the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (MSRA) (NMFS 2007). The MSRA Klamath River Coho Salmon Recovery Plan presents long-range guidance for various agencies, organizations and individuals to use

in actions that may affect Klamath River coho salmon. NOAA Fisheries has also published status reviews of coho salmon in both the SONCC and CCC ESUs (Williams et al. 2011). The 2011 status review of coho salmon in the SONCC ESU concluded that, similar to the last status review in 2005, coho salmon in the ESU remain in the ESA *threatened* category. Population monitoring has indicated that for many streams in the SONCC ESU the abundance of coho salmon has decreased, and that population trends are downward (NMFS 2011).

The 2011 status review of CCC ESU coho salmon concluded that conditions had degenerated for populations in this ESU since the last status review was published in 2005 (Spence and Williams 2011). Coho salmon in the ESU continue to be classified under ESA as *endangered*. Recent population trends in the ESU have been downward, with particularly poor returns during the period from 2006 to 2010. The poor returns in 2006-2010 were probably the result of poor ocean productivity and coho survival in 2005 and 2006 (Lindley et al. 2009). Poor returns in 2007 and 2008 severely reduced many coho populations, and therefore reduced potential numbers in subsequent years. The risk of local population extinction appears to have increased (NMFS 2011).

1.4 Other Coho Salmon Recovery Plans

The Mattole Salmon Group (MSG), a watershed restoration group focused on the Mattole River in Humboldt County, recently published the *Mattole Coho Recovery Strategy* (MSG 2011). The MSG has monitored coho salmon populations in the Mattole River system since the early 1990's. In recent years, populations have fallen to very low levels. There is a very real threat that without the implementation of extra-ordinary and continued restoration efforts coho salmon in the Mattole River may be extirpated in the near future.

In 2007, the Sonoma County Water Agency (SCWA) produced the draft *Russian River Coho Salmon Recovery Strategy Implementation Plan* which identifies and prioritizes possible coho salmon recovery activities that could be implemented in the Russian River Hydrologic Unit under the existing regulatory framework. The plan was developed collaboratively by state, federal, county, and non-governmental organizations.

Also in Sonoma County, the *Russian River Coho Water Resources Partnership*, funded by the National Fish and Wildlife Foundation, is working with its partners to study baseline streamflow conditions, develop water management plans, and develop priority infrastructure improvements to restore coho salmon populations to the Russian River system. For further information see: http://cohopartnership.org/ and text box on page 91.

In Marin County, the Marin Municipal Watershed District (MMWD) has produced the *Lagunitas Creek Stewardship Plan*, which addresses actions to be taken by MMWD, over a ten-year period, to manage the aquatic resource habitat of Lagunitas Creek for the benefit of coho salmon, steelhead, and California freshwater shrimp.

For further information see:
http://www.marinwater.org/documents/Part_3_Tables_Lagunitas_Stewardship_Plan_Final_June_2011.pdf

1.5 Coho Salmon Recovery Teams and State Legislature Hearing

The statewide Coho Salmon Recovery Team (CRT) consists of 21 representatives from state and federal agencies, sport fishing, Tribes and other non-governmental organizations (Table 1.1). The group has met regularly since the *Recovery Strategy* was produced in 2004 and coordinates with the Department on issues related to statewide coho salmon recovery.

Table 1.1. Membership of the statewide Coho Salmon Recovery Team

State Government Agencies	Landowners	State, County or Watershed Organizations	Environmental Groups	Tribal Groups	Fishing Associations	Academia & Federal Government Departments
California Department Fish and Wildlife (CDFW)	California Farm Bureau	Sonoma County Water Agency (SCWA)	The Nature Conservancy (TNC)	The Yurok Tribe	California Trout (CalTrout)	National Oceanic & Atmospheric Administration (NOAA)
California Department of Forestry & Fire Protection (CalFire)	California Forestry Association	Five Counties Salmonid Conservation Plan (5C)	The Sierra Club (TSC)		Pacific Coast Federation of Fishermen's Associations (PCFFA)	Humboldt State University
California Department of Transportation (CalTrans)		Shasta Valley RCD				
State Water Resources Control Board (SWRCB)	Cattlemen's Association	Mattole Salmon Group (MSG)			Trout Unlimited (TU)	San Jose State University
		Smith River Alliance (SRA)				

The Shasta-Scott Coho Recovery Team (SSRT), consisting of 13 members representing a variety of local and regional interests, was established in 2003 to advise the Department on coho salmon recovery in the Scott and Shasta rivers in Siskiyou County. The SSRT created the Shasta-Scott Pilot Program (SSPP) (Chapter 10 of the *Recovery Strategy*), a recovery plan for coho salmon that specifically addressed agricultural practices and the use of water for agriculture in the two watersheds. In 2010, the SSRT was integrated into the CRT.

In August 2011, the Joint Committee on Fisheries and Aquaculture convened an all-day hearing in the State Capitol entitled "*Coho on the Brink"*. At this meeting representatives from state and federal agencies, together with non-governmental agencies, delivered updates and presentations to the Committee on the status of California coho salmon and on-going recovery activities.

In 2011, the Department and NOAA Fisheries, in response to the severe declines in coho salmon populations observed in the CCC ESU from 2008-2010, formed the Priority Action Coho Team (PACT). The focus of the PACT is to identify critical coho salmon recovery actions from the state and federal coho salmon recovery plans and elsewhere and create pathways for their rapid implementation with the immediate goal of preventing further population extirpations of coho salmon in the CCC ESU (see Chapter 7).

1.6 Coho Salmon Recovery Actions

Since the *Recovery Strategy* was produced in 2004, a wide range of recovery tasks has been implemented by the Department and other organizations. These activities include;

(i) Restoration and enhancement of suitable habitat conditions for juvenile and adult coho salmon throughout their range, funded partly through the Fisheries Restoration Grants Program, administered by the Department. Other government agencies that provide funding for coho salmon habitat restoration projects include United States Fish and Wildlife Service (USFWS) , NOAA Fisheries, Bureau of Reclamation, the California Department of Water Resources and the Regional Water Quality Control Board. In addition, a range of other non-governmental organizations also fund salmonid habitat restoration work.

(ii) Improvements in regulations to protect coho salmon populations on non-federal timberlands , such as the *Anadromous Salmonid Protection* (ASP) rules, approved by the Board of Forestry (BOF) in 2009 and implemented on the ground in January 2010.

(iii) Continuation and further development of captive rearing programs for coho salmon at Warm Springs and Kingfisher Flat conservation hatcheries, to help re-establish coho salmon in depleted streams north and south of San Francisco Bay, respectively.

(iv) Implementation of range-wide and watershed-wide recommendations identified in the *Recovery Strategy*.

Recovery activities carried out in the CCC and SONCC ESUs and within each recovery unit are summarized in Chapters 5,6 and 7 of this report.

<u>Addendum</u>

Appendix F. contains a list of acronyms and abbreviations contained in this report.

Chapter 2. Coho Salmon Biology

This section addresses recent scientific studies dealing with the biology of California coho salmon which have been published since the *Recovery Strategy* was produced in 2004. Both the *Recovery Strategy* and the *Status Reviews* provide comprehensive reviews of coho salmon biology up to the date of their publication.

2.1 Geographic range and distribution

The geographic range and distribution of California coho salmon, as documented in the *Recovery Strategy* and *Status Reviews,* do not appear to have changed substantially over the intervening time period. The natural range of California coho salmon extends from the Oregon border to the Monterey peninsula. The established southern boundary of coho salmon in California was recently questioned (Kaczynski and Alvarado 2006). The authors of the study suggested that it is improbable that coho salmon historically maintained self-sustaining populations south of San Francisco Bay. However, Adams et al. (2007) found no creditable climatic, oceanographic, or ecological evidence for habitat differences between areas immediately south and north of San Francisco Bay and concluded that coho salmon are in fact native to southern streams as far as Santa Cruz county.

The historical status of coho salmon in streams of the urbanized San Francisco estuary was recently reviewed by Leidy et al. (2005). The authors found evidence that at least four of sixty-five estuary watersheds (6 percent) historically supported coho salmon. A minimum of an additional 11 watersheds (17 percent) may also have supported coho salmon, but evidence is inconclusive. Coho salmon were last documented from the San Francisco estuary in the early to mid-1980's.

In the SONCC ESU, the Department reported recently on the historic and recent occurrence of coho salmon in streams, based on an analysis of fisheries data together with stream surveys carried out up to 2004 (Garwood 2012). This study provides an independent synthesis of available fisheries data through 2004, resulting in a list of 540 coho salmon streams in the California portion of the SONCC ESU. The list of streams includes 325 verified coho salmon streams from a previously published distribution list (Brown and Moyle 1991; Brown et al.1994) and 215 additional streams identified through this study. Based on the verification methods used, results from the study represent a 40 percent increase in the number of documented historic coho salmon streams. In addition to the data analysis and literature review, a standardized field observation study was conducted from 2001 to 2003 to establish a contemporary distribution for a subset of coho salmon streams. A total of 628 surveys was completed

in 301 coho salmon streams, resulting in an occupancy rate by coho salmon ranging from 31 percent to 62 percent (Garwood, 2012).

2.2 Life-history, population genetics and ecology

Formerly, it was generally believed that juvenile coho salmon in California streams spend just one year rearing in their natal stream after hatching before out-migrating to the ocean as smolts. Recent research in Prairie Creek, a tributary of Redwood Creek in Humboldt County, however, has demonstrated previously undocumented two-year freshwater residency of juvenile coho salmon (Bell and Duffy 2007). Previously, it had generally been assumed that all juvenile coho salmon in northern California streams spend only one year in freshwater before out-migrating at age one-plus and that a two-year freshwater life history pattern was found only in the more northerly portion of the species' range.

Water temperature is an important environmental factor affecting the survival of juvenile coho salmon (Stenhouse et al. 2012). In Redwood Creek, Humboldt County, Madej et al. (2006) assessed thermal rearing restrictions for juvenile coho salmon and found that coho salmon are currently restricted to one-fifth of the historical distribution due to increases in water temperature through channel widening and the removal of riparian vegetation. Similar examples of juvenile coho salmon habitat loss exist in other watersheds where such perturbations have taken place.

The genetic diversity of protected coho salmon populations in California has recently been investigated by several agencies and authors. Abundant new genetic data are available for California populations of coho salmon, including microsatellite genotypes from over 1,500 fish from nearly every extant population in the state (Garza and Gilbert-Horvath unpublished data). These recent genetic data do not suggest the need for a reexamination of the boundaries of the two coho salmon ESUs, as these data show a clear separation between populations south and north of Punta Gorda. Furthermore, there is no signal of populations at the southern end of the range having been derived from hatchery broodstock from another ESU (Williams et al. 2011). A recently published study found that California coho salmon populations comprise small numbers of endemic breeders, with populations experiencing high levels of genetic drift and inbreeding depression (Bucklin et al. 2007). The study implicated population fragmentation, genetic drift and isolation by distance, owing to the very low levels of migration, as the major evolutionary forces shaping genetic diversity within and among extant populations of California coho salmon.

Chapter 3. Status and Trends of Coho Salmon Populations

3.1 Monitoring of population status and trends

Coho salmon populations in both the CCC and SONCC ESUs are monitored by the Department and other agencies and organizations (see Table 3.1 and Figure 3.1). Juvenile coho salmon are generally monitored by trapping or by direct observation (snorkeling), while adult coho salmon may be monitored by various methods including trapping, video and Dual Frequency Identification Sonar (DIDSON) monitoring, redd and carcass counts and direct observation (Johnson et al. 2007).

Trends in population change of adult coho salmon in some representative monitored streams in the CCC and SONCC ESUs are shown in Figures 3.2 and 3.3, and also in Chapter 6. In most monitored streams, adult coho salmon have declined in abundance since the *Recovery Strategy* was produced in 2004 (for population data see Appendix A and Appendix B). The only exception to this is the Russian River where the numbers of returning adult coho salmon have recently begun to show increases, due to the on-going operation of the Warm Springs conservation hatchery. Note that high flows in some years may affect the ability to accurately estimate fish abundance and therefore results should be considered minimum estimates. However, numbers do reflect the relative strengths of each brood year.

NOAA Fisheries has recently published status reviews of coho salmon populations in both the CCC and SONCC ESUs (Spence and Williams 2011; NMFS 2011, Williams et al. 2011). The main finding of these reviews is that coho salmon populations in both ESUs are declining and that the long-term trend continues to be downward. In many of California's coastal streams and rivers the risk of population extinction appears to have increased.

The precise causes of the ongoing reductions in coho salmon populations in most watersheds have not been established, but it is apparent that the declines are associated with the continued deterioration in freshwater and estuarine habitat conditions through human land and water resource development activities (see Chapter 4). The declines in coho salmon populations recorded in many streams between 2008 and 2010 were compounded by poor ocean conditions in 2005 and 2006, which were also correlated with recent declines in populations of other salmon species, particularly Chinook salmon, in California and the Pacific Northwest (Lindley et al. 2009).

3.2 Coastal California Salmonid Monitoring Plan

Since the *Recovery Strategy* was produced, the Department and NOAA Fisheries have cooperatively worked to develop the *Coastal California Salmonid Monitoring Program* (CMP). The CMP is a comprehensive monitoring strategy for coastal California populations of salmon and steelhead (Adams et al. 2011). The CMP will enable tracking of the status, trends and recovery of coho salmon and other anadromous salmonid populations in both the SONCC and CCC ESUs (see following textbox).

Coastal California Salmonid Monitoring Program

California's salmonid populations have experienced marked declines leading to listing of almost all of California's anadromous salmonids under CESA and ESA. Both CESA and ESA listings require recovery plans that call for monitoring to provide some measure of progress toward recovery. In addition, there are related monitoring needs for other management activities such as hatchery operations and fisheries management.

The CMP is designed to provide a comprehensive monitoring program for anadromous salmonids in coastal basins to inform recovery, conservation, and management activities. The scientific foundation of the CMP is made up of a rigorous sampling design incorporating standardized field protocols to allow for valid evaluations of status and trends of fish populations across spatial (within a basin, among basins, independent populations, diversity strata) and temporal (annual variation, short-term trends, long-term trends) scales. Building from the initial efforts by Shaffer et al. (unpublished) and Adams et al. (2011), the CMP calls for standardized field protocols, data collection, and data reporting – the goal being open access of collected data from a web-based platform.

The CMP provides a sampling framework to collect information at the appropriate life stages and spatial scales to evaluate adult salmonid abundance, both at larger regional scales and at the population level. Productivity is calculated as the trend in abundance over time. CMP design also allows basic assessments of connectivity through the collection of juvenile distribution and relative abundance data. Measurements of diversity are based on local evaluation of essential life history variants and both broad and focused assessments of genetic diversity patterns.

Life Cycle Monitoring (LCM) stations will provide estimates of freshwater and ocean survival, essential to understanding whether changes in salmonid numbers are due to recovery from improvements in freshwater habitat conditions or changes in ocean conditions. An LCM station will include an absolute measure of adult abundance from a counting facility, a spawning survey estimate of adult abundance, and an estimate of outmigrating smolts. The adult counts and outmigrant smolt counts will provide estimates of fish in and fish out, that can be used to provide relative estimates of freshwater and marine survival. The counting station data and adult survey estimates will be used to develop an estimation factor between redds and adults for calibration of adult surveys conducted in other watersheds. The LCM sites are also expected to be magnets for other kinds of recovery-oriented research, particularly studies of fish habitat-productivity relationships and evaluations of habitat restoration effectiveness.

Monitoring is necessary to provide data that will be analyzed to inform management decisions, and those data must be made available in a timely manner to managers in a usable form. The data management structure is one of the most important parts of the CMP, ensuring that consistent data standards and protocols are applied across and within monitoring areas and that data flow is coordinated from the field to a central data collection center. It will also ensure that data reporting necessary for common analytical activities occurs in a timely manner and will provide a data source for other analytical needs.

Reference:

Adams, P., L. Boydstun, S. Gallagher, M. Lacy, T. McDonald, K. Shaffer 2011. California Coastal Salmonid Population Monitoring: Strategy, Design, and Methods. Fish Bulletin 180, California Department of Fish and Game, 82p.

Within the CMP, coho salmon population monitoring projects have already been established in coastal watersheds in Humboldt County and the Mendocino Coast (see Chapter 6). Several other planned projects will involve monitoring of coho salmon populations in coastal watersheds in both the SONCC and CCC ESUs.

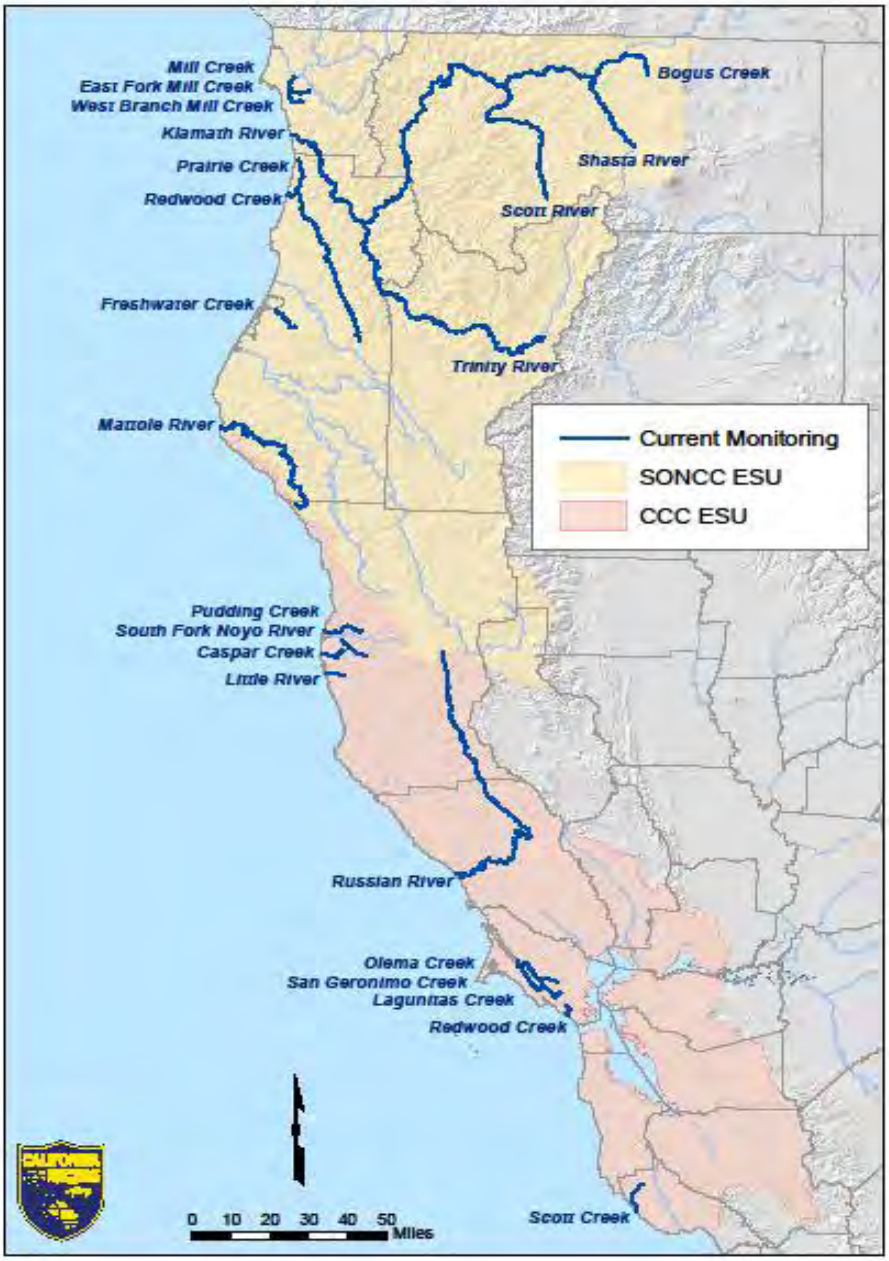


Figure 3.1. Locations of selected streams monitored for California coho salmon.

Table 3.1. Locations of California coho salmon monitoring sites and involved agency/organization.

ESU River/Stream	County	Watershed Stream/River	Agency/ Organization	Form of monitoring
CCC ESU				
Scott Creek*	Santa Cruz	Scott	NOAA Fisheries	Juvenile and adult monitoring
Lagunitas Creek	Marin	Lagunitas	MMWD	Juvenile and adult monitoring
San Geronimo Creek	Marin	Lagunitas	MMWD	Juvenile and adult monitoring
Olema Creek	Marin	Lagunitas	NPS	Juvenile and adult monitoring
Redwood Creek	Marin	Redwood	NPS	Juvenile and adult monitoring
Russian River	Sonoma/ Mendocino	Russian	CDFW/SCWA/ UCCE	Juvenile and adult monitoring
Pudding Creek	Mendocino	Pudding Creek	CDFW	Juvenile and adult monitoring
Caspar Creek	Mendocino	Caspar	CDFW	Juvenile and adult monitoring
Noyo River South Fork	Mendocino	Noyo	CDFW	Juvenile and adult monitoring
Little River	Mendocino	Little River	CDFW	Juvenile and adult monitoring
SONCC ESU				
Mattole River	Humboldt	Mattole	MSG	Juvenile and adult monitoring
Trinity River	Humboldt	Klamath	CDFW	Juvenile and adult monitoring
South Fork Eel River	Humboldt	Eel	CDFW	Juvenile and adult monitoring
Klamath River	Siskiyou	Klamath	CDFW/Tribes/ FWS	Juvenile and adult monitoring
Bogus Creek	Siskiyou	Klamath	CDFW	Adult monitoring
Scott River	Siskiyou	Klamath	CDFW	Juvenile and adult monitoring
Shasta River	Siskiyou	Klamath	CDFW	Juvenile and adult monitoring
Freshwater Creek*	Humboldt	Humboldt Bay	CDFW	Juvenile and adult monitoring
Redwood Creek	Humboldt	Redwood	CDFW	Juvenile and adult monitoring
Prairie Creek	Humboldt	Redwood	CDFW	Juvenile and adult monitoring
Mill Creek – West Branch	Del Norte	Smith River	CDFW	Juvenile and adult monitoring
Mill Creek - East Fork	Del Norte	Smith River	CDFW	Juvenile and adult monitoring
Mill Creek - Mainstem	Del Norte	Smith River	CDFW	Juvenile and adult monitoring

Key; CDFW: California Department of Fish and Wildlife , NOAA Fisheries: National Oceanic and Atmospheric Administration's National Marine Fisheries Service, NPS – National Parks Service, MMWD – Marin Municipal Water District, UCOE – U.S. Corps of Engineers, Tribes – Yurok and Hoopa tribes, SCWA – Sonoma County Water Agency, UCCE – University of California Cooperative Extension, FWS – U.S. Fish and Wildlife Service, MSG – Mattole Salmon Group. *indicates the presence of a life-cycle monitoring station.

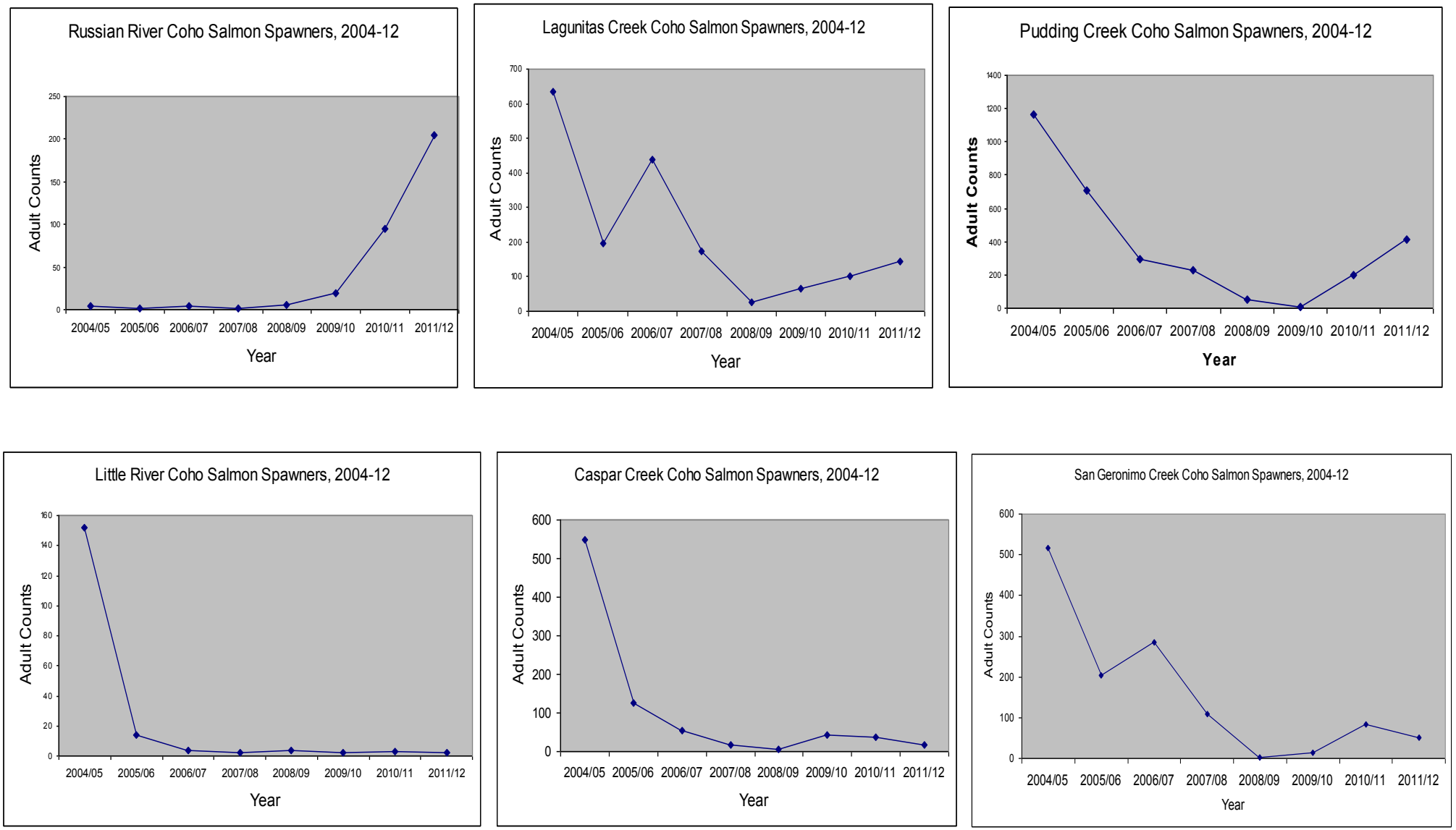
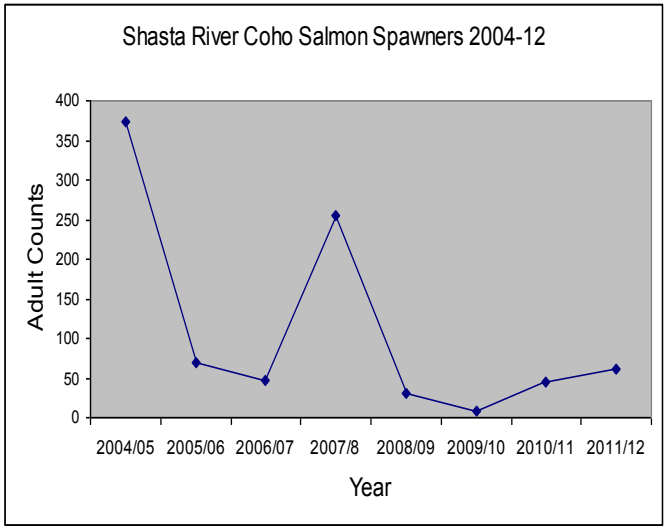
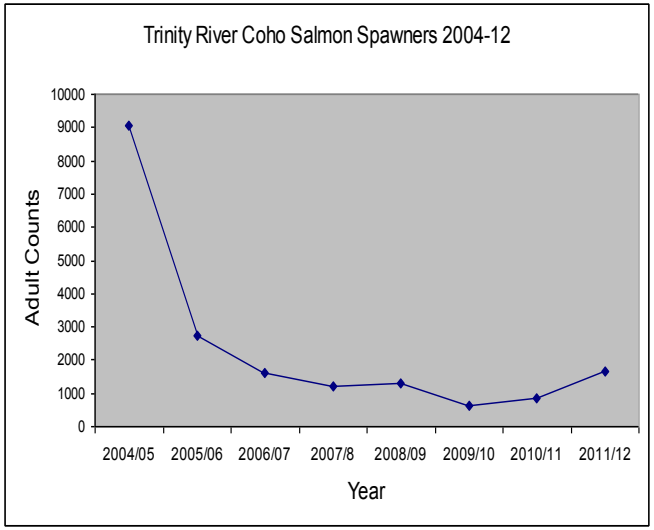
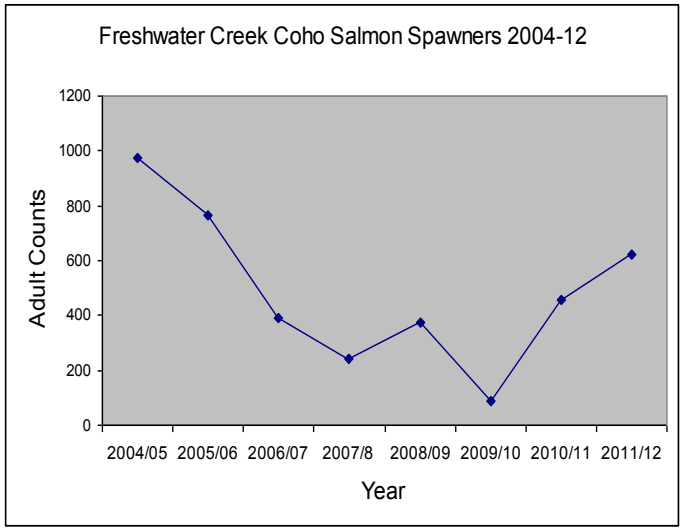
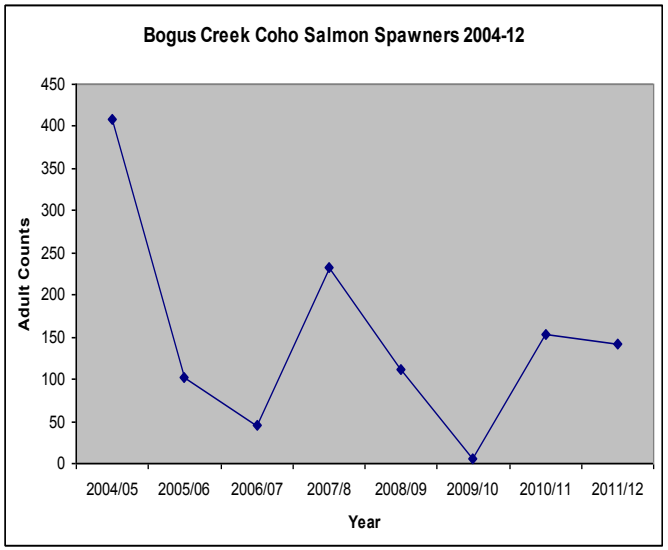


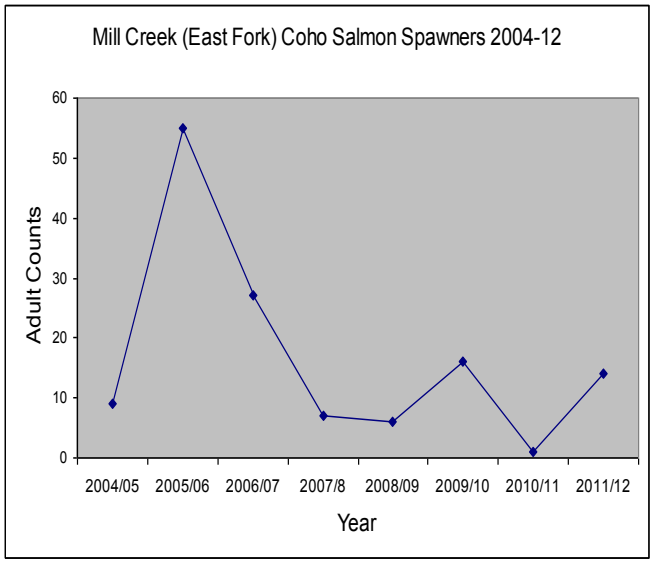
Figure 3.2. Trends in adult coho salmon populations in selected monitored streams in the CCC ESU, 2004-2010 (see Appendix A and Chapter 6 for further information on monitoring procedure).











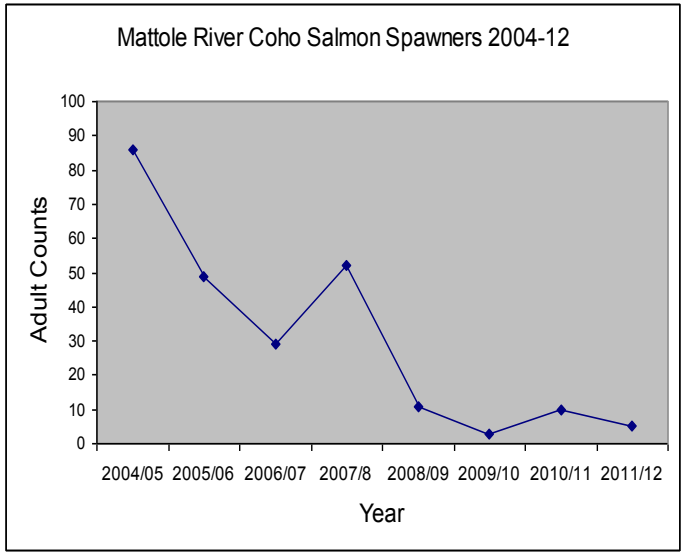


Figure 3.3. Trends in adult coho salmon populations in selected monitored streams in the SONCC ESU, 2004-12 (see Appendix B and Chapter 6 for further information on monitoring procedure).

3.3 Summary of current status of California coho salmon

Coho salmon populations in California have been in decline over the past several decades. In the 1940s, estimated numbers of adults spawning in California streams were 200,000–400,000. Even then they were regarded by Moyle and Williams (1990) as being in sharp decline but still common. Subsequent studies documented their rapid disappearance from their native streams throughout the state and by 1996 coho salmon in the CCC and SONCC ESUs were listed as *threatened* or *endangered*. Today, coho salmon populations in both ESU's are at just a small fraction of their previous levels (Moyle et al. 2008, 2011).

Since 2011, however, coho salmon populations in some central and northern California coastal watersheds have increased, following very poor returns in 2009 and 2010. These increases have been associated with improved ocean conditions, which have increased the marine survival and growth of salmon populations. However, the overall trend in coho salmon populations in most monitored streams in the state remains downward.

In the CCC ESU, Lagunitas Creek exhibited a steady upward trend of returning adult coho salmon from a low of less than 25 in 2009 to 65, 101 and 145 for 2010, 2011 and 2012 , respectively (Figure 3.2). These numbers are close to average over a 17-year monitoring period. Preliminary population estimates for 2012/13 show a continued upward trend. However, most streams south of San Francisco Bay, such as Scott Creek, now have only remnant coho salmon populations which are at or near extirpation. In some streams, including southern streams (Redwood Creek in Marin County, and Scott, Waddell, and Gazos creeks, south of San Francisco,) the severe impacts of the poor ocean conditions in 2005 and 2006 on adult returns essentially extirpated wild runs, so no natural rebound was possible when ocean conditions improved. In streams south of San Francisco Bay, including Scott, Gazos, and Waddell creeks, there has been little or no production of wild coho salmon since 2008 (Smith 2013).

In Mendocino County, for the past ten years the Department has conducted life-cycle monitoring of coho salmon in Pudding Creek, Caspar Creek, Little River, and the South Fork Noyo River. As in other monitored streams in the CCC ESU, coho salmon populations in streams such as Pudding Creek have shown some increases following extreme lows in 2009-10, although in most streams, represented by Caspar Creek and Little River, the overall population trend remains downward (Figure 3.2).

In some watersheds in the SONCC ESU, such as the Mattole and Shasta rivers, coho salmon populations continue to decline, and without the implementation of extra-ordinary measures, appear to be heading towards near-term extirpation. However, in other rivers, such as the Eel, Scott, Klamath, and Smith rivers, in recent years there have been increases in adult coho salmon returns. The Department continues to conduct population status and trend monitoring in the Smith River and in Humboldt Bay tributaries, such as Freshwater Creek. It is expected that the CMP will continue to be expanded in both coho salmon ESU's, with the goal of having at least one life cycle

monitoring station in each diversity stratum (populations are categorized into diversity strata based on the geographical structure described in Spence et al. 2008).

The current status of coho salmon populations in California's waters may be summarized as follows:

1) Coho salmon are currently extirpated from many of their historically occupied watersheds in the CCC. This has created a fragmented pattern of stream occupancy that strongly affects population structure and negatively affects recovery potential.
2) Due to the dominant 3 year life cycle of coho salmon, in some populations there are year-class gaps or weak year-classes that without intervention, such as brief captive rearing or broodstock transfers, will only recover slowly.
3) The numbers of adult coho salmon in monitored streams in the SONCC and CCC ESUs have declined considerably since 2004.
4) Wild coho salmon populations in the CCC ESU have declined from estimates of over 50,000 in the early 1960's to approximately 1,000 - 2,000 at the present time.
5) The most adversely affected populations in the State are in the Shasta River, Mattole River, Russian River and streams south of San Francisco Bay, such as Scott Creek.
6) Coho salmon in northern coastal streams are relatively more numerous than in southern streams, but northern populations are also experiencing declines in population numbers.
7) Coho salmon populations were historically abundant in large northern river systems in the SONCC ESU, such as the Klamath, Smith and Eel Rivers, but in some areas numbers are now considerably reduced.
8) The overall picture of coho salmon in California is one of severely depleted populations, many of which, without expanded recovery efforts, may be heading towards extirpation.
9) The ongoing population declines are thought to be largely attributable to human causes, particularly the loss and degradation of suitable freshwater and estuarine habitat conditions for juvenile rearing and adult reproduction in coastal watersheds.
10) In recent years, the primary causes of population decline have been compounded by poor ocean conditions which have led to low survival in the marine environment and subsequent poor adult returns.
11) Many factors affect coho salmon throughout their life-cycle, and not all are amenable to management, such as ocean conditions.
12) It is possible that current management efforts are not of a scale to be effective in achieving full recovery, or are not addressing the primary limiting factors affecting populations.
13) As discussed in the *Recovery Strategy,* adaptive management is essential for successful planning and implementation of coho salmon recovery.

Chapter 4. Factors and Threats Affecting Population Viability

As described in the *Recovery Strategy* and the *Status Review,* there are a number of activities related to human uses of land and water which affect the viability of California coho salmon populations. In addition, other environmental factors, which may be related to human activities, such as climate change, and also natural factors such as ocean conditions, are thought to affect populations of anadromous salmonids, including coho salmon. This section provides updated information, where available, on some of the major threats listed in the *Recovery Strategy.*

4.1 Forestry activities

The *Recovery Strategy* lists forest management practices (FMPs) as one of the major threats to anadromous salmonids in general, and to coho salmon in particular. Although FMPs have improved considerably over recent years, there still remains room for improvement and there are considerable legacy effects from past forestry practices in the State which continue to adversely affect the habitats and ecology of anadromous salmonids, including coho salmon.

The Board of Forestry (BOF) recently consulted with the Department, California Department of Forestry and Fire Protection (CalFire) and other state and federal agencies in revising the FMPs to benefit the recovery and conservation of coho salmon and other anadromous salmonids. As part of this process, the Fisheries Branch of the Department recently undertook a scientific literature review of California forest management practices in relation to the conservation of anadromous salmonids, with particular emphasis on the role of FMPs in coho salmon recovery (Swales 2010).

The existing FMPs were subsequently revised by the BOF and were renamed the *Anadromous Salmonid Protection Rules* (ASP). The new rules were adopted permanently in October 2009 with the goal of providing increased and lasting protection for coho salmon. However, no information is currently available as to whether coho salmon recovery is benefiting from the new rules. In order to answer this question requires population monitoring and the implementation of experimental research.

The ASP rules also include provisions to allow site-specific riparian management to more rapidly improve conditions for listed anadromous salmonids, including coho salmon. A detailed guidance document was produced to illustrate where to implement these types of projects (VTAC 2012). CalFire produced a detailed ASP Rule Question and Answer document to provide insight into the application of the rules (DFW and CalFire 2010). Further refinements in the rules for Class II-Large watercourses were approved by the BOF in the fall of 2013. Implementation of modern FMPs (post-1975) has substantially reduced the impacts of forestry operations on water quality (both sediment and water temperature) (Ice 2011). Additionally, in 2013 the BOF approved the *Road Rules*, a rule package designed to reduce sediment impacts, both in ASP watersheds and statewide. However, concern remains over cumulative watershed

effects related to logging in erodible North Coast watersheds. Although FMPs have improved, it will take more time for comprehensive monitoring work to fully document improvements to water quality, habitat and fish populations.

4.2 Water diversions and fish screens

The *Recovery Strategy* identifies water diversions and groundwater extraction as being significant threats to coho salmon, acting through changes to the hydrologic regime of rivers, which may adversely affect fish survival, movement and migration. In addition, juvenile salmon may be entrained into water diversions, leading to increased mortality. Screening to prevent entrainment in water diversions is consequently required to reduce fish mortality.

These threats to coho salmon recovery are still extant in most areas of the State and are known to inhibit coho salmon recovery. Since the *Recovery Strategy* was produced, the Department has worked in consultation with other state and federal agencies to limit water diversions in river systems and to install fish screens in many streams and rivers. However, even though water diversion agreements have been reached with many user groups, water diversions remain a significant threat to coho salmon recovery in many areas of the State. There are currently 464 unscreened diversions affecting coho salmon recovery in the CCC and SONCC ESUs (source: Fish Passage Assessment Database; see Appendix D).

Among the water diversion agreements that have recently been developed are those for vineyards and irrigation of other agricultural crops, livestock watering, and municipal and small domestic water supplies. Some important areas of water diversion regulation that Department staff have been investigating since the State listing of coho salmon are: a) the diversion of water by vineyard managers for frost protection, b) diversion of water for agricultural purposes in the Shasta and Scott Valleys in Siskiyou County, c) water diversions for dust abatement on timber roads and d) water diversion for illicit purposes, such as marijuana cultivation, which increasingly is a major issue in watersheds on the central and north coast.

4.3. Regulated stream flows

Land-uses such as urbanization, agricultural activities, and timber harvest can alter natural hydrologic cycles and impact stream flows, low flows, peak flows, flow timing, and flood frequencies. Alterations to the natural hydrological cycle can in turn create significant impacts to coho salmon and their habitat (Lawson et al. 2004). The *Recovery Strategy* identifies modifications to the natural flow regime of streams and rivers as being a significant threat to coho salmon populations in the State. The development of more natural streamflow regimes that minimize the adverse effects of flow regulation is consequently an important aspect of coho salmon recovery.

The Department has interest in assuring that stream flows are maintained at levels adequate for long-term protection, maintenance and proper stewardship of aquatic resources. In April 2008, the Instream Flow Program was initiated by the newly developed Water Branch of the Department. The primary objective of the Instream Flow Program is to develop scientific information on the relationship between stream flow and available habitat to determine flow levels needed to maintain healthy conditions for fish and wildlife. Relationships between flow and habitat are developed on selected streams for each species' critical life stage need, including spawning, rearing and migration.

The Instream Flow Program has developed a list of 22 priority streams or watercourses for future instream flow work pursuant to Public Resources Code (PRC) 10004 (listed in Appendix C). The Navarro, Mattole, Scott and Shasta Rivers are important watercourses identified on the priority streams list in the North and Central Coast that afford important habitat for coho salmon, among other aquatic resources.

In the *Recovery Strategy,* the Shasta Scott Recovery Team identified the need for instream flow studies in each of the Shasta and the Scott watersheds as a high priority to recover coho salmon populations. In November 2008, the Department's Instream Flow Program was successful in securing grant funding from the Ocean Protection Council to conduct stream flow studies on the Shasta River. The flow studies began in 2009 and are expected to result in identification of interim instream flow needs for coho salmon in the upper Shasta Springs Complex and the Shasta Canyon reaches of the watershed. Upon completion, the Shasta Canyon interim instream flow recommendations are intended to be submitted to the State Water Resources Control Board (SWRCB).

Forest management practices may also result in changes to water quality and the hydrologic regime of river systems. In coastal watersheds, water yields and summer low flows may also be altered through land management and forestry. For example, in Caspar Creek in Mendocino County, it was shown that summer flows increased following logging activities, which has numerous ecological ramifications (Keppeler, 1998). Similar findings have been recorded at other sites in the Pacific Northwest.

4.4 Artificial barriers

The *Recovery Strategy* identifies artificial barriers on streams and rivers as being a significant factor impeding fish passage for both coho salmon adults and juveniles. In listing coho salmon, resource agencies have cited the loss of historic spawning and rearing habitats that are upstream of large, impassable dams as a primary factor contributing to fish decline and a threat to their recovery. Other structures contributing to their decline include road crossings, bridges, culverts, flood control channels, erosion control structures, canal and pipeline crossings, tide-gates and gravel mining pits.

The Passage Assessment Database (PAD) has been developed to provide a common framework for the collection, management and analysis of known and potential barriers to fish passage in California streams. It is intended to capture a set of basic information about each potential barrier to aid in inventorying and assessing fish passage issues on a statewide scale.

The PAD is an ongoing map-based inventory of known and potential barriers to anadromous fish in California. It compiles currently available fish passage information from more than two hundred data sources and references, and allows past and future barrier assessments to be standardized and stored in one location. The inventory is to be used to identify barriers suitable for removal or modification to restore spawning and riparian habitat and reduce stream fragmentation. The PAD database is available to the public via the CalFish website: www.calfish.org.

During the period 2004 to 2011, state and federal agencies completed 189 fish passage improvement projects in the range of coho salmon, with an additional 36 projects ongoing (see Appendix D). These projects involved culvert renovations, dam removals, and installation of fish passage structures or natural by-passes, modification of stream grade control structures, and barrier inventory and assessments. Most of the completed projects have been carried out on public lands and there still remain over 1,902 known barriers that have been identified in need of remediation.

The implemented barrier removal projects are expected to contribute to restoration of natural-flow regimes in California rivers and streams and are likely to benefit coho salmon by making additional habitat available for spawning, rearing and feeding.

4.5 Hatcheries

In northern California, coho salmon are produced artificially using hatcheries, both as mitigation for human impacts, such as dam construction, and also as conservation facilities. Currently, four hatchery programs are engaged in artificial propagation of coho salmon in California. Iron Gate Hatchery (IGH) and Trinity River Hatchery(TRH) are operated largely as mitigation hatcheries, located in the SONCC ESU. Warm Springs Hatchery (WSH) and Monterey Bay Salmon and Trout Project's (MBSTP) Kingfisher Flat Hatchery are conservation hatcheries located within the CCC ESU. All of these programs were active at the time of the listing. No new coho artificial propagation programs have been initiated since the listing in 2004. However, the WSH program since 2009 has expanded to include coho salmon from other basins, mainly for the purpose of outbreeding.

IGH's coho salmon program, located on the Klamath River, continues to produce a relatively small number (about 75,000) of yearling coho salmon annually. Since the listing, the Department, in consultation with NOAA Fisheries and Pacificorp, has developed a draft Hatchery and Genetic Management Program (HGMP) for this hatchery and has recently begun to incorporate substantial conservation elements in its

operations, including genetic management of spawning to reduce inbreeding. There is an active multi-agency steering group that has guided modifications of hatchery operations to benefit coho salmon in the Klamath River.

TRH continues to produce relatively large numbers of coho salmon annually (approximately 500,000 juveniles) as mitigation for the adverse effects of dam construction on coho salmon populations. A preliminary draft HGMP has been produced for this hatchery program. This hatchery has not substantially changed its production or operations since the listing.

The coho salmon captive rearing program at WSH is a conservation/recovery effort that has been in operation since 2001. Since 2004, this program has steadily increased its production and has improved the condition of fish produced. The program carries out intensive genetic stock management, including minimization of inbreeding using genetic spawner pairing and careful outbreeding to mitigate inbreeding effects.

South of San Francisco Bay, the *MBSTP* continues to produce relatively small numbers of coho salmon annually at the Kingfisher Flat Hatchery for stocking into Scott Creek in Santa Cruz County. Since the listing, coho salmon propagation in this program has steadily shifted to include captive broodstock housed at WSH, in cooperation with NOAA Fisheries Southwest Regional Science Center (SWFSC).

In Scott Creek the last wild runs of coho salmon were in 2005 and 2006, with no apparent successful wild returns in 2007 through 2011. The captive broodstock program at the hatchery had limited brood stock or egg production until the captive broodstock program ramped up in 2011-12.

The hatchery operation with captive brood stock to produce fry, smolts, and some rereleases of adults to spawn in the wild in Scott (and San Vicente Creek) is currently preventing extirpation of the stocks south of San Francisco. Some wild rearing in San Vicente and Scott creeks was produced from release of surplus adults to spawn in the wild in 2012, and substantial wild juveniles were produced in 2013 in Scott Creek by the release of captive broodstock to spawn in the wild (Smith 2013).

In general, artificially produced hatchery salmon may potentially have adverse ecological and genetic effects on wild stocks through increased competition for food and space and inbreeding (e.g. Christie et al. 2012, Eldridge & Nash, 2007; Rand et al., 2012). However, in California, there have been few studies on the effects of hatchery coho salmon on wild stocks (see Conrad et al. 2013). Hatchery reform programs are currently being developed in California and the Pacific Northwest to mitigate potential adverse impacts of hatchery practices on populations of wild salmon.

4.6 Climate change

California experiences wide variation in climatic and hydrologic conditions. Various climatic phenomena including severe storms, drought, seasonal cycles, El Niño and La Niña events, decadal events, and regime shifts can alter the physical, chemical, and biological aquatic environment (Parrish and Tegner 2001). These changes can, in turn, play a major role in the life history, productivity, and persistence of coho salmon populations. Coho salmon evolved with, and have persisted in the face of, extreme variability in habitat conditions caused by these natural phenomena. However, catastrophic conditions combined with low population numbers, habitat fragmentation, impacts of human activities, and habitat degradation or loss can cause an unrecoverable decline of a given population or species (Moyle et al. 1995).

There is evidence that recent changes in populations of Pacific salmon in the Pacific Northwest may be related to patterns in climate change (Beamish et al. 1999; Hare et al. 1999; Mantua et al. 1997; Battin et al. 2007)). Climate change may affect flood frequency in California streams, which may in turn impact salmonid populations (Meyers et al. 2010).

It is predicted that globally within the next few years, climate change may surpass habitat loss as the primary threat to the conservation of most animal species (Thomas 2004; Schwartz et al. 2006). Moreover, climate variability is known to affect the marine survival of coho salmon in Oregon and Washington (Lawson et al. 2004). Marine factors have been used to explain up to 83% of the variability in Oregon coastal natural coho salmon recruitment, yet about half the variability in coho salmon recruitment comes from the freshwater life phase of the life cycle. This seeming paradox could be resolved if freshwater variability were linked to climate and climate factors influencing marine survival were correlated with those affecting freshwater survival (Lawson et al. op.cit.). In California it will be (and currently is) the multiple stressors, that include climate extremes, that are most important for salmon survival and recovery.

California coho salmon are at the southern limit of their geographic range and often reside in streams near the upper limits of their thermal tolerance and hence may be more susceptible to any increases in water temperature due to climate change. Coho salmon are also thought to be one of the most sensitive of all anadromous salmonids to climate variability because of their life history, with most spending an extended time rearing in freshwater (Bell & Duffy 2007; Moyle et al. 2013). However, there is little or no data on actual or potential impacts of climate change on California coho salmon, or the consequences for population recovery. It has also been suggested that habitat restoration for salmon recovery may also be impacted by climate change and that habitat deterioration associated with climate change will make salmon recovery targets much more difficult to attain (Battin et al. 2007; Beechie et al. 2012).

Climate change will likely produce a range of responses in different life stages. Many will likely be negative while others may be positive (Schwartz et al. 2006). Negative effects may occur due to increased water temperatures which may decrease juvenile

freshwater survival rates. The impacts from climate change will likely exacerbate the current stresses and threats affecting California coho salmon and may push many systems beyond current thresholds for suitability and beyond their potential for recovery (Moyle et al. 2013).

Droughts, especially those of long duration and high intensity, are a major hazard to both natural and human-dominated environments and can be damaging and leave long-lasting effects on aquatic biota, including fish populations (Lake 2003). California is known to experience periodic drought conditions, dating back most recently to 2012, which results in severely reduced precipitation, and hence lower stream flows, in many coastal rivers. Coho salmon recovery in coastal watersheds may be impeded as adult spawning success and juvenile survival are reduced as a result of lower stream flows and higher water temperatures (CDFG 2004).

4.7 Ocean conditions

It has been reported that poor ocean conditions in 2005 and 2006 were an important contributing factor in the recent declines of runs of Pacific Salmon in California and the Pacific Northwest (Lindley et al., 2009). It is well established that ocean conditions in the Pacific Northwest have considerable influences on anadromous salmonids, including California coho salmon, especially through changes in ocean productivity. (Nickelson 1986; Mueter et al. 2002; Hobday and Boehlert 2001; Ryding and Skalski 1999). It is likely that downturns in ocean productivity in 2005 and 2006 affected coho salmon more than other anadromous salmonids because of their low population numbers. The adverse effects of poor ocean conditions were also severe on Central Valley Fall Chinook salmon (Lindley et al., 2009).

Survival rates of coho salmon smolts in the eastern North Pacific are influenced by broad-scale climate patterns (Coronado and Hilborn 1998). Survival of coho salmon in the ocean is correlated with physical environmental factors, including upwelling and sea surface temperature (Nickelson 1986) operating across scales of hundreds of kilometers(km) (Mueter et al. 2002). In Oregon, ocean environmental indices explained 75 percent to 83 percent of adult recruitment in naturally spawned coho salmon (Koslow et al. 2002).

The extent to which the recent declines in California coho salmon populations are attributable to changes in ocean conditions is not clear. Further investigations are needed to answer this question. However, recent data from across the range of coho salmon on the coast of California and Oregon reveal that there was a 72 percent decline in returning adults in 2007/08 compared to the same cohort in 2004/05 (MacFarlane et al. 2008).

Chapter 5. Coho Salmon Habitat Restoration

The restoration and enhancement of suitable habitat conditions for juvenile rearing and survival and adult reproduction in both freshwater and estuarine environments has been the main focus for coho salmon recovery programs in both the CCC and SONCC ESUs. The Department has funded and also undertaken extensive habitat restoration for coho salmon recovery throughout their range in both the CCC and SONCC ESUs. In addition, many other agencies and organizations have been involved with habitat restoration projects for the recovery of California coho salmon populations.

5.1 The California Fisheries Restoration Grants Program (FRGP)

Since 1981, the Department has funded, through the Fisheries Restoration Grants Program, anadromous salmonid restoration and recovery projects in coastal watersheds throughout northern and central California. FRGP is a collaborative effort involving more than 600 stakeholders that focuses on restoring fish habitat conditions in order to ensure the survival and protection of anadromous salmon and steelhead trout in California's coastal watersheds.

Over the last 30 years, FRGP has invested over $250 million and supported approximately 3,500 salmonid restoration projects. From 2004 to the present time, FRGP has allocated a total expenditure of over $100 million to coho salmon recovery projects in California. The Department conducts implementation and effectiveness monitoring of a sub-set of projects to track the success and benefits of FRGP habitat restoration efforts for the enhancement and restoration of salmonid populations.

Since 2004, the FRGP program has focused on projects intended specifically to benefit coho salmon through the restoration of suitable habitat conditions in watersheds within the CCC and SONCC ESUs. FRGP performance measures for coho salmon habitat improvement projects carried out in the State over the period 2004-2011 are summarized in Table 5.1. The locations in the two ESUs where habitat restoration works and other types of FRGP funded projects for coho salmon recovery have been undertaken from 2004 to 2011 are shown in Figures 5.1 and 5.2 and Appendix G.

A total of 433 FRGP-funded projects benefiting coho salmon recovery was completed over the time period 2004 -2011, addressing 287 recovery tasks, listed in the 2004 *Recovery Strategy*. The locations of the recovery projects within each ESU and recovery unit, and the type of project undertaken, are shown in maps and tables, included in Appendix G.

Table 5.1. Summaries of FRGP Performance Metrics for Coho Salmon Recovery, 2004-2012.

Project Type	Metric	Quantity
Fish Passage Improvement	Number of blockages removed	118
Fish Passage Improvement	Miles of stream opened	209
Fish Screening Projects	Number of fish screens installed/replaced	92
Instream Habitat Improvement	Total miles of stream treated	223
Riparian Habitat Improvement	Miles of riparian bank treated	149
Riparian Habitat Improvement	Acres of riparian area treated	1,467
Upland Habitat Improvement	Acres of upland area treated	4,117
Upland Habitat Improvement	Miles of road treated	462
Monitoring	Miles of stream monitored	1,578
Fish rearing	Number of hatchery fry/smolt released	182,675
Organizational Support	Number of watershed plans/assessments completed	196

The various project types funded by FRGP grants were grouped together into six major categories: 1. Fish passage improvement, 2. Instream habitat improvement, 3. Organizational support, 4. Watershed restoration monitoring, 5. Water conservation, 6. Cooperative fish rearing.

The number of FRGP-funded projects in each category and recovery unit is summarized in Table 5.2.[3] In both the CCC and SONCC ESUs, the category with the most numerous projects has been instream habitat improvement, followed by organizational support and monitoring.

[3] The restoration projects approved for funding are listed annually on-line: http://www.dfg.ca.gov/fish/Administration/Grants/FRGP/FundSummary.asp

For additional information on the FRGP grants program see: http://www.dfg.ca.gov/fish/Administration/Grants/FRGP/index.asp

5.2 Coho salmon habitat restoration programs by other agencies and organizations

Coho salmon habitat restoration and species recovery work is also undertaken in California by a wide range of other agencies and organizations, including NOAA, water agencies, watershed groups, sport fishing organizations, non-governmental organizations (NGOs) and Resource Conservation Districts (RCDs). Some examples of other coho habitat restoration programs are listed below.

5.2.1 The NOAA Restoration Center

The NOAA Restoration Center provides funding and technical assistance for restoration projects benefitting NOAA trust resources, including salmon and steelhead. Since 1996, the Restoration Center has funded over 400 projects benefitting California's salmon and steelhead. The Restoration center works with NMFS staff and others to develop and implement projects addressing limiting factors to salmonid recovery, such as partnering with grassroots organizations to encourage hands-on citizen participation and providing technical support. Funding opportunities come from a variety of sources managed by the Restoration Center. More information is available at: http:/www.habitat.noaa.gov/funding/southwest.html.

5.2.2 Water agencies

Marin Municipal Water District (MMWD) is a public agency that aims to mitigate the effects of reservoir development in the Lagunitas Creek watershed and has a comprehensive, long-term program to enhance the habitat of the creek for the benefit of coho salmon and other aquatic resources. For further information see http://www.marinwater.org/176/Natural-Resources-Fisheries

Sonoma County water Agency (SCWA) conducts fisheries research and monitoring activities to support ongoing SCWA operations and ESA compliance, focusing on the Russian River system in Sonoma County. For further information see http://www.scwa.ca.gov/fisheries/

5.2.3 Sport fishing organizations

Trout Unlimited (TU) is a nationwide sport fishing organization. To date, TU's North Coast Coho Project and its partners have improved or eliminated over 514 miles of logging roads, removed 11 major fish migration barriers, reconnected 68 miles of stream habitat, and installed over 1,110 instream features to improve coho salmon and steelhead habitat. For further information see Appendix I and http://www.tucalifornia.org/index.php?page=north-coast-coho-recovery

Figure 5.1. Locations of FRGP-funded coho salmon restoration projects in the CCC ESU Recovery Units from 2004 through 2011 (map legend on following separate page).

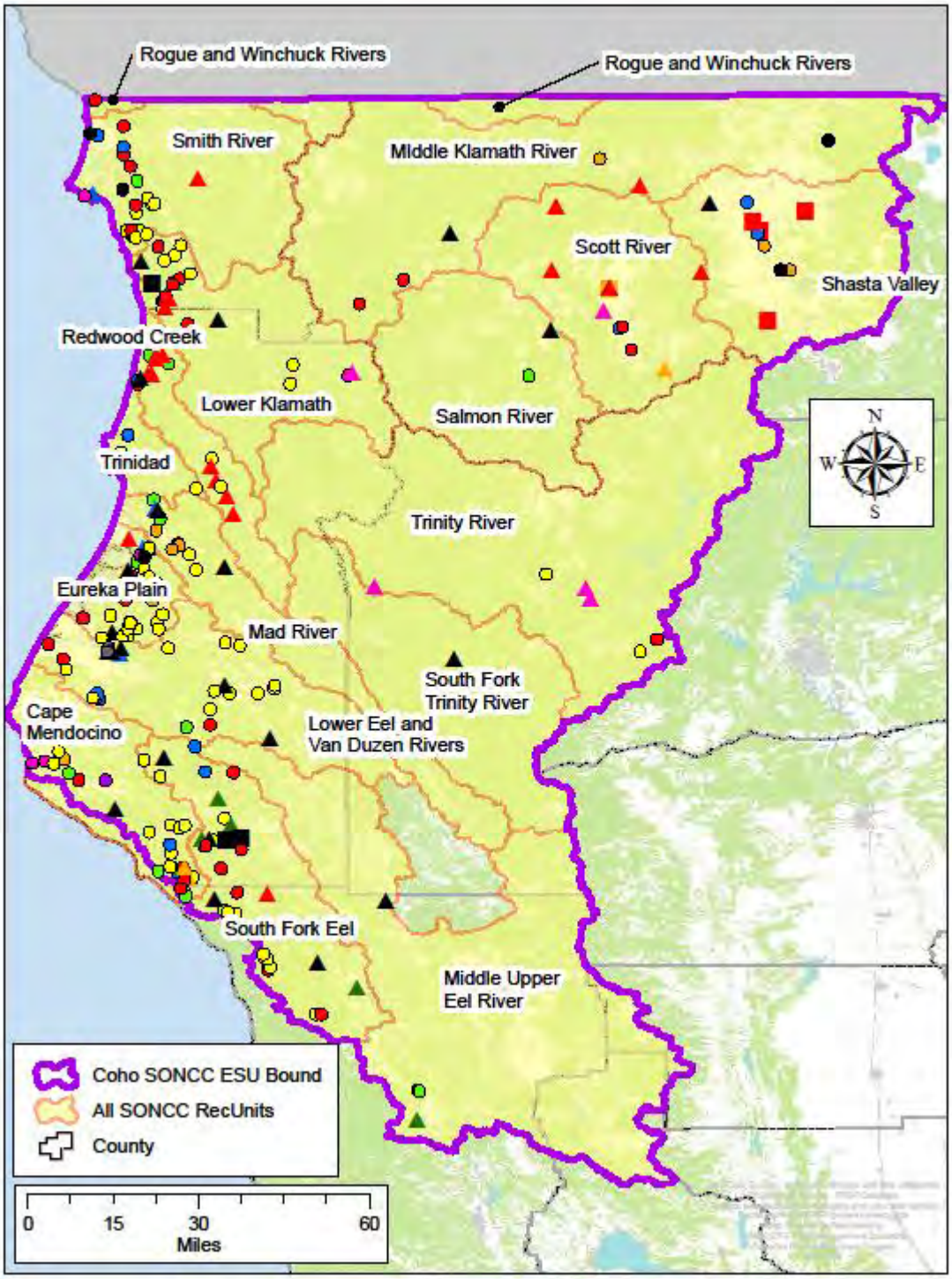


Figure 5.2. Locations of FRGP-funded coho salmon restoration projects in the SONCC ESU Recovery Units from 2004 through 2011 (map legend on following separate page).

Legend for Figures 5.1 and 5.2– SONCC and CCC ESU Projects

- ● AmeriCorps
- ● Public School Watershed and Fishery Conservation Education Projects
- ● Fish Passage Improvement at Stream Crossings
- ● Instream Barrier Modification
- ● Instream Habitat Modification
- ● Riparian Restoration
- # Instream Bank Stabilization
- ● Watershed Restoration (Upslope)
- # Monitoring Projects
- ● Project Monitoring Following Project Completion
- # Watershed Organization Support and Assistance
- ● Project Design
- # Public Involvement and Capacity Building
- # Watershed Evaluation, Assessment and Planning
- " Project Maintenance
- " Fish Screening of Diversions
- " Private Sector Technical Training and Education Projects
- # Water Conservation Measures (Ditch lining, Piping, Stock Water Systems)
- " Cooperative Rearing

Table 5.2. Summary of numbers of FRGP-funded projects in each project category and recovery unit in the CCC and SONCC ESUs from 2004 through 2011.

ESU and Recovery Unit	Fish Passage	Instream Habitat	Organizational. Support	Monitoring	Water	Fish Rearing	Total
CCC ESU							
Big Basin	0	0	2	4	0	4	10
San Mateo	0	1	2	0	0	0	3
San Francisco Bay	0	0	5	3	0	0	8
Bodega-Marin	3	10	10	5	1	0	29
Mendocino Coast	8	39	13	3	0	0	63
Russian River	4	16	11	2	0	0	33
NUMBER OF PROJECTS	15	66	43	17	1	4	146
SONCC ESU							
Middle-Upper Eel	2	1	1	0	0	0	4
South Fork Eel	1	25	9	1	0	0	36
Lower Eel/Van Duzen	1	17	11	0	0	0	29
Cape Mendocino	4	17	4	2	2	0	29
Eureka Plain	2	21	7	5	0	0	35
Mad River	5	3	3	0	0	0	11
Trinidad	0	4	0	0	0	0	4
Redwood Creek	2	4	1	11	0	0	18
Lower Klamath	0	19	6	4	0	0	29
Middle Klamath	7	2	2	1	0	0	12
Salmon River	1	0	0	0	0	0	1
Trinity River	0	4	3	0	0	0	7
South Fork Trinity River	0	0	1	0	0	0	1
Shasta River	14	2	7	1	0	0	23
Scott River	5	5	6	5	2	0	23
Smith River	0	18	10	0	0	0	23
Rogue/Winchuk Rivers	0	2	0	0	0	0	2
NUMBER OF PROJECTS	44	144	71	30	4	0	292
OVERALL TOTALS	59	210	114	47	5	4	433

California Trout (CalTrout) is an NGO currently focused exclusively on protecting and restoring wild trout, salmon, steelhead and their waters throughout California. CalTrout currently focuses their efforts around restoring salmon and steelhead and saving imperiled native trout. For further information, see http://caltrout.org/

5.2.4 Non-governmental environmental groups (NGOs)

This section includes information on the work of some NGOS actively involved with coho salmon recovery in the State of California. However, it is beyond the scope of this report to provide information on all NGO activities. A partial list of organizations is provided in Appendix E.

The **Salmon Protection and Watershed Network** (SPAWN) is a science-based watershed protection organization located in Marin County that engages community members to take action in order to help with salmon recovery. The group focuses on restoring suitable habitats and monitoring coho salmon populations in the Lagunitas Creek watershed. See: http://seaturtles.org/programs/salmon/

In Humboldt County, the **Mattole Restoration Council** (MRC) the **Mattole Salmon Group** (MSG) and **Sanctuary Forest** (SF) are community based non-profit organizations that are actively involved with habitat restoration, water storage and forbearance, salmon population monitoring and education and outreach in the Mattole River watershed. For further information see: MRC, http://www.mattole.org/, MSG, http://www.mattolesalmon.org/, SF, http://sanctuaryforest.org/

Founded in 1976, the **Monterey Bay Salmon and Trout Program (**MBSTP) is a non-profit organization dedicated to the restoration and enhancement of the native salmon and steelhead populations of the greater Monterey Bay area. To accomplish the goals, MBSTP has developed three major programs: Coho Salmon and Steelhead, Chinook Salmon Enhancement, Salmon and Trout Education. See: http:// www.mbstp.org

5.2.5 Local government organizations (LGOs)

This section includes information on the work of some LGOs actively involved with coho salmon recovery in the State of California. However, it is beyond the scope of this report to provide information on all LGO activities. A partial list of organizations is provided in Appendix E.

FishNet 4C was a county-based salmon protection and restoration program that brings together the Central California Coastal Counties of Mendocino, Sonoma, Marin, San Mateo, Santa Cruz and Monterey. The focus of the FishNet 4C program was on implementing on-the-ground restoration projects, employing best management practices during maintenance activities, and incorporating aquatic habitat protections into land use regulations and policies. Due to funding short-falls, this program ceased operations in 2012.

Five Counties Salmonid Conservation Program. In 1997, the northwestern California Counties of Del Norte, Humboldt, Mendocino, Siskiyou and Trinity agreed to collaborate on a proactive, positive response to the federal listing of coho salmon as a *threatened* species by forming the Five Counties Salmonid Conservation Program (5C). The primary goal of 5C is "to strive to protect the economic and social resources of northwestern California by providing for the conservation and restoration of salmonid populations to healthy and sustainable levels and to base decisions on watershed rather than county boundaries." See: http://www.5counties.org/

5.2.6 Other government agencies

The **State Water Resources Control Board** (SWRCB) has worked actively to coordinate water rights activities with the Department, NOAA Fisheries, United States Fish and Wildlife Service (FWS), Army Corps of Engineers (USACE), and other stakeholders to address adverse impacts caused by water diversion (Appendix H). See; http://www.swrcb.ca.gov/

The **Point Reyes National Seashore Association** (PRNSA). When coho salmon and steelhead trout were placed on the ESA list, the National Park Service (NPS) initiated a five-year project to identify, evaluate, restore, and enhance coho salmon and steelhead populations and their habitat within three West Marin parks, Point Reyes National Seashore, Golden Gate National Recreation Area, and Muir Woods National Monument. The Coho and Steelhead Restoration Project focuses on Pine Gulch, Redwood, Olema, and Lagunitas creeks and their watersheds. For further information see: http://www.sfnps.org/species/

The **University of California Cooperative Extension Program** (UCCE) and the **Sonoma County Water Agency** (SCWA) have participated in a collaborative effort to re-establish coho salmon in the Russian River in Sonoma County since 2001. Warm Springs Hatchery captures, rears and spawns coho salmon broodstock from the Russian River and elsewhere. Juvenile salmon are released in selected tributary streams and UCCE and SCWA staff monitors their movements, growth and survival until they migrate downstream to the ocean for adult rearing and maturation. See: http://www.scwa.ca.gov/fisheries/

The **California Conservation Corps Watershed Stewards Project (WSP)** is a comprehensive, community-based, watershed protection, restoration and education program. Established in the spring of 1994, WSP was created by biologists and educators and brought together by the California Conservation Corps to fill critical gaps in scientific data collection, restoration efforts and community education.

In the past 20 years, WSP members have accomplished the following: inventoried over 34,504 miles through stream, riparian and upslope surveys; generated over 2,620 scientific reports and databases; developed over 1,600 watershed restoration projects;

instructed over 40,573 students on salmonid lifecycles and watershed processes; provided outreach to over 237,174 students and community members; and engaged more than 16,995 community volunteers in hands-on restoration projects. In collaboration with private landowners, timber companies, tribal communities, commercial and sport fishing industry representatives, teachers, community members, non-profit organizations, and public agencies, the WSP's partnerships work to revitalize watersheds that contain endangered and threatened species by using state-of-the-art data collection and watershed restoration techniques.

For further information see:
http://www.ccc.ca.gov/work/programs/AmeriCorpsPrograms/wsp/Pages/wsp1.aspx

5.2.7 Landowners and watershed groups

Private landowners have access to and knowledge of some of the most critical lands and waterways for coho salmon recovery. With the proper organization and partners, landowners have been able to successfully complete projects on their land that have benefits to a variety of resources.

Land owners, stakeholders, and interested parties have formed watershed groups and land conservancies to maintain and/or improve the status of the basins' aesthetic values, and economic and natural resources. These include groups such as the Yager/Van Duzen Environmental Stewards (YES), Friends of the Van Duzen River, Friends of the Eel River, the Eel River Watershed Improvement Group (ERWIG), Mid Klamath Watershed Council, Scott River Water Trust, Scott Valley Watershed Council and Salmon River Restoration Council . These groups and stakeholders along with state and federal agencies are working together to promote natural resource sustainability. Watershed improvement projects have focused on reducing erosion and sediment delivery to streams by improving road conditions and watercourse crossings, stabilizing stream banks, improving instream habitat conditions with instream enhancement structures, and facilitating fish passage. The majority of these projects have occurred on privately owned lands.

5.2.8 Native American Tribes

In coastal watersheds of the central and northern California coast, several Native American Tribes are involved with coho salmon recovery activities. In the Klamath River system these include the Yurok, Hoopa and Karuk Tribes. This summary will focus on the activities of the Yurok Tribe.

The Fisheries Department of the Yurok Tribe carries out adult and juvenile coho salmon population monitoring and stream habitat restoration work in the Trinity River and tributaries of the lower Klamath River, such as McGarvey Creek (Appendix J). In addition, the *Coho Salmon Ecology Project* monitors juvenile coho salmon habitat use, movement, growth and distribution throughout the Klamath estuary and surrounding

slough and backwater habitat. This project is undertaken in conjunction with the Karuk Tribe. For further information see:
http://www.yuroktribe.org/documents/FisheriesDepartment.pdf

5.2.9 Timber companies

Several industrial timber companies which operate in the CCC and SONCC ESUs, such as Green Diamond Resource Company, Humboldt Redwood Company, Mendocino Redwood Company and Campbell Global, undertake habitat restoration work and facilitate habitat restoration work and population monitoring for coho salmon in northern California coastal watersheds.

5.2.10 Resource Conservation Districts (RCDs)

A number of RCDs are involved with coho salmon recovery activities in California watersheds. However, it is beyond the scope of this report to provide information on all these activities. For further information on the activities of individual RCDs see: http://www.carcd.org/home0.aspx.

As an example, in Sonoma County, the **Gold Ridge Resource Conservation District** is undertaking *The Salmon Creek Habitat Rehabilitation Program:*

"Coho and other salmonids have been the focus of watershed restoration efforts designed to improve habitat conditions for the fish and assist in their long-term survival in coastal California. In Salmon Creek, the Gold Ridge RCD has been an important part of these efforts, conducting assessments of watershed and habitat conditions, working with local landowners on stream protection and restoration projects, and helping to inform the public about the ecological and economic importance of coho.

Efforts to restore the fish in Salmon Creek have been given a huge boost by the California Department of Fish and Game, which has released spawning adult coho into the stream for the past four winters. But improvements to both summer flows and instream habitat must continue if the coho are to thrive once again in Salmon Creek."
Source: http://www.goldridgercd.org/project/SOS.html

Appendix E provides a partial list of organizations involved in coho salmon recovery in the State of California.

Chapter 6. Coho Salmon Recovery Status Report by Evolutionarily Significant Unit and Recovery Unit

6.1 Recovery Activities in the Southern Oregon – Northern California Coast Coho Salmon Evolutionarily Significant Unit

6.1.1 Introduction

Since the *Recovery Strategy* for coho salmon was produced in 2004, there have been numerous activities in the SONCC ESU aimed at protecting, restoring and enhancing anadromous salmonid freshwater and estuarine habitats in general, and coho salmon recovery specifically. Protection of coho salmon and their habitats from significant impacts continues to be a priority under the jurisdiction of the Department.

Habitat and species protection activities include: environmental review and permitting for timber harvesting, land development projects (for example - residential housing, commercial or industrial building), gravel mining, water diversion for domestic or agricultural use, and road maintenance and bridge replacement. In the SONCC ESU 292 FRGP projects intended to benefit coho salmon have been funded through the Department over the period 2004-2011 (Table 5.2). In addition, numerous additional projects have been funded by federal agencies and other entities.

Habitat improvement projects which have been carried out in the SONCC ESU since the *Recovery Strategy* was produced have included increased access to favorable spawning and rearing habitat. These projects were achieved through the combined efforts of the Department, other state agencies, federal agencies, non-governmental organizations, non-profit groups and industrial timber companies. The majority of FRGP project categories which were funded include instream habitat restoration, fish passage improvement and organizational support (Table 5.2). The locations of FRGP projects within each recovery unit, and the tasks which were addressed by the project are shown in Appendix G.

This chapter also describes population monitoring programs for coho salmon which have been performed in each recovery unit since the *Recovery Strategy* was produced. The Department monitors anadromous salmonid populations in several streams within the SONCC ESU, including Humboldt Bay tributaries in the Eureka Plain recovery unit, Shasta Valley and Scott River recovery units, Trinity River, South Fork Eel River and the Smith River recovery unit. In addition, other projects which may have been carried out and may have benefited coho salmon recovery are also described.

To facilitate monitoring of progress towards recovery, the Department divided each ESU into recovery units. The recovery units are groups of smaller drainages that are

related hydrologically, geologically, and ecologically are believed to function as unique and important components of the ESU. Measuring progress toward recovery is being done at the recovery unit scale. The SONCC Coho ESU has been divided into 17 recovery units:

SONCC ESU Recovery Units
Rogue and Winchuck Rivers
Smith River
Mad River
Shasta River
Redwood Creek
Scott River
Trinidad
Salmon River
Eureka Plain
Middle Klamath River
Lower Eel/Van Duzen rivers
Lower Klamath River
South Fork Eel River
Trinity River
Middle/Upper Fork Eel River
South Fork Trinity River
Cape Mendocino

To provide consistency with existing resource databases, recovery units are aligned with the geographic divisions of the CALWATER 2.2a system, the standard watershed mapping system used by the State of California. The CALWATER classification system includes (from largest to smallest) hydrologic regions, hydrologic units (HUs), hydrologic areas (HAs), hydrologic subareas (HSAs), and planning watersheds. The recovery units generally correspond with CALWATER hydrologic units, with the exception of the Klamath, Trinity, and Eel river systems, which are further refined at the hydrologic area level.

6.1.2 Rogue and Winchuck Rivers Recovery Unit

The Rogue and Winchuck rivers recovery unit encompasses tributaries that fall within the SONCC ESU. Portions of the Illinois River watershed, which is a tributary to the Rogue River, are also located in California. Coho salmon are present in both Elk and Dunn creeks, tributaries to the West Fork and East Fork of the Illinois River, respectively. The South Fork Winchuck River is the sole tributary of the Winchuck River located in California. General land use in this recovery unit is timber production.

Habitat Restoration

There has been some instream enhancement of coho salmon habitat in Elk Creek since 2004. In addition, there have been several projects for enhancement of habitat in the South Fork Winchuck under FRGP funding. Projects since 2004 include the installation of large woody debris (LWD) instream structures and boulder structures and planting of conifers to diversify the alder-dominated riparian (streamside) area.

6.1.3 Smith River Recovery Unit

The Smith River recovery unit encompasses all branches of the Smith River and Wilson Creek. The main coho salmon-producing streams include Mill Creek, Rowdy Creek and Wilson Creek. Land use includes timber production, recreation in state and national parks and national forest, and agriculture (in the coastal plain).

Habitat Restoration

Restoration activities for coho salmon have focused on improving fish passage, large wood enhancement, sediment reduction and riparian restoration. The Department, FWS, and the Smith River Alliance have been working with agricultural landowners in the lower river to control exotic canary reed grass, and to improve riparian vegetation by livestock exclusion fencing and riparian plantings. A pilot project was also recently completed on Reservation Ranch to improve estuary habitat for juvenile salmonids. Fish passage projects have been completed by Del Norte County on Peacock Creek and on Cedar Creek by the Pacific Coast Fisheries, Wildlife, and Wetland Restoration Association (PCFWWRA). PCFWWRA has also completed road decommissioning projects on Dominie Creek. Large wood enhancement projects were completed by Rural Human Services on Sultan Creek, along with noxious weed removal projects in the Smith River National Recreation Area. In east branch of Mill Creek, complex wood jams were effective at improving over summer and over winter pool habitats for coho salmon and other anadromous salmonids (Benegar 2011).

In 2002, California State Parks acquired the 25,000-acre Mill Creek property. Since that time, significant restoration has been completed using a variety of funding sources. The activities have been coordinated by California State Parks, Rural Human Services and

the Smith River Alliance. Projects include decommissioning roads throughout the property and large wood projects in the East Fork of Mill Creek. Riparian tree planting is also an important component of this program.

Extensive road decommissioning has occurred in the Wilson Creek watershed, carried out by PCFWWRA and Green Diamond Resource Company (GDRC). The California Conservation Corps with funding from the Department and NOAA Fisheries has also completed several large wood and riparian projects in coordination with the upslope projects.

Population Monitoring

The Mill Creek watershed supports the greatest number of coho salmon in the Smith River population. Juvenile and adult coho salmon have been monitored continuously from 1994 to present, with funding from the FRGP. Minimum counts of adult abundance, summer juvenile abundance, and juvenile outmigrant abundance have been generated each year within two major tributaries to Mill Creek including the West Branch and the East Fork (Figures 6.1 and 6.2, Table 6.1). Results from these monitoring activities are being used to estimate survival, productivity, and life history patterns. Additionally, results are being used to track salmonid population abundance trends relative to restoration efforts (e.g. road removal, reforestation) occurring throughout the Mill Creek watershed (McLeod and Howard 2010).

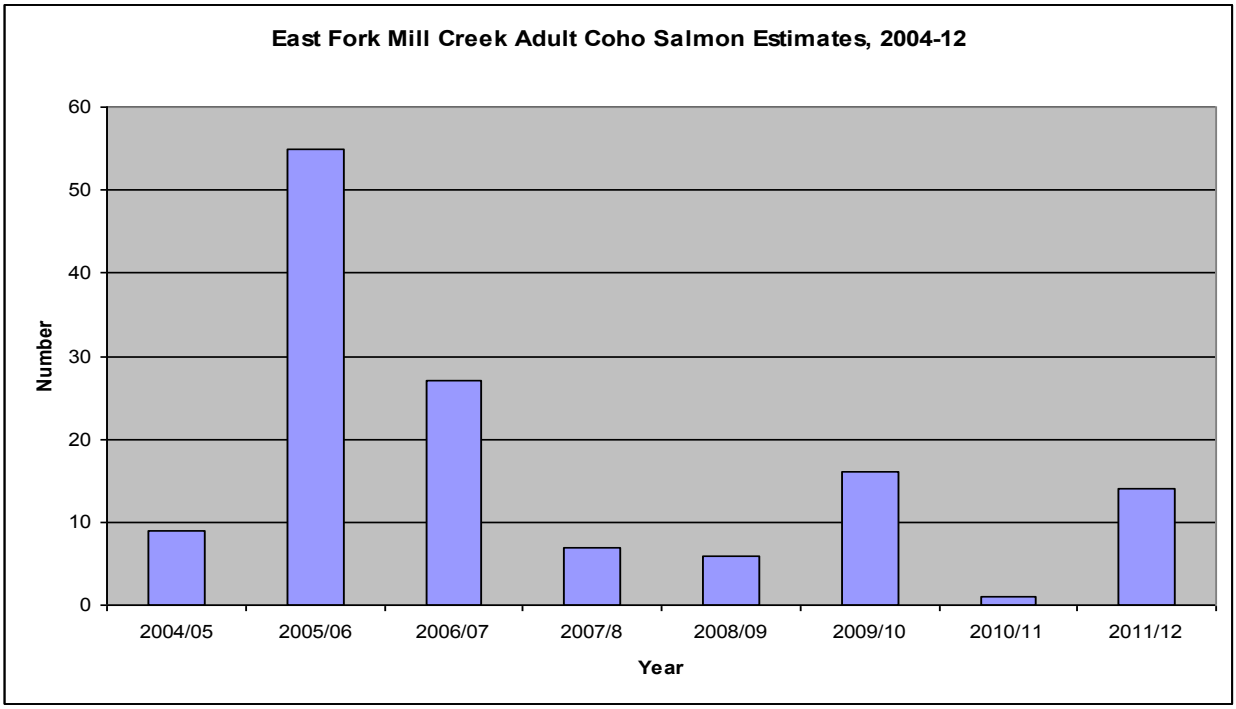


Figure 6. 1. Adult Coho Salmon Escapement Estimates, East Fork Mill Creek, Del Norte County, CA 2004-2012.

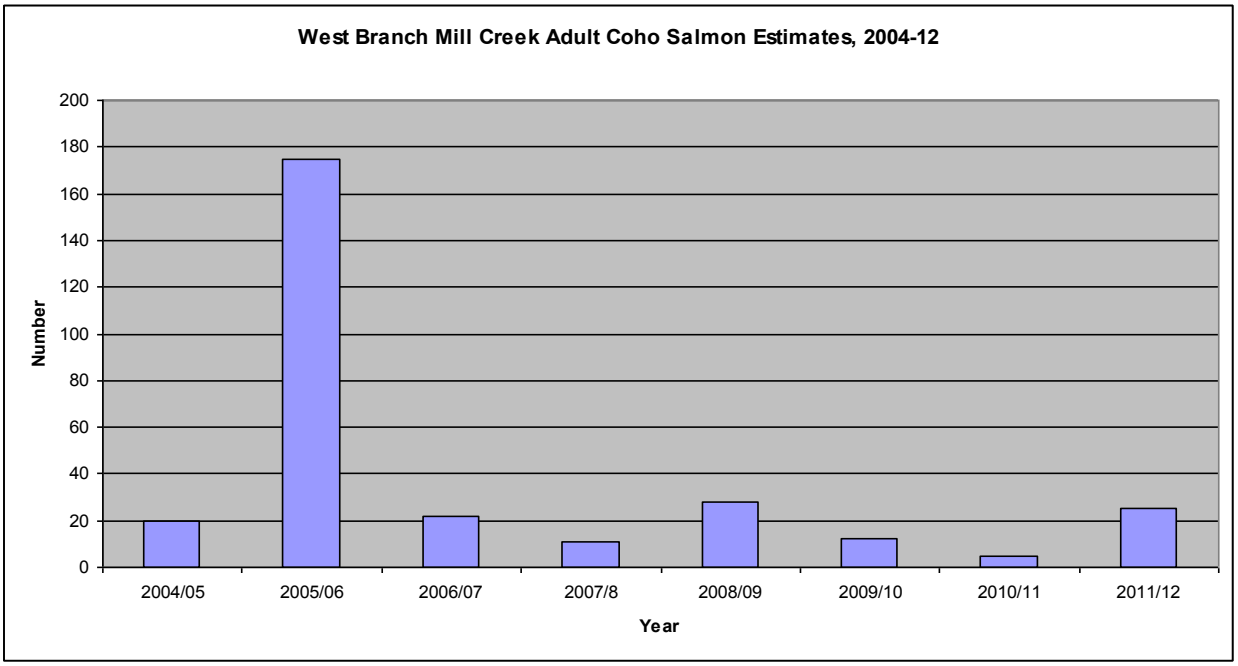


Figure 6. 2. Adult Coho Salmon Escapement Estimates, West Branch Mill Creek, Del Norte County, CA 2004-2012.

Table 6.1. Coho salmon abundance estimates by life stage in two tributaries of Mill Creek, Del Norte County, CA 2004-2011.

	East Fork Mill Creek				West Branch Mill Creek		
Year	Adults	Juveniles	Smolts		Adults	Juveniles	Smolts
2004	9	3,957	1,507		20	8,336	3,832
2005	55	12,067	496		175	24,527	763
2006	27	9,418	1,404		22	23,999	3,981
2007	7	4,491	3,018		11	13,826	3,129
2008	6	8,605	1,234		28	15,569	3,731
2009	16	9,934	1,766		12	8,628	4,535
2010	1	1,556	1406		5	2,659	3,456
2011	14	9,760	508		25	21,407	795
Means:	17	7,474	1,417		37	14,869	3,028

In addition to the Mill Creek monitoring program, a survey to estimate the annual abundance of adult coho salmon and the annual spatial distribution of juvenile coho salmon has been initiated in 2011 by the Department and the Smith River Alliance, funded through the FRGP. Spawning ground surveys and summer snorkel surveys will occur in reaches throughout the Smith River basin using a spatially balanced

Generalized Random Tessellation Stratified sample from a finite number of available reaches. These surveys will be part of the CMP and will follow the methods provided in Adams et al. (2011).

6.1.4 Lower Klamath River Recovery Unit

The Lower Klamath River recovery unit extends from the mouth of the Salmon River, approximately six miles upriver from the town of Orleans downstream to the Trinity River confluence at Weitchpec and on to the mouth of the Klamath River where it enters the Pacific Ocean. Land use includes timber production with public (USFS) and industrial timber ownership. All of the Yurok and some of the Karuk tribal lands are also located in the Lower Klamath River recovery unit.

Habitat Restoration

In the Orleans hydrologic sub area (HSA), Six Rivers National Forest has formed partnerships with the Karuk and Yurok Tribes to acquire funding for fish habitat improvement through road decommissioning efforts. Recent efforts have focused on the Bluff Creek watershed.

The Yurok Tribal Fisheries Program (YTFP) and the Yurok Tribe Watershed Program have worked with Green Diamond Resource Co. and a number of funding agencies to take a top-down approach to watershed restoration in the Lower Klamath River. Upslope restoration projects have been completed in McGarvey, Ah Pah, Tectah, Hunter, Terwer and Blue creeks. Instream projects have been completed in Hunter, East Fork Hunter, Waukell, Terwer, McGarvey, Ah Pah, Tectah creeks. They have also completed riparian projects in Hunter, East Fork Hunter, Waukell, McGarvey, Ah Pah, and Tectah creeks as well as livestock exclusion fencing and riparian planting in Terwer Creek. YTFP has also constructed off-channel alcoves in Terwer Creek (n=2), McGarvey Creek (n=2), and in Hunter Creek (n=1). Current restoration planning and implementation projects include continuing wood loading efforts and off-channel habitat enhancement in Hunter, Waukell, Terwer, and McGarvey creeks.

The FWS has worked with a private landowner to conduct livestock exclusion fencing and riparian planting within lower Salt and Hunter creeks. The FWS has also constructed off-channel habitat features in lower Salt Creek (n=1) and Panther Creek (n=1). These off-channel projects also included livestock exclusion fencing and riparian planting.

Population Monitoring

The Fisheries Department of the Yurok Tribe monitors juvenile salmonid populations in tributaries of the Lower Klamath River by trapping outmigrating juveniles, including coho salmon (Yurok Tribe Fisheries Program, 2009). A primary goal of YTFP is to restore habitats in the Klamath Basin to levels that support robust, self-sustaining populations of native anadromous fish. Primary roles of YTFP's Lower Klamath Division are to monitor

and assess fisheries populations and their habitats; identify factors currently limiting salmonid production; and integrate past and present data to further develop and implement meaningful and process-based restoration in the Lower Klamath River Sub-basin. Previous and ongoing monitoring projects include outmigrant trapping in Hunter Creek (1996-2001), Terwer Creek (2001-2005), McGarvey Creek (since 1997) and Blue Creek (since 1995); spawning surveys in Blue Creek (since 1995); regional and single stream juvenile coho salmon abundance surveys (since 2004); fish pathology monitoring in the lower river and estuary; and monitoring juvenile salmonid use, prey availability, and water quality of the estuary and its off-channel habitats. Current fisheries research projects include the Klamath River Coho Ecology Study, life history monitoring of salmonids in McGarvey Creek and assessing fish use of natural and constructed off-channel and slow velocity rearing habitat.
(see Appendix J and
http://www.yuroktribe.org/departments/fisheries/watershedrestoration.htm).

6.1.5 Middle Klamath River Recovery Unit

The Middle Klamath River extends from Iron Gate Dam to the confluence of the Salmon River.

Habitat Restoration

Most restoration work completed since 2004 has focused on fish passage improvements through, for example, culvert replacement (Table 5.2). The Mid Klamath Watershed Council (MKWC) and the Karuk Tribe have carried out habitat improvement on the South Fork Clear Creek. MKWC, in coordination with the Karuk Tribe and the USFS, have completed numerous projects to connect cold water tributaries to the mainstem of the Klamath River, providing non-natal rearing opportunities for coho salmon seeking refuge from high water temperatures in the Klamath River. In addition, MCWC has collaborated with the Karuk Tribe to enhance off-channel habitats along the Klamath River associated with tributary mouths crossing the floodplain. Projects to improve fish passage and fish screens associated with water diversions have been completed on Horse Creek and Seiad Creek.

Iron Gate Hatchery

IGH continues to produce coho salmon as mitigation for construction of Iron Gate and Copco dams , The annual mitigation production goal is 75,000 yearling coho salmon. , Coho salmon production at IGH is an important contributor to overall population abundance in the Klamath River system.

The *Recovery Strategy* outlines hatchery operation principles designed to minimize ecological, behavioral, and genetic impacts from artificial production. A first draft Hatchery and Genetic Management Plan (HGMP) for IGH was completed in 2009 and later drafts are currently under review by NOAA Fisheries. As of 2010, numerous

conservation elements from the HGMP are being implemented (prior to approval). The HGMP contains conservation measures designed to avoid impacts to listed species, preserve the genetic health of the natural and hatchery coho stocks in the basin, and enhance and accelerate coho salmon recovery. Conservation measures include operational modifications to avoid inbreeding and domestication, and to maximize fitness attributes of hatchery-origin coho salmon.

The total number of coho salmon adults entering IGH has varied from 1,734 in 2004 to 46 in 2009 (Table 6.2). The variability of available spawners resulted in the variable production of smolts from 2003-04 through 2010-11 (Table 6.3). Annual production from 2003-2010 exceeded the production goal of 75,000 coho salmon yearlings in five of the eight years. In two years production was well under the target, and in one year production was just slightly under the target. Overall, average production from 2003-2006 exceeded the 75,000-fish annual target by about 12 percent .

Table 6.2. Number of coho salmon entering Iron Gate Hatchery, 2004 through 2010.

Year	Females	Males	Grilse	Total
2004	865	630	239	1,734
2005	799	596	30	1,425
2006	151	112	69	332
2007	325	300	154	779
2008	770	508	18	1,296
2009	25	21	24	70
2010	235	193	57	485
Means	453	337	84	874

Table 6.3. Production data for Iron Gate Hatchery coho salmon, 2003-04 through 2010-11.

Season	Females Spawned	Total Egg Harvest	Yearling Production	Eggs per female
2003-04	197	502,048	74,714	2,548
2004-05	276	799,623	89,482	2,897
2005-06	103	295,101	118,487	2,865
2006-07	85	236,406	53,950	2,781
2007-08	124	316,155	117,832	2,550
2008-09	148	455,480	121,000	3,078
2009-10	20	53,435	22,236	2,672
2010-11	91	259,490	155,840	2,792
Mean	131	302,025	101,057	2,773

Bogus Creek

Bogus Creek is located on the south east side of the Klamath River just downstream of Iron Gate Hatchery (IGH) (between river mile 189 and 190) in Siskiyou County, near the Oregon border. The mouth of Bogus Creek is roughly 75 feet downstream of the entrance to the axillary ladder used to collected adult salmonid returns at IGH. As a result of the extremely close proximity of Bogus Creek to IGH there has been significant mixing of hatchery origin and natural origin salmonids from these two locations. The Department's Klamath River Project (KRP) operates a video fish counting facility and conducts spawning ground surveys (carcass surveys) on Bogus Creek during the coho salmon spawning season.

Bogus Creek, despite its small size, is particularly important because it is a major salmon spawning tributary of the Klamath River (Knechtle & Chesney 2013). A significant portion of natural escapement to the Klamath Basin would be unaccounted for if the Bogus Creek studies were not conducted. Since video operations began in 2004 the estimated escapement of coho salmon in Bogus Creek has averaged 184 fish. The run size of coho salmon during 2013 was estimated to be 446, 142.6% above the ten year average. The increase in brood year strength observed in 2013 can largely be attributed to the influence of IGH origin fish. Some adult coho stray into Bogus Creek after first entering IGH and are subsequently released as part of the surplus adult release program intended to reduce the demographic risk of extinction to the Upper Klamath coho salmon population unit.

The proportion of hatchery origin coho (HOR) in Bogus Creek has been estimated since 2004 and has ranged from 24% to 88% and has averaged 51%. As a result of hatchery management changes associated with IGH since 2010 surplus HOR adults have been released back to the river at the spawning building. During the 2010 season 60 adults were released from IGH but during 2011, 2012 and 2013, 259, 342, 896 were released respectively and this has significantly affected the proportion of HOR returns to Bogus Creek. Forty seven of the 174 (27.0%) coho salmon observed in the spawning ground survey upstream of the counting station were operculum punched, indicating that they were surplus coho salmon from IGH. However, spawning ground surveys may underestimate the proportion of surplus coho that enter Bogus Creek.

Utilizing total escapement, estimated proportion natural origin coho and estimated age structure of returning adult coho salmon to Bogus Creek allows for total spawner (hatchery plus natural origin) to natural origin recruit analysis for years 2004, 2005 and 2007-2010. The spawner recruit analysis is limited to six years of data, but indicates that the production of natural origin coho salmon in Bogus Creek may be limited to roughly 150 adults.

6.1.6 Salmon River Recovery Unit

The Salmon River recovery unit encompasses the Salmon River, a tributary to the Klamath River. The Salmon River currently has very low populations of coho salmon and suitable habitat conditions for juvenile rearing may be a limiting factor.

Habitat Restoration

Much of the habitat restoration completed on the Salmon River has been to reduce sediment delivery from roads. The USFS in cooperation with the Salmon River Restoration Council (SRRC) has completed several projects on forest service lands. The SRRC has also worked with private landowners in the watershed. Fish passage projects have been completed by Siskiyou County on Merrill Creek, Kelley Gulch and Whites Gulch. Two dams were also removed on Whites Gulch, with funding from NOAA Fisheries and the Department. Another focus has been to improve riparian areas by removing noxious weeds, primarily spotted knapweed. Since 2004, the SRRC has propagated and planted over 10,000 native plants and cuttings throughout the Salmon River at prioritized sites on federal lands.

6.1.7 Shasta Valley and Scott River Recovery Units

6.1.7.1 Shasta Valley

Habitat Restoration

The Shasta Valley Resource Conservation District (SVRCD) has taken the lead in implementing coho salmon recovery tasks in the Shasta River watershed. A total of 132 recovery projects were implemented by the SVRCD between 2004 and 2012.

Recovery actions included:

- Removal of fish barriers (2 summer flashboard permanently removed, actions initiated on a third, later also removed, along with remediation of one road barrier),
- Riparian fencing (approximately 9.3 km (5.8 miles) of additional fencing installed, along with one off-stream stock watering system),
- Fish screening (21 fish screens installed)
- Shade producing tree planting (one acre of riparian habitat was planted)
- Initiation of a major planning effort to identify and prioritize hot irrigation tailwater return to the river, along with multiple construction projects to begin addressing this long-standing problem.
- Multiple studies, including groundwater investigation and planning, irrigation efficiency studies, fish otolith studies, juvenile coho outmigration, rearing

behavior and distribution monitoring via advanced radio tracking, watershed assessment, development and joint implementation of a locally-based Shasta River Coho Emergency Action Plan, and the development and initial funding of a Shasta River water trust.

- Ongoing outreach along with the coordination needed to sustain this effort.

Recovery actions also included an effort to develop a watershed-wide coho salmon Incidental Take Permitting program as a partnership between CDFW and SVRCD. However, legal actions prevented the program from being implemented.

Voluntary efforts during this period included coordination with agricultural land irrigators to reduce water diversions and so increase instream flows to assist the out-migration of juvenile coho salmon .

Water conservation efforts in this watershed also included the purchase by The Nature Conservancy (TNC) of Big Springs and Nelson cattle ranches. Improvements in land and water management through these acquisitions have improved water quality conditions and assisted coho salmon recovery.

Population Monitoring

In 2005 the Department developed the Shasta-Scott Draft Monitoring Plan, which specifies priorities for long-term population monitoring in the Scott and Shasta rivers. The Plan's objectives are: i) develop statistically sound population estimates of adult and juvenile coho salmon, ii) identify successful coho salmon life history strategies and limiting factors, and iii) facilitate effective fish habitat improvement. The monitoring effort is consistent with recommendations in the *Recovery Strategy* concerning limiting factors and trends for coho salmon, the proposed anadromous salmonid CMP (Adams et al. 2011), and with prioritization of geographic locations for restoration.

An additional impetus for development of the Shasta-Scott Draft Monitoring Plan was the pilot program to address recovery issues associated with the agricultural use of water in the Shasta and Scott watersheds. On-going data collection activities began in 2001, and include estimating adult returns and juvenile outmigration to investigate status and trends in the smolt-to-adult ratios (Chesney et al. 2009).

Minimum adult escapements of adult and juvenile coho salmon in the Shasta River during the period 2004 to 2012 are provided in Figures 6.3 and 6.4 and Table 6.4. Adult coho escapements for the Shasta River are derived from video weir operations located approximately 0.3 km (0.20 mi) upstream from the Shasta River/ Klamath River confluence. Annual dates of operation are variable but attempts are made to operate the counting facility through the end of coho migration. Juvenile coho production estimates on the Shasta River are generated from rotary screw trap operation in the same location as the weir. Trap efficiencies are generated annually for 1+ coho using a mark and recapture estimate. In years when not enough coho are captured or marked

to generate independent trap efficiencies, the observed correlation between 1+ coho and steelhead smolt efficiencies from previous years is used to produce an estimate.

The estimated number of returning adult coho salmon has ranged from a high of 373 in 2004 to a low of nine fish (all males) in 2009, although this is a minimum estimate as high river flows at this time of year resulted in low trap efficiency. In 2010, an estimated 44 adult coho salmon returned to the Shasta River. The decline of the only relatively strong brood-year cycle, apparent in 2001, 2004 and 2007, to fewer than 50 fish in 2010 appears to indicate the possible extirpation of this brood year cycle, if conditions do not improve. Estimates of the remaining brood year cycles of adult coho salmon have in recent years been considerably fewer and extirpation is also possible.

Table 6.4. Adult Coho Salmon Escapement Estimates and Corresponding 1+ Juvenile Coho Production Estimates for the Shasta River since 2001. NA – data not yet available.

Brood Year	Number of Adults	1+ coho produced	Year of emigration	1+ per adult coho
2004	373	10,833	2006	29.04
2005	69	1,178	2007	17.07
2006	47	208	2008	4.43
2007	255	5,396	2009	21.16
2008	31	169	2010	5.45
2009	9	19	2011	2.11
2010	44	2,049	2012	51.57
2011	62	494	2013	7.97
2012	115	NA	NA	NA

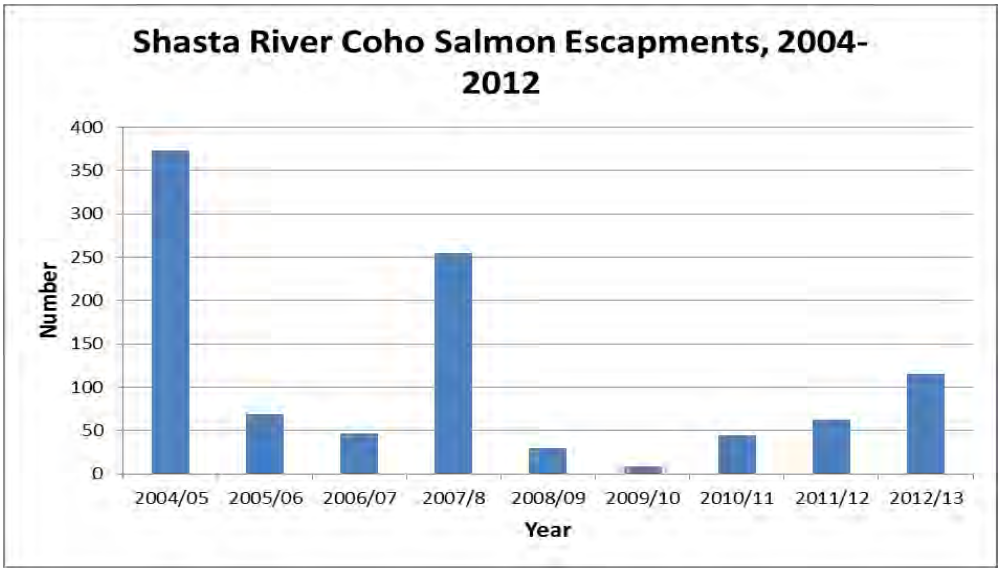


Figure 6.3. Shasta River Adult Coho Salmon Escapement Estimates, 2004-2012.

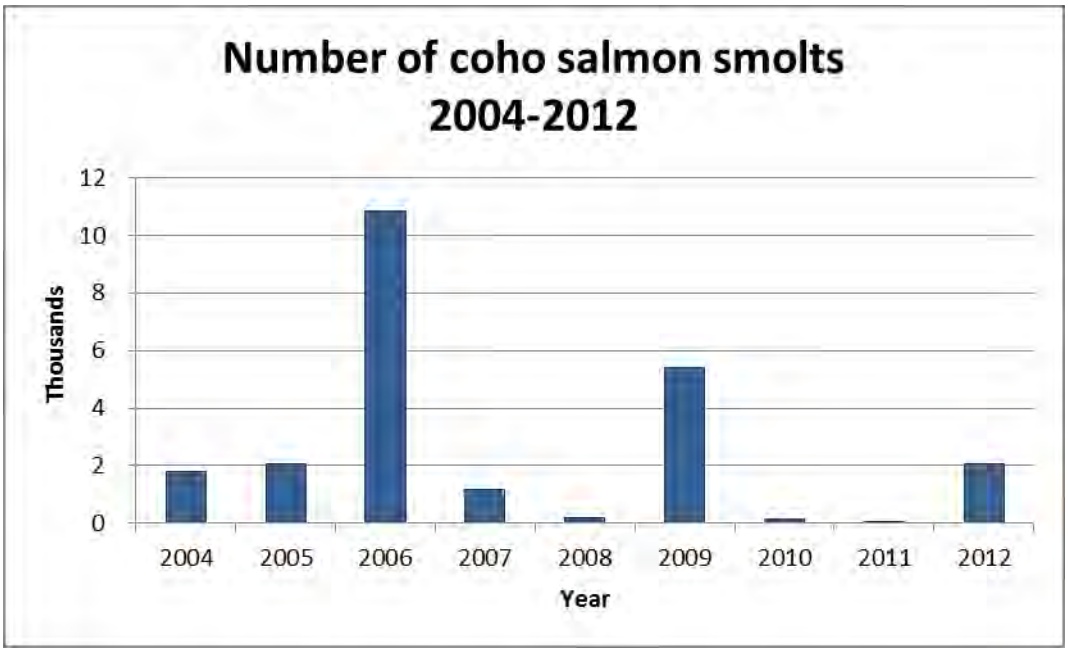


Figure 6.4. Shasta River 1+ Coho Salmon Production Estimates, 2004-2012.

Specific goals and objectives of the Department's Shasta-Scott Draft Monitoring Plan are:

1. Increase knowledge of basic life history requirements of salmonid species utilizing the Scott and Shasta watersheds.
2. Provide sound and statistically defensible data to estimate the number of adult and juvenile salmonids in the Shasta and Scott River basins.
3. Investigate factors that may be limiting salmonid populations, where possible.
4. Use limiting factor data to restore habitat and improve salmonid survival in both basins.
5. Work with local landowners and others to restore salmonid populations while allowing landowners to maintain their current way of life.
6. Identify the stream origin of coho salmon emigrating from the Shasta River and elucidate the significance of its role as a nursery area for Klamath River Basin juvenile coho salmon.
7. Identify the rearing areas of coho salmon within the Shasta River.
8. Quantify the contribution of age 0+ and age 1+ coho salmon to adult spawning populations returning to the Shasta River.

Fish monitoring techniques include; i) the use of rotary screw traps for capturing juveniles during the spring and early summer to obtain juvenile-production (juvenile population) estimates; ii) weirs, using visual and video graphic techniques to count immigrating adult salmon; iii) spawning adult carcass and redd surveys; iv) summer

juvenile counts combined with electro fishing verification in sub-watersheds to obtain a full juvenile production estimate; v) application of Passive Integrated Transponders (PIT tags) to monitor intra- and inter-basin movements and survival of juvenile salmonids, and vi) radio tracking of adults on the Shasta River to obtain information regarding spawning habitat and migration behavior. A summary of the results of these activities may be found in Chesney et al. (2009).

6.1.7.2 Scott River

Habitat Restoration

The Siskiyou Resource Conservation District (SQRCD) has taken the lead in implementing coho salmon recovery tasks in the Scott River watershed. The following summary is based on projects implemented by the SQRCD between 2004 and 2009. Ninety-four coho salmon recovery projects were funded. Approximately 10.8 km (6.7 mi) of riparian fencing was installed, 38 fish screens were installed, 22.1 hectares(ha) (54.5 acres(ac)) of riparian habitat was planted, 72.4 km (45 mi) of previously inaccessible fish habitat became accessible due to fish passage improvement projects, two alternative stock water systems were installed, 10 instream habitat improvement structures were installed, and 25 studies were funded. The studies included Scott River anadromous fish spawning assessments, Scott River thermal refugia analysis, juvenile coho salmon summer habitat utilization surveys, and a Scott River water balance evaluation.

Population Monitoring

Components of the Shasta-Scott Monitoring Plan discussed in the previous section are also currently being implemented for coho salmon population monitoring in the Scott River. These consist of monitoring adult coho salmon returns and smolt (1+ juvenile) production. Video-monitoring of adult escapements began in 2007. Escapements were not estimated prior to 2007. Instead, limited spawning ground surveys were conducted by a cooperative group, including the Department, FWS, USFS, Tribes and the SQRCD. Since large portions of available coho salmon spawning areas are located on private property, individual landowners may deny access thereby precluding complete spawning areas surveys. The data collected prior to 2007 are therefore limited in usefulness.

Complete estimates of adult coho salmon returning to the Scott River have only been available since 2007, and have ranged from a high of 1,622 in 2007 to a low of 63 in 2008, with 81 returning in 2009 and 927 in 2010 (Figure 6.5) Escapement counts are derived from video weir operations at river km 30 (mile 18) of the Scott River and spawning ground surveys downstream of the counting station. Estimates are the product of summing the number of coho observed passing through the counting station with the number of carcasses and adult coho observed during spawning ground surveys

downstream of the counting station (in both the mainstem Scott River and the tributaries). Annual dates of operation are variable but attempts are made to operate the counting facility through the end of the coho migration.

Juvenile 1+ coho salmon smolt estimates have been highly variable over the same period (Table 6.5). Juvenile coho production estimates from the Scott River are generated from rotary screw trap operation located approximately 5.5 km (3.5 mi) upstream from the confluence with the Klamath River. Trap efficiencies are generated annually for 1+ coho using a mark and recapture estimate. In years when not enough coho are captured or marked to generate independent trap efficiencies, the observed correlation between 1+ coho and steelhead smolt efficiencies from previous years is used to produce the estimate.

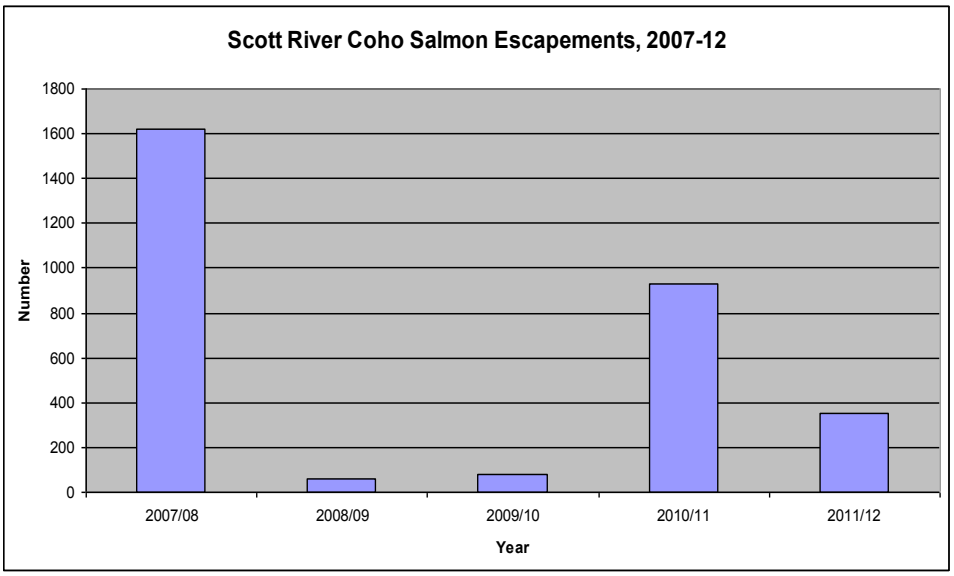


Figure 6.5. Scott River Coho Salmon Escapement Estimates, 2007-2012.

Table 6.5. Adult Coho Salmon Escapement and Corresponding 1+ Juveniles (smolts) Production Estimates for the Scott River since 2001.

Brood Year	Adult escapement	Number of 1+ juveniles produced	Year of emigration	1+ per adult
2001	NA	34,149	2003	NA
2002	NA	NA	2004	NA
2003	NA	1,660	2005	NA
2004	NA	75,097	2006	NA
2005	NA	3,931	2007	NA
2006	NA	941	2008	NA
2007	1,622	62,220	2009	38.36
2008	63	1,979	2010	31.41
2009	81	275	2011	3.4
2010	927	50,315	2012	54.28

6.1.8 Trinity River Recovery Unit

The Trinity River Hydrologic Unit constitutes the Trinity River Recovery Unit and includes the Trinity River mainstem and tributary channels located from the Trinity/Klamath confluence upstream to Lewiston Dam (river km 180.2, river mi 112). The Trinity Dam (TRD) is located approximately 11.2 km (7 mi) upstream from the Lewiston Dam. The Lewiston Dam blocks all anadromous fish passage on the mainstem Trinity River. Trinity River Hatchery (TRH), located just below Lewiston Dam, is operated to mitigate for the loss of anadromous salmonid habitat above the dam, and has an annual production goal of 500,000 yearling coho salmon for release into the Trinity River. The Trinity River recovery unit also supports naturally reproducing populations of coho salmon. Coho salmon utilize the mainstem channel as a corridor for upstream and downstream migrations, natural spawning, and juvenile rearing. Coho salmon also spawn and rear in Trinity River basin tributaries.

Habitat Restoration

The primary limiting factor for coho populations of the Trinity River has been identified as juvenile rearing habitat availability. Recent restoration activities intended to increase rearing habitat availability for coho salmon were prescribed in the 2000 Trinity River Record of Decision (ROD) and were first implemented in 2005. The ROD presents the culmination of over two decades of efforts aimed at understanding the necessary instream flow and physical habitat restoration requirements in order to improve the Trinity River for all anadromous salmon populations. These include: 1) increased flows and annually variable release flows from TRD; 2) physical channel rehabilitation, including the removal of riparian berms and the establishment of side channel habitat; 3) sediment management, including the supplementation of spawning gravels below the TRD and reduction in fine sediments which degrade fish habitats; and 4) watershed wide restoration efforts, addressing negative impacts from land-use practices in the tributaries and mainstem.

The first variable-flow releases from TRD were implemented in 2005. The annual discharge of variable-flow releases are based on forecasted hydrology for the Trinity River Basin for each year in April. The available water for release ranges from 369,000 acre-feet (af) in critically dry years to 815,000 af in extremely wet years. The increased flows are expected to improve habitat suitability for salmonids including coho salmon. Peak flow releases initiate fluvial geomorphic and riparian channel forming processes needed to improve mainstem channel habitats and also provide opportunities to inject spawning gravel to the system. Peak flows have ranged from 113.3 to 3115 cubic meters per second (4,000 to 11,000 cubic feet per second (cfs)). In addition, late summer season enhancement flows may be used to improve water quality in the Lower Klamath system.

Between 2004 and 2009, five habitat restoration sites were constructed on the mainstem Trinity River. Activities at each of these sites include channel widening, side channel construction, berm removal or modification, vegetation manipulation, large

woody debris addition, and gravel augmentation. Mechanical manipulation of the channel, coarse sediment augmentation and release of variable channel maintenance flows are expected to increase habitat quantity, quality, and diversity through rehabilitation of alluvial function. Benefits to coho salmon are expected due to the increased complexity of the available spawning and rearing habitat, increased habitat area in the form of side channels and backwaters, and a broader selection of preferred flow, depth, and temperature within habitat areas.

An important component of Trinity River habitat restoration is the addition of spawning size gravel to replenish the gravel being trapped behind Trinity and Lewiston dams. Gravel is important to replenish and build spawning areas, create channel bars to increase habitat complexity, and provide suitable substrate for riparian vegetation establishment. The addition of gravel and building of these features between 2004 and 2009 was intended to increase spawning and juvenile survival of all species of salmon, and of particular importance, naturally produced coho salmon. Approximately 408.1 million kilograms (kilos) (53,000 tons) of gravel was added to the river between 2004 and 2009. A majority of the gravel used for augmentation was acquired by sorting existing dredge tailing piles deposited during early gold mining activity. These dredge piles are located at numerous locations along the Trinity River. This method has been effective in supplying larger cobble for bar building, thereby generating suitable topsoil for riparian re-vegetation. Additionally, sorting and moving these dredge piles has helped reclaim floodplain habitat at these locations. Dredge tailing pile reclamation and gravel injections will likely continue annually for the foreseeable future.

The Trinity River has numerous tributaries important for coho salmon reproduction and rearing. Though the majority of habitat rehabilitation activities have been expended on the mainstem Trinity River, there have been several enhancement projects completed on tributary steams. Between 2007 and 2009, approximately 408,233 kilos (240 tons) of spawning-size gravel was added to Grass Valley Creek immediately downstream of Buckhorn Dam in an effort to supply gravel now being blocked by the dam. In 2008 a road crossing was modified on Grass Valley Creek to improve fish passage in a location where it was determined that passage may be a problem at certain flows. Since the passage improvement, coho salmon have been observed above the road crossing, and redds have been observed in the recently placed gravel. To date, habitat restoration programs totaling 4.5 million dollars have been carried out in tributaries of the Trinity River between Rush Creek and the South Fork Trinity River.

Population Monitoring

Juvenile and adult coho salmon populations within the mainstem Trinity River Basin are monitored by various agencies and tribes including the Department, FWS, USFS, Hoopa Valley Tribe and Yurok Tribe. Juvenile coho salmon monitoring is primarily accomplished using rotary screw traps on the main stem and fyke net traps in Hoopa Valley Reservation tributaries. These surveys have been conducted by FWS, Hoopa Valley Tribe and Yurok Tribe and have been continuous since 1995. Supplemental snorkel surveys were conducted by the Department in 2009 and 2010 in the upper

Trinity River to identify coho salmon distribution and habitat use (Sinnen et al. 2011). In 2012, a new study using snorkel surveys was initiated to estimate juvenile coho densities in the upper Trinity River.

Grilse and adult coho salmon returns to the Trinity Basin have been estimated continuously since 1977 and have been conducted by the Department using mark-recapture techniques. Fish are trapped and marked at mainstem weirs near the towns of Willow Creek and Junction City, located approximately 37 and 144.8 km (23 and 90 mi) upstream of the Klamath River confluence, respectively. Summaries of adult run-size estimates for 2004 -2012 are presented in Figure 6.6 and Table 6.6. The run size of both hatchery and natural coho salmon appear in a declining drift in recent years compared to peak numbers recorded earlier in the decade.

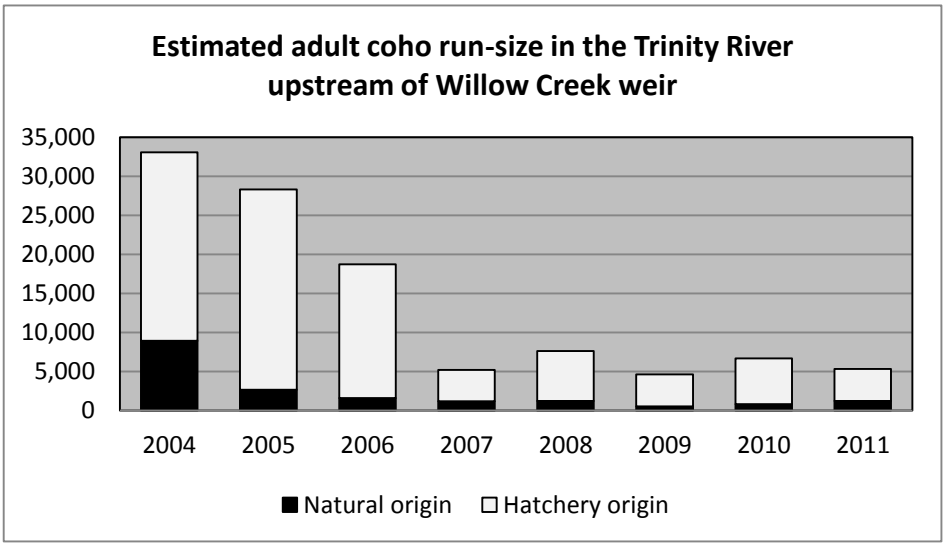


Figure 6.6. Trinity River Coho Salmon Run Size Estimates, 2004-2011.

Table 6.6. Trinity River coho salmon run-size estimates, upstream of Willow Creek weir, 2004 – 2011.

				Escapement Area	
Year	Grilse	Adults	Total	Natural	Hatchery
2004	5,819	33,063	38,882	27,859	10,983
2005	3,093	28,326	31,419	13,043	18,355
2006	1,369	18,709	20,078	9,578	10,500
2007	545	5,205	5,750	2,822	2,928
2008	2,379	7,603	9,982	4,794	5,188
2009	1,762	4,634	6,396	3,045	3,351
2010	1,278	6,669	7,947	3,522	4,425
2011	9,722	5,318	15,040	10,186	4,810
Mean	**3,246**	**13,691**	**16,937**	**9,356**	**7,568**

Mainstem Trinity River redd and carcass surveys are also conducted on a yearly basis. Though these surveys primarily target Chinook salmon and end prior to completion of coho salmon spawning, observations of coho salmon spawning are included in the data collection. These observations note that mixing of known hatchery and naturally produced coho occurs in the upper mainstem and tributaries located in close proximity to the hatchery (Sinnen et al., 2011). In 2011, approximately 60 percent of coho salmon carcasses observed during upper mainstem spawner surveys had right maxillary clips, identifying them as Trinity River Hatchery stock.

Hatchery Operations

Since 2005, the TRH has annually released approximately 500,000 coho salmon yearlings to meet mitigation and Tribal fishery obligations. The yearlings are marked with a right maxillary clip. The marking has enabled the Department to make independent estimates of hatchery and natural returns to the Trinity Basin. Summary information of coho salmon counted at the TRH is presented in Table 6.7.

Table 6.7. Summary of coho salmon trapped at Trinity River Hatchery, 2002-2011. The separation between adults and grilse is estimated by analysis of fork-length-frequency distributions.

	Adult Fish			Grilse			
Year	Males	Females	Total	Males	Females	Total	Totals
2002	3,538	2,957	6,495	602	101	703	7,198
2003	4,898	5,498	10,396	1,318	145	1,463	11,859
2004	4,716	5,190	9,906	1,038	39	1,077	10,983
2005	7,206	9,418	16,624	1,673	58	1,731	18,355
2006	4,531	5,308	9,839	561	100	651	10,500
2007	1,205	1,448	2,653	269	6	275	2,928
2008	1,960	2,579	4,539	616	32	648	5,187
2009	1,112	1,365	2,477	811	63	874	3,351
2010	1,634	2,265	3,899	444	82	526	4,425
2011	809	1,115	1,924	2,743	143	2,886	4,810
Mean	3,161	3,714	6,875	1,008	77	1,083	7,960

6.1.9 Trinidad Recovery Unit

The Trinidad recovery unit includes Freshwater, Big, and Stone coastal lagoons and their tributaries and the Little River drainage. Maple Creek (tributary to Big Lagoon) and Little River are the main coho salmon producing streams. The principal land use is industrial timber production.

Habitat Restoration

Most of the recent work in the Trinidad recovery unit has been in Maple Creek and Little River watersheds. PCFWWRA and GDRC have cooperated on upslope sediment reduction projects. In addition, large wood and riparian restoration projects have been completed in Maple Creek by Coastal Streams Restoration and the Humboldt Fish Action Council.

6.1.10 Redwood Creek Recovery Unit

The Redwood Creek recovery unit is a long, narrow unit that covers the Redwood Creek Hydrologic Unit in Humboldt County. Coho salmon are found in greatest numbers in Prairie Creek and other tributaries of the lower Redwood Creek recovery unit. The lower watershed contains Redwood National and State parks, while the mid-to-upper watershed is under industrial timber ownership.

Habitat Restoration

Restoration activities have concentrated on sediment reduction projects. Redwood National Park (RNP), the Bureau of Land Management (BLM) and PCFWWRA have aggressively decommissioned roads in the basin. Recent efforts have focused on the Lacks Creek watershed. Redwood National Park also completed fish passage projects on Streetlow Creek and North Fork Lost Man Creek. The North Coast Regional Land Trust with funding from the California Coastal Conservancy recently purchased the McNamara Property in the Redwood Creek estuary as a first step towards an estuary enhancement project. PCFWWRA in cooperation with private landowners, RNP, and the FWS have completed a planning project to restore non-natal coho salmon rearing habitat in Strawberry Creek a tributary to the estuary. Included in this project was a canary reed grass control and riparian restoration project.

Population Monitoring

The Department traps juvenile anadromous salmonids at two sites in Redwood Creek during the spring and summer emigration period (April – August). The lower trap site is located at approximately 3.8 km (2.3 mi) from the mouth just above the confluence with Prairie Creek. The lower trap has been operated each season from 2004-2009. The upper site is located approximately 33.6 km (20.2 mi) upstream from the mouth and captures salmonids from the 59 km (36.9 mi) of anadromous drainage upstream. The upper trap has been operated each season from 2000-2009 (Sparkman 2011 a,b).

The purpose of the monitoring program is to describe juvenile salmonid out-migration timing, partition the basin salmonid outmigration into that originating from the upper basin and lower basin, and estimate smolt population abundances for wild 0+ Chinook salmon, 0+ coho salmon, 1+ coho salmon, 1+ steelhead trout, 2+ steelhead trout, and cutthroat trout, using mark-recapture methods. The long term goal is to monitor the status and trends of out-migrating juvenile salmonid smolts.

For the first time, in 2007 six age 0+ young-of-the-year coho salmon were captured by the upper Redwood Creek trap indicating successful coho salmon spawning in the upper basin in that year. Abundances of age 1+ juvenile coho salmon migrants at the lower trap (above Prairie Creek) range between 102 and 879 over the five years of data (Figure 6.7).

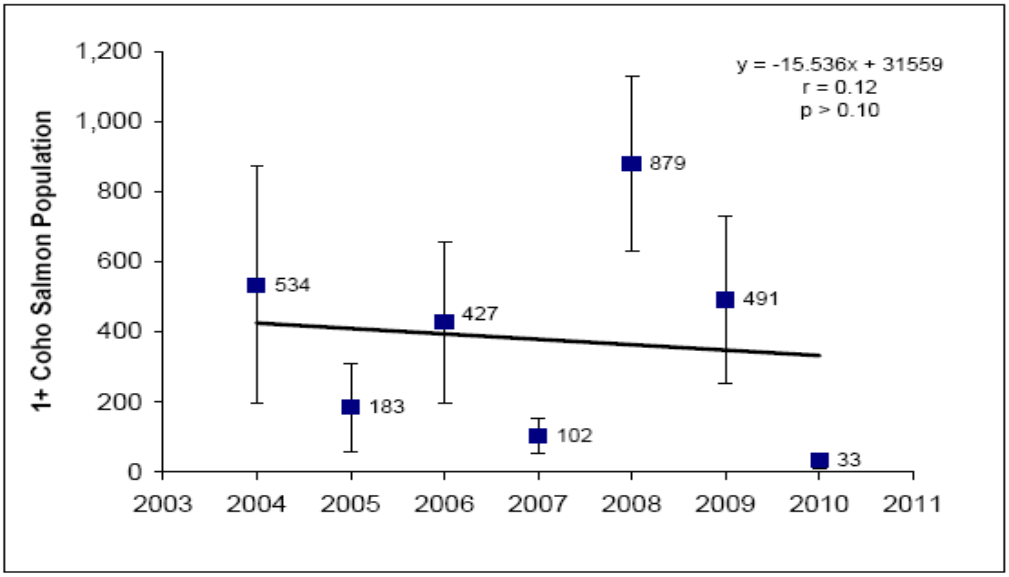


Figure 6.7. Population abundance estimates of 1+ coho salmon (error bars are 95% confidence intervals) in Lower Redwood Creek, 2004 – 2010. Source: Sparkman 2011a.

The Department initiated a survey in 2008 to estimate adult salmonid abundance within Redwood Creek; finalized data are not yet available. Additional salmonid monitoring within Redwood Creek, is conducted by the United States Geological Survey's California Cooperative Fisheries Research Unit at Humboldt State University, with funding from the FRGP. Prairie Creek Life Cycle Station is located in the largest tributary sub-basin to Redwood Creek. This project estimates juvenile summer salmonid abundance, spring smolt production and adult salmonid escapement estimates (Duffy 2008). Prairie Creek adult coho salmon escapement estimates are shown below in Figure 6.8.

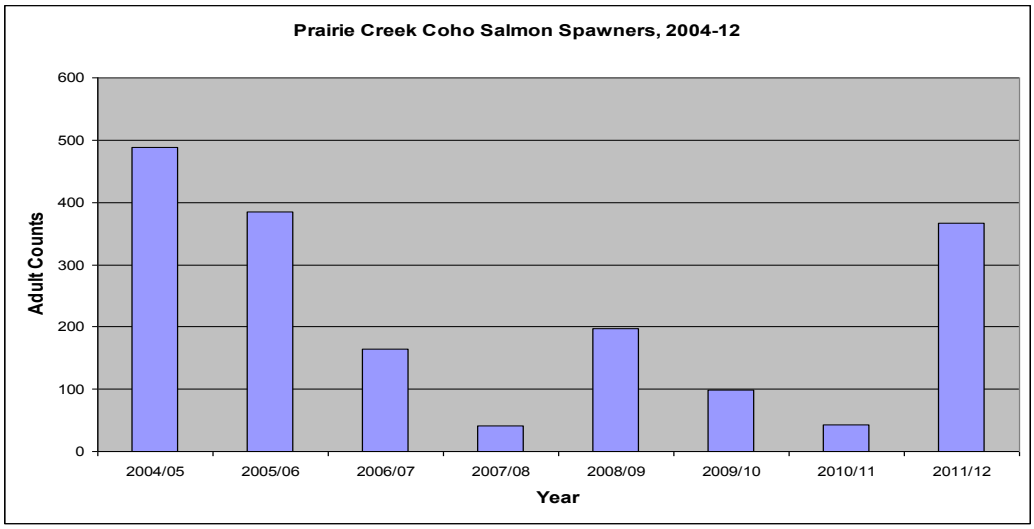


Figure 6.8. Adult coho salmon escapement estimates in Prairie Creek, 2004-12.

Watershed Assessment

A watershed assessment has been completed for Redwood Creek (Cannata et al. 2006). This assessment contains a detailed description of baseline watershed conditions, with good and poor aquatic habitat, and recommendations for addressing habitat deficiencies. As with other watershed assessments, this assessment document serves as a guide to focus restoration and habitat and species protection activities for the recovery of coho salmon.

6.1.11 Mad River Recovery Unit

The Mad River recovery unit is a long, narrow unit south of the Redwood Creek recovery unit that encompasses the Mad River watershed. The four tributaries supporting coho salmon in the lower Mad River watershed are Lindsay Creek, North Fork Mad River, Hall Creek and Canon Creek. BLM and USFS manage 39 percent of the watershed. The remaining 61 percent are in private ownership with two timber companies owning about half of the privately owned land.

Habitat Restoration

Major efforts have been made by Humboldt County, with funding from the Department and NOAA Fisheries, to improve fish passage in the Mad River. Projects have been completed on Lindsey, Grassy, Warren and Watek creeks. Humboldt Fish Action Council has also completed fish passage projects in Lindsey Creek and Hall Creek. Coastal Streams Restoration completed stream enhancement projects on the North Fork Mad River that included bank stabilization and large wood placement.

6.1.12 Eureka Plain Recovery Unit

The Eureka Plain recovery unit corresponds to the Humboldt Bay watershed, which encompasses four major tributaries and several smaller low-gradient tributaries that are used by coho salmon. The major Humboldt Bay tributaries include Jacoby Creek, Freshwater Creek, Elk River, and Salmon Creek, and all contain habitat well suited to support coho salmon. Principal land use includes industrial timber, agriculture, urban and rural residential development.

Humboldt Bay tributaries support populations of coho salmon, Chinook salmon, steelhead trout, and coastal cutthroat trout. Prior to the Department's Natural Stocks Assessment Project (NSA) studies, which began in 2003, little was known about juvenile salmonid use of Humboldt Bay or the sloughs and tidal portion of its tributaries. Recent studies conducted by NSA in the tidal portions of Humboldt Bay tributaries have shown that the stream-estuary ecotone habitat is heavily utilized by juvenile salmonids, including coho salmon.

Habitat Restoration

The City of Arcata has been active in coho salmon recovery through acquisition of property and restoration of the stream and riparian zones in streams flowing into Humboldt Bay. Projects include fish passage, livestock fencing, riparian planting and instream habitat improvement. The City of Arcata with funding from the FWS and NOAA Fisheries has completed restoration projects on Beith, Campbell, Jacoby, Janes and Jolly Giant creeks. Humboldt Fish Action Council has completed fish passage projects at three sites on the South Fork Janes Creek.

A comprehensive watershed restoration project has been completed on Rocky Gulch. The project included tide gate modification, channel reconstruction, fish passage at three sites, livestock exclusion fencing, riparian planting and road decommissioning in the upper watershed. Coho salmon were found in Rocky Gulch the first year after the tide gate was replaced with a fish-friendly gate. There have been numerous cooperators in this project including several key landowners, Humboldt County, FWS, NOAA Fisheries, GDRC and PCFWWRA.

Extensive upslope restoration has been completed on Freshwater Creek and Elk River and their tributaries by Trout Unlimited, PCFWWRA, Pacific Watershed Associates (PWA), Humboldt Redwoods Company, and Humboldt County RCD. Humboldt County completed a fish passage project on Graham Gulch. Humboldt Fish Action Council and the California Conservation Corps have modified log debris accumulations to provide fish passage and completed instream habitat improvement projects. The North Coast Regional Land Trust, FWS and Redwood Community Action Agency recently completed the Wood Creek Project to improve habitat in the Freshwater Creek estuary.

Case-Study. *Chad Creek Fish Passage Project*

Chad Creek is located in Humboldt County. The Chad Creek Highway 101 fish barrier was identified in an assessment and prioritization of Northern California state highway stream crossings carried out by Humboldt State University, California Department of Transportation (CalTrans), and the Department. The assessment identified that upstream passage of steelhead, Chinook, and coho salmon was blocked by high water velocities within the culvert and a 4.5 foot leap required for upstream migration.

In September 2011, juvenile coho salmon were observed upstream of the Highway 101 Chad Creek culvert for the first time since its construction 50 years ago. The successful retrofitting of this culvert to allow fish passage was made possible by a collaboration between the Department's FRGP and CalTrans. The success demonstrated by the return of coho salmon to Chad Creek represents the benefit to resources achieved through proper assessment and prioritization, clear standards for fish passage and design, multiple public and private entity partnership, effective funding mechanisms, efficient permitting, and post project validation monitoring.
See: http://www.dot.ca.gov/dist1/d1pubinfo/press/2007/07-093-photos.htm

The completed Chad Creek fish passage project.
CalTrans Photo

Case-Study. *Rocky Gulch Salmonid Access and Habitat Restoration Project.*

Rocky Gulch, a tributary to Humboldt Bay, is a small watershed of one square mile that was once home to trout and coho salmon, although those species have not been documented since the 1960's. The stream is now benefiting from a comprehensive, multi-phased restoration project which began with the installation of a new tide gate in the fall of 2004. The new gate replaced one that had acted as a barrier to fish migration for over 40 years. The channel rebuilding work included: restoration of the floodplain; the planting of native riparian plant species; installation of exclusionary livestock fencing; and the addition of several instream habitat structures. Also, two culverts are scheduled for replacement to eliminate the last barriers to fish migration in this watershed.

As part of the Rocky Gulch project, the antiquated tide gate was replaced with a new "fish-friendly" gate which allows unimpeded fish passage. Many benefits have been attributed to daily seawater intrusion past the gate but, undoubtedly the most exciting came in August 2005. Following the first winter with the new tide gate in operation, juvenile coho salmon, and steelhead and coastal cutthroat trout were positively identified in Rocky Gulch. Additional benefits to Rocky Gulch include the reduction of flooding, maintenance of salt marshes, enhanced fish habitat and fish migration, reduced impacts from cattle grazing, and increased plant diversity. This project serves as an example of successful stream restoration on many levels. The success of the project clearly illustrates the mutual benefits to private landowners and fisheries resources, and the feasibility to rapidly design and implement a large-scale project.
For final report see:
http://www.stream.fs.fed.us/fishxing/case/RockyGulch/Final_Report.pdf

Population Monitoring

Freshwater Creek, which drains into Humboldt Bay via the Eureka Slough, is a fourth order stream with a drainage area of approximately 9227 ha (31 square miles). The goal of the Freshwater Creek life-cycle monitoring station is to estimate fundamental population parameters essential for assessment of population viability (McElhany et al. 2000).The focus of the program is to estimate yearly abundance of adult and juvenile coho salmon (Ricker & Anderson 2011).

Adult coho salmon escapement to Freshwater Creek has declined from a high of 1,810 fish in 2002/03, to a low of just 89 fish in 2009/10 (Figure 6.9).

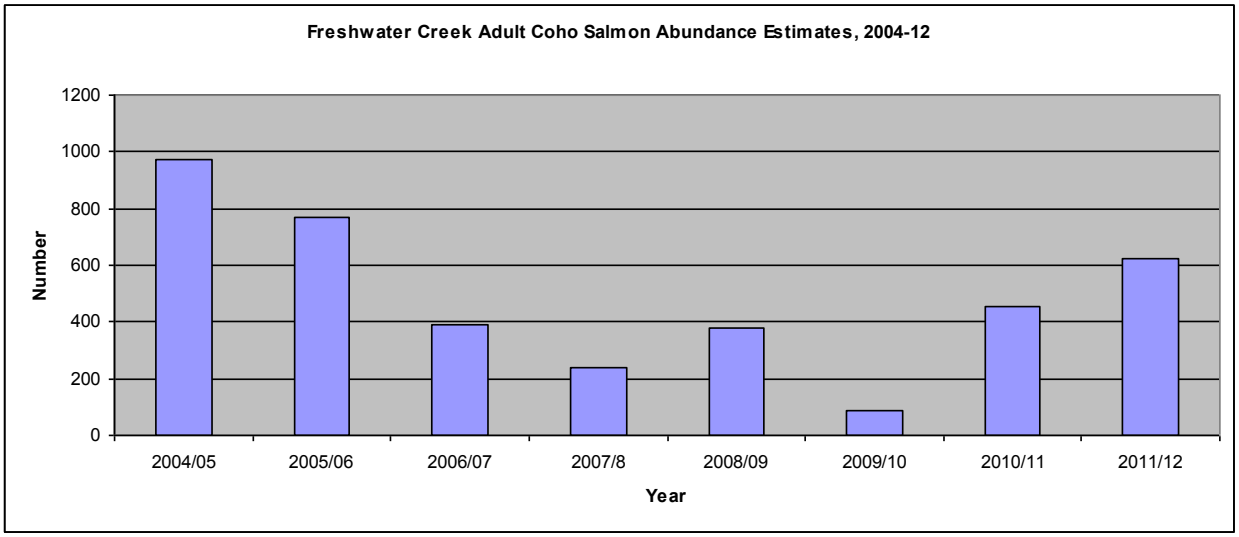


Figure 6.9. Adult Coho Salmon Abundance Estimates in Freshwater Creek, 2004-12.

There has been a clear and continuing downward trend in the abundance of adult coho salmon in Freshwater Creek over the period 2002 – 2010; with some increase over 2010 to 2012 (Figures 6.9 and 6.10). In addition, juvenile fall standing crop estimates have varied from 65,000 to under 15,000 juveniles. Estimates of spring smolt emigrants have remained relatively consistent over seven years at around 3,000 fish (range 2,376-3,600) (Ricker and Anderson 2011).

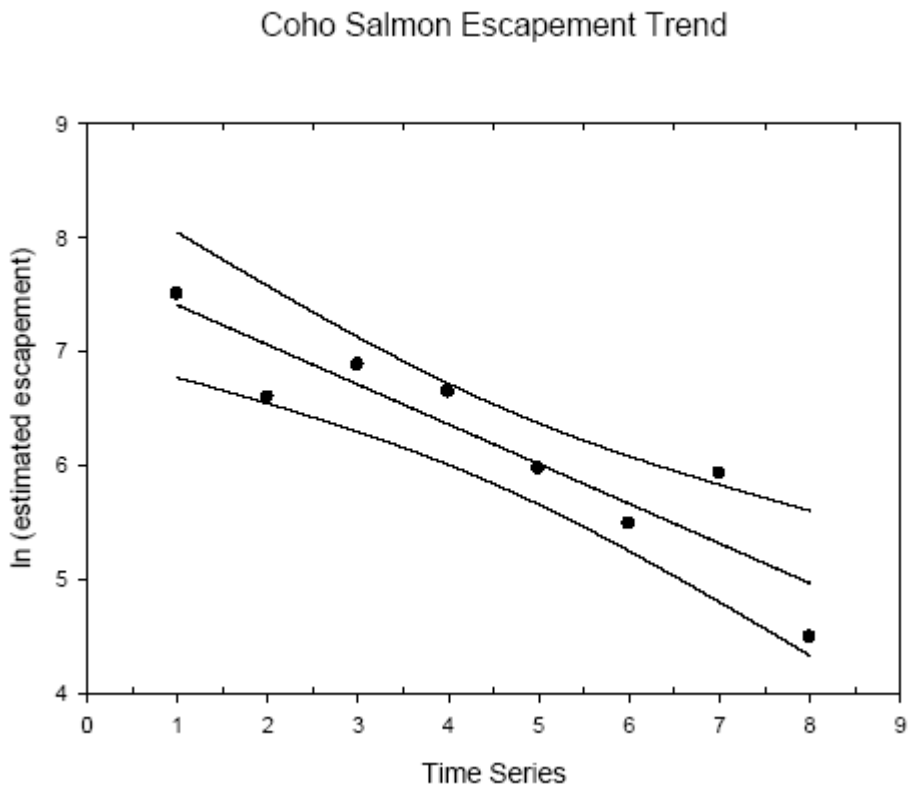


Figure 6.10. Scatter plot and regression of the log-transformed coho salmon escapement vs. the time series of available data, Freshwater Creek, 2002-2010. Source: Ricker and Anderson 2011.

Estuarine Rearing

In 2007, the Department's Anadromous Fisheries Resource Assessment and Monitoring Program (AFRAMP) and NSA estimated that 41 percent of coho salmon smolts and over 90 percent of large steelhead smolts originated from the stream-estuary ecotone of Freshwater Creek. In 2008, AFRAMP and NSA estimated that 38% of coho salmon smolts and 82 percent of large steelhead smolts originated from the stream-estuary ecotone of Freshwater Creek. These studies also showed that juvenile salmonids using this habitat experience faster growth, obtained a larger size, and likely experienced increased marine survival than juvenile salmonids rearing in stream habitat (Wallace and Allen 2012; CDFG 2008).

Wallace and Allen (2012) reported that juvenile salmonids, especially young-of-the-year coho salmon, rear in Freshwater Creek Slough for several months, though their abundance varies from year to year. Subsequent surveys in the tidal portion of other Humboldt Bay tributaries such as Elk River Slough, Martin Slough, Salmon Creek estuary, Wood Creek, and Rocky Gulch showed that juvenile salmonids, especially coho salmon, rear in the stream-estuary ecotone of these streams for several months using this important over-wintering habitat. This project has documented juvenile coho

salmon rearing in the tidal freshwater portion of Humboldt Bay tributaries throughout the summer. Some coho salmon continue to rear in the stream/estuary ecotone over the winter bringing their total estuarine rearing time to over a year.

Case Study. *Salmon Creek Delta Project.*

The Salmon Creek Delta Project is a relatively large scale FRGP funded estuarine habitat restoration project on lower Salmon Creek in Humboldt County. Salmon Creek is the third largest tributary to Humboldt Bay and is a tributary to Hookton Slough, located in Humboldt Bay National Wildlife Refuge. Salmon Creek historically supported large runs of coho and Chinook salmon as well as steelhead and coastal cutthroat trout.

Salmon Creek historically consisted of tidal salt marsh and complex slough channels, which provided important salmonid habitats. However, these lands were reclaimed for grazing during the early 1900's through construction of dikes and levees, draining of salt marshes, straightening or relocation of stream channels, and installation of tide gates to eliminate tidal influence. The lands were acquired by the U.S. Fish and Wildlife Service in the 1980's and became part of the Humboldt Bay National Wildlife Refuge. A management plan identified Salmon Creek as requiring habitat improvements to reestablish estuarine and off-channel stream non-natal rearing salmonid habitat.

The first phase of the project was completed in 2006 – 2008 and included the construction of two new adjustable tide gates to increase tidal influence and enlarge estuarine rearing habitat in Salmon Creek, providing unimpeded fish passage at all tide stages, and to improve drainage of stored floodwaters to reduce sediment deposition. Also, the project provided a connection of existing off-channel wetlands to Salmon Creek to create productive estuarine rearing habitat for coho salmon and other salmonids.

Phase 2 of the project, carried out in 2011, included creating 4,205 feet of tidal channel, converting 5,000 feet of ditched channel to backwater habitat, constructing 2.8 acres of new freshwater ponds, restoring 14 acres of salt marsh, and improving stream connectivity to seasonal freshwater habitat. Project implementation was intended to address high priority task EP-HU-10 identified in the *Recovery Strategy*. This task states, "In cooperation with willing landowners, restore and maintain historical tidal areas, backwater channels and salt marsh." The project was successful in achieving this goal.

Salmon Creek estuary artificial off-channel pond
DFG Photo: Mike Wallace

Salmon Creek estuary, Humboldt Bay
Photo credit: Pacific Coast Fish, Wildlife and Wetlands Restoration Association (PCFWWRA)

Case Study. *Wood Creek Habitat Restoration Project*

The Natural Stocks Assessment Project (NSA) of California Department of Fish and Wildlife recently assessed the performance of an estuarine habitat restoration project in Wood Creek, a tributary to Freshwater Creek Slough in Humboldt Bay, for coho salmon recovery.

In the early 1900's the marsh surrounding Wood Creek was diked, drained, and converted to pasture land, eliminating or reducing tidal influence and producing a single linear stream channel with little to no suitable habitat for coho salmon. Recent salmonid habitat restoration measures included removing a tide gate from the mouth of Wood Creek, creating a network of tidal channels in the lower portion of the project area, removing an undersized culvert and road crossing and replacing them with a bridge and constructing a new off-channel pond.

In 2010, the newly built off-channel pond supported large numbers of juvenile coho salmon throughout winter and spring. Therefore, creating additional low gradient habitat, especially in the stream-estuary ecotone where the Wood Creek restoration project is located, has provided important habitat for juvenile coho salmon and other salmonids. NSA found a seasonal pattern of young-of-the-year coho salmon moving into Wood Creek during the spring followed by a greater number of yearling coho salmon in winter months, suggesting that the pond provided important over winter rearing habitat for coho salmon both before and after project construction. Juvenile coho salmon throughout the Humboldt Bay watershed migrate, primarily downstream, to over-winter in low gradient habitat in the stream-estuary ecotone surrounding Humboldt Bay.

Wood Creek artificial off-channel pond
CDFW Photo: Mike Wallace

6.1.13 Eel River and Van Duzen River Recovery Units

Habitat Restoration

In the Eel River hydrologic unit, conservation easements have been secured on two large private properties that include anadromous reaches of Howe, Price and Atwell creeks. Riparian enhancement, livestock exclusion fencing, bank stabilization and instream improvement projects on Howe and Price creeks have been completed by landowners in cooperation with the Department, FWS and the Natural Resources Conservation Service (NRCS).

In the lower Van Duzen River, Humboldt County RCD, the Department and NOAA Fisheries have implemented bank stabilization and riparian projects. Trout Unlimited (TU), Humboldt County Department of Transportation, Pacific Watershed Associates (PWA), and the Yager Environmental Stewards (YES), a group of landowners in the middle Van Duzen River, have also implemented sediment reduction projects. In South Fork Eel River, California Department of Parks and Recreation has completed road decommissioning on much of Bull Creek and its tributaries. Eel River Watershed Improvement Group (ERWIG) and the California Conservation Corps have carried out stream habitat enhancement and riparian restoration projects on Bull Creek and bank stabilization and stream enhancement projects on Elk Creek. Restoration Forestry completed fish passage, sediment reduction and riparian projects on Seely Creek.

ERWIG has completed large wood projects on Sproul Creek, a fish passage project on Warden Creek a tributary to Sproul Creek and a bank stabilization project on China Creek. Eel River Salmon Restoration has implemented fish passage, bank stabilization and riparian projects on Leggett, Redwood and Miller creeks. The Redwood Forest Foundation, Inc. (RFFI) purchased the Usal Redwood Forest which includes tributaries to the South Fork Eel River. In cooperation with RFFI, TU, PWA and Campbell Global, LLC, road decommissioning projects have been carried out in Standley Creek. A major habitat restoration effort by TU, Mendocino Redwood Company, FWS and PWA has been undertaken in Hollow Tree Creek and its tributaries. Restoration work includes road upgrading, road decommissioning, fish passage and instream habitat enhancement

An Invasive Species is a Potential Threat to Coho Salmon Recovery

The Sacramento pike minnow (*Ptychocheilus grandis*) is an invasive species known to prey on juvenile coho salmon and other anadromous salmonids. The pike-minnow was introduced to the Eel River in 1979 and since then has spread throughout the drainage. It has also recently been recorded in Martin Slough in Humboldt Bay. If pike-minnow spread to other coastal drainages they may pose a serious threat to coho salmon populations and may inhibit species recovery.

Sacramento pike-minnow (*Ptychocheilus grandis*)
Photo: Dave Giordano

Population Monitoring

The Eel River is inhabited by coho salmon and the South Fork Eel River supports California's largest wild (i.e. non-hatchery) coho salmon population. Since 2010, monitoring for population and status trends are coordinated under the CMP.

Historically, the majority of Eel River coho salmon were spawned in tributaries of the South Fork Eel, Van Duzen River, Lower Mainstem Eel, and Outlet Creek. The current concentration of suitable coho salmon habitat and populations exists in tributaries to the South Fork Eel, where redwood forested watersheds with little water withdrawal support cool tree-shaded streams with adequate pools for shelter. Coho salmon populations are low outside the stronghold South Fork tributaries, and are absent from many of the sub-basin tributaries which were formerly occupied.

Sampling of coho salmon populations within the Eel River watershed has included historic fish-ladder counts at Benbow Dam, and spawner surveys in tributaries of the South Fork, main-stem, and Van Duzen River sub-basins. In recent years, coho salmon populations in many tributary streams have fallen to low levels.

Both the Recovery Strategy and federal coho salmon recovery plan call for monitoring spawning adults at the Eel River sub-basin scale. The CMP monitoring program estimates spawning coho salmon redd numbers by surveying randomly selected coho tributary stream sections throughout a sub-basin.

CMP population monitoring of coho salmon in the South Fork Eel commenced in 2010/11, when 1023 coho redds were recorded, equivalent to over 2,000 adult coho salmon (see Appendix B). This estimate is among the highest number of wild coho salmon currently recorded in any river in the State.

The Department plans ongoing CMP monitoring of coho salmon populations in the South Fork Eel River. Coho salmon population status, recovery planning, and delisting require the initiation of additional CMP monitoring projects, and further work within other Eel River sub-basins is under consideration.

6.1.14 Cape Mendocino Recovery Unit

Habitat Restoration

Many habitat improvement projects have been implemented by various groups in the Mattole River watershed, including the MSG, MRC, and Sanctuary Forest Inc. (SFI). Funding for those projects has come from the Department, the California Coastal Conservancy, Wildlife Conservation Board, CalFire, SWRCB and the North Coast Regional Water Quality Control Board (NCRWQCB), NOAA Fisheries, BLM, private foundations, and Mattole Basin landowners.

Population Monitoring

Two Mattole River plans were completed in 2009 by Mattole River watershed groups. The plans are the Mattole Salmon Group's Salmonid Population Monitoring Plan (Mattole Salmon Group, 2009), and the Mattole Integrated Coastal Watershed Management Plan. These plans, along with many Mattole River fisheries monitoring reports are available from the Mattole Salmon Group's web site: http://www.mattolesalmon.org/index.php/reports

This summary of coho salmon monitoring conducted in the Mattole River is primarily based on the Integrated Plan's Fisheries Companion Report and MSG's fisheries program data and reports.

Since 1981, the Mattole Salmon Group has conducted various types of annual fish monitoring surveys within the watershed. As of the 2008/2009 season, adult salmon and steelhead counts have taken place for 28 years, and juvenile salmon and steelhead have been monitored via downstream migrant trapping and dive surveys for 23 and 15 years, respectively.

Adult coho salmon population monitoring has primarily been conducted through redd/spawner surveys in index reaches rather than by a probabilistic sampling design. The reaches monitored have varied to some degree throughout the sampling period. Concentrations of coho salmon spawners observed in the Mattole River have generally been sparse. Carcass recoveries are few, and recaptures of previously marked spawners are rare, therefore mark-recapture methodologies are not suitable for coho salmon escapement estimates. During the period of 2004/2005 through 2008/2009, live adult coho salmon counts have ranged from three fish in 2009 to 86 fish in 2004. During the same period, coho salmon redd counts have ranged from nine to 68 (Figure 6.11, Table 6.8).

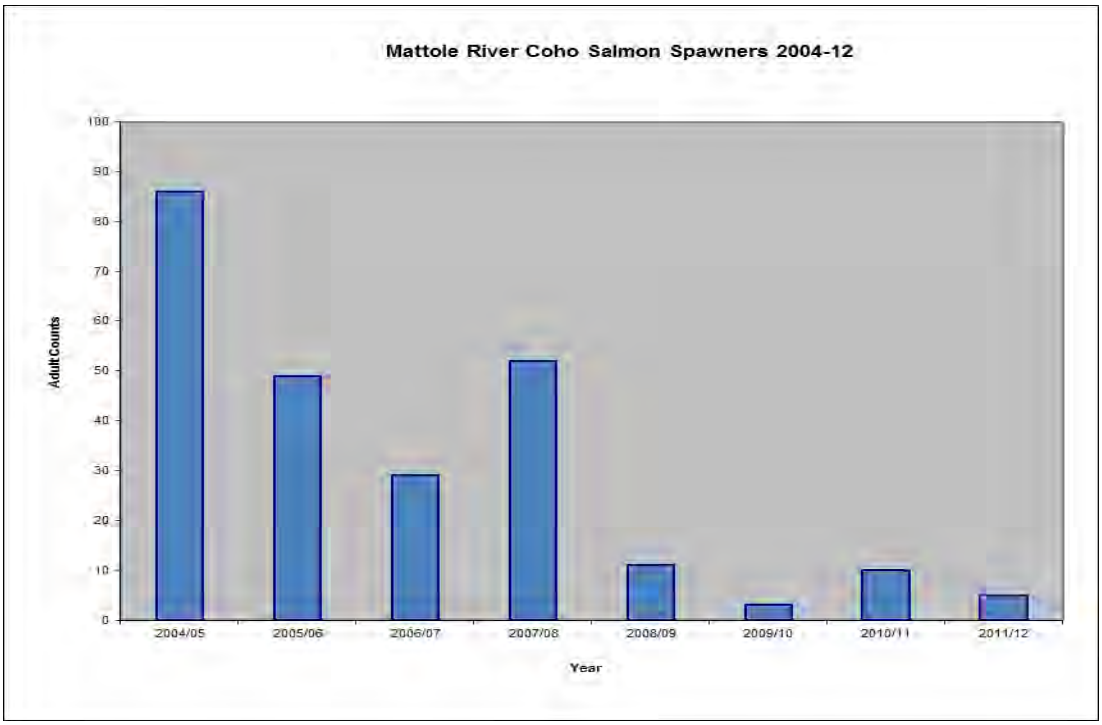


Figure 6.11. Adult coho salmon observed in the Mattole River, 2004-2012.

Table 6.8. Mattole River Observations of Live Adult Coho Salmon, Coho Salmon Carcasses, Definitive Redds, and Accumulated Survey Miles from Mattole Salmon Group Spawner Surveys, Seasons 2004 through 2011.

Season	Live Adult Coho Salmon Observations	Coho Salmon Carcasses	Number of Definitive Coho Salmon Redds	Accumulated Survey Miles
2004	86	29	68	99.3
2005	49	12	15	123.64
2006	29	6	18	100.76
2007	52	4	31	147.65
2008	11	0	9	139.83
2009	3	0	1	128.33
2010	10	3	5	177.93
2011	6	1	5	292.7
Mean	31	7	19	151.3

*Data provided by Mattole Salmon Group

Juvenile anadromous salmonid monitoring in the lower mainstem Mattole River has been conducted primarily by downstream migrant trapping. However, estimates of coho salmon smolt abundance were not made due to the low number of fish caught. Operational problems include the amount and timing of winter/spring rainfall, which affects emigration, and the timing of trap installation. The majority of Mattole River coho salmon smolt emigration is known to occur from early March to early May (MSG 2009). Both high stream flows and funding shortages at times have prevented initiation of trapping early enough in the spring to capture migrating fish.

Screw-trap monitoring of juvenile coho salmon in the Mattole River. Photo: Jim Korpi

6.2 Recovery Units in the Central California Coast Evolutionarily Significant Unit

6.2.1 Introduction

The CCC ESU includes six main recovery units: Mendocino Coast, Russian River, Bodega/Marin Coastal, San Francisco Bay, San Mateo Coastal and Big Basin. The CCC ESU includes historic coho salmon-bearing streams from Usal Creek at the northern end of the Mendocino Coast to Aptos Creek, south of Santa Cruz.

Since 2004, there have been numerous activities in the CCC ESU aimed at restoring and enhancing freshwater habitats, leading to recovery of coho salmon populations. A total of 146 projects benefiting coho salmon have been funded through the Department's FRGP and more have been carried out by other organizations. Many of these projects are being monitored for their effectiveness in remediating identified habitat-related problems. The FRGP project categories mostly funded through the FRGP in the CCC ESU include instream habitat restoration (56 projects) and organizational support (43 projects) (Table 5.2).

The Department routinely considers coho salmon during implementation of its regulatory programs and prioritizes projects, including implementation of CESA, responding to notifications for lake and streambed alteration, reviewing timber harvesting plans, review of projects under review by SWRCB, reviewing projects subject to the California Environmental Quality Act (CEQA) and participating in federal permitting processes on behalf of California's fish and wildlife resources.

Despite the numerous activities with potential benefits to coho salmon which have been carried out in the CCC ESU since 2004, coho salmon abundance and distribution in this ESU have experienced declines. Decreases in abundance have been particularly drastic since 2007, most likely partly associated with poor ocean survival acting on reduced populations with fragmented distribution. The declines were generally more pronounced to the south (for example Redwood Creek in Marin County and Scott Creek in Santa Cruz County).

NOAA Fisheries recently published a status review of CCC coho salmon (Spence and Williams 2011) which documented the further decline in coho populations in the CCC since the last status review was published in 2005. The report concludes that the risk of extinction for CCC coho salmon appears to have increased since 2005, when NOAA Fisheries concluded that the ESU was in danger of extinction.

Between 2004 and 2012, monitoring programs for coho salmon in the CCC ESU were underway in the Scott Creek, Santa Cruz mountains, Russian River, Lagunitas Creek, and Redwood Creek and in Mendocino streams (see Figure 3.1).

6.2.2 Mendocino Coast Recovery Unit

Habitat Restoration

The Mendocino Coast Recovery Unit is comprised of the coastal watersheds in Mendocino and Sonoma counties that are west and south of the Eel and Mattole river basins, and west and north of the Russian River basin. The northernmost anadromous stream is Whale Gulch in Mendocino County, and the southernmost anadromous stream is Russian Gulch in Sonoma County (not to be confused with the Russian Gulch in coastal Mendocino County). The larger river systems in the recovery unit include the Ten Mile, Noyo, Big, Albion, Navarro, Garcia, and Gualala rivers. Also included are numerous smaller streams draining directly to the Pacific Ocean, some of which have relatively high numbers of coho salmon.

In the Cottaneva Creek watershed, instream habitat enhancement has occurred through placement of log structures in the North Fork. In the South Fork, fish passage has been improved through replacement of a culvert with a bridge, and upslope sediment source control is in progress.

In the Ten Mile River basin, fish passage has been improved through replacement of culverts with bridges on several streams in the North Fork watershed. Upslope sediment source control has been implemented on riparian roads in the Little North Fork watershed. In the North Fork, Middle Fork and South Fork, instream habitat enhancement has occurred through placement of log structures.

In Pudding Creek, sediment source control has been implemented on riparian roads. In the Noyo River basin, instream habitat has been enhanced with log structures in the North Fork Noyo, South Fork Noyo, Kass Creek and Hayworth Creek and in underway in Little North Fork Noyo. Upslope sediment source control, though road upgrade and decommissioning, has occurred in the main stem, North Fork, Hayworth Creek, McMullen Creek, and Olds Creek.

In Caspar Creek, improvement of fish passage has occurred though the redesign and reconstruction of two fish ladders. Fish ladders were installed at both the South Fork and North Fork weirs in the Caspar Creek watershed in 2008, replacing the original wooden structures built in the early 1960's as part of a cooperative watershed study between Cal Fire and the PSW (Cafferata and Reid 2013).Three road decommissioning projects have been completed. In the Big River basin, instream habitat has been improved with log structures on East Branch North Fork Big, Daugherty Creek and Johnson Creek.

In the Albion River basin, fish passage has been improved by replacing culverts with bridges on the main stem and South Fork. Instream habitat has been improved with log structures in the main stem. Upslope sediment source control has been implemented in the South Fork watershed through road upgrading and decommissioning.

In Navarro River basin, instream bank stabilization has occurred on the main stem. Instream habitat enhancements using logs and boulders have been completed on Mill Creek and the North Fork. Upslope sediment source remediation has occurred in Little North Fork, North Branch North Fork, South Branch North Fork, Mill Creek, Jimmy Creek and Rancheria Creek.

In the Garcia River basin, instream habitat enhancement projects using logs and boulders have been implemented in the South Fork and Inman Creek. Riparian re-vegetation and bank stabilization has been implemented on the main stem. Upslope sediment control has been implemented in the watersheds of the South Fork, Fleming Creek, Inman Creek, Mill Creek and Pardaloe Creek.

In Gualala River basin, instream habitat enhancement projects using logs have been implemented in the Little North Fork, North Fork, and Rockpile Creek. Upslope sediment source control projects have been completed in the Little North Fork, North Fork, Robinson Creek, and Pepperwood Creek.

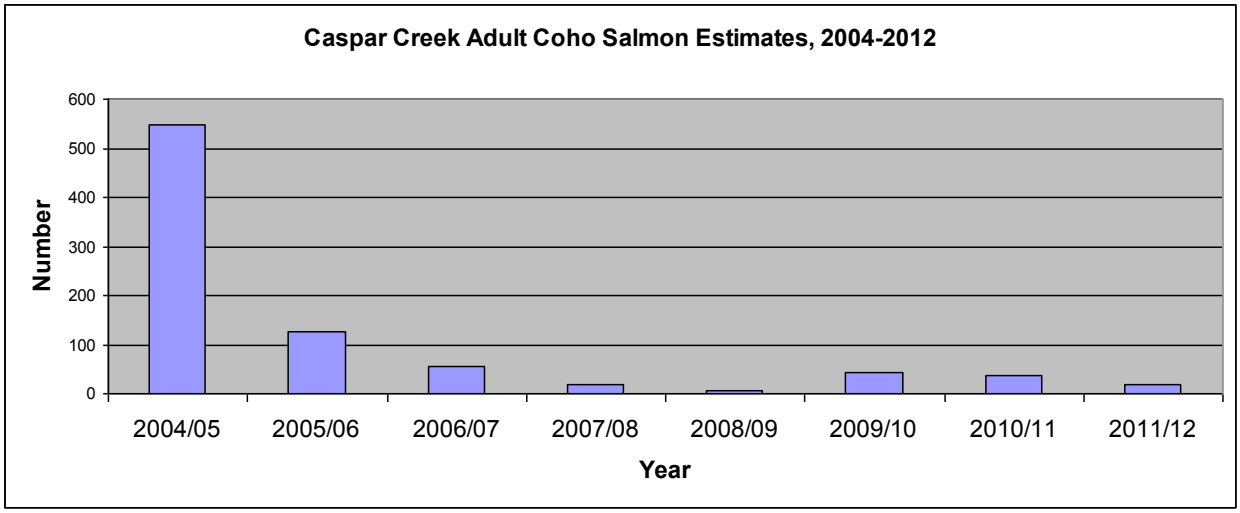
Population Monitoring

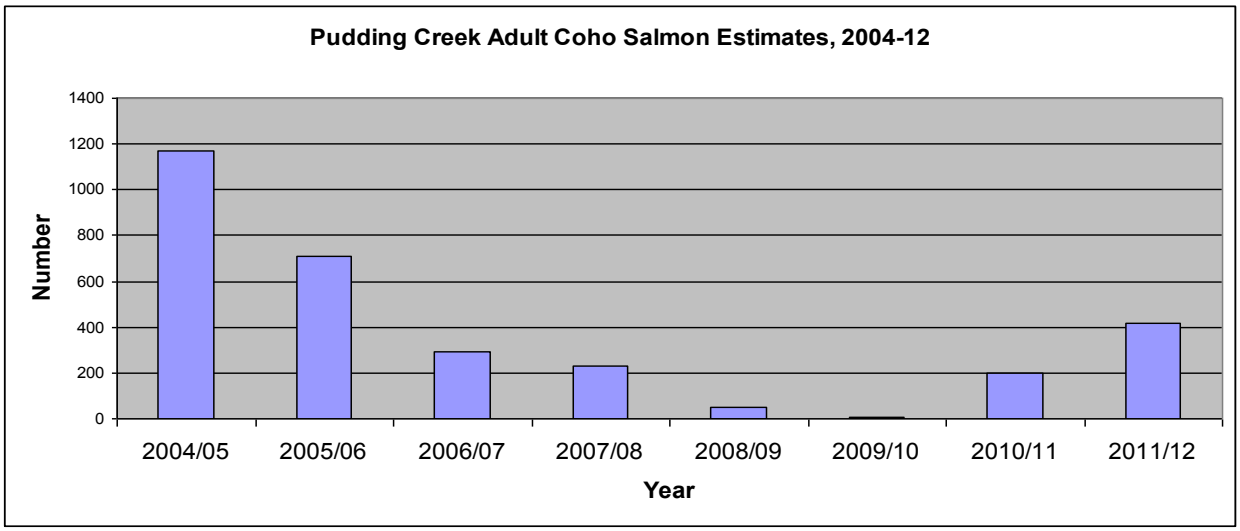
Coho salmon population monitoring in coastal Mendocino County streams has advanced significantly since 2004 (Gallagher and Wright 2011). Adult and smolt abundance monitoring in Caspar Creek and the South Fork Noyo and Little rivers constitute a nine-year time series. In 2004, the Department began working collaboratively with Campbell Global, LLC to estimate adult escapement in Pudding Creek (Figure 6.13). Also in 2004, NOAA Fisheries assisted with data collection in the South Fork Noyo River. During 2004 and 2005 the Department worked to further standardize data collection and analysis at these sites. Presently, coho populations are estimated annually from Usal Creek in the north to the Garcia River in the south.

Population estimates of the abundance of adult and juvenile coho salmon in coastal Mendocino streams from 2004 to 2010 are shown in Figures 6.12 and 6.13. The numbers of both adult and juvenile coho salmon have declined progressively in all monitored streams each year since 2004.

Taking coho salmon redd measurements (Pudding Creek).

CDFW Photo: Sean Gallagher





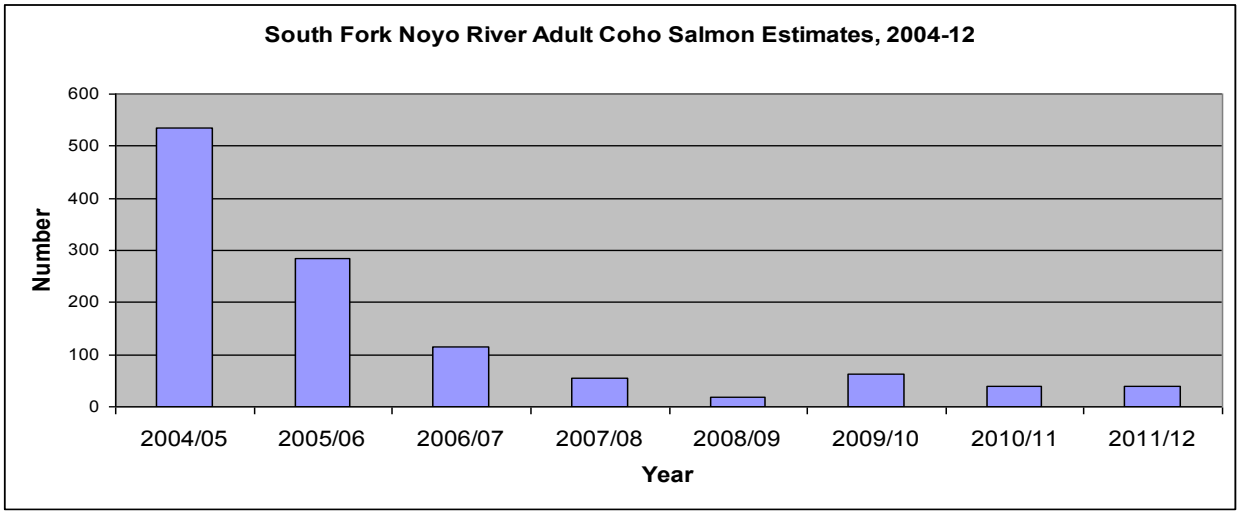
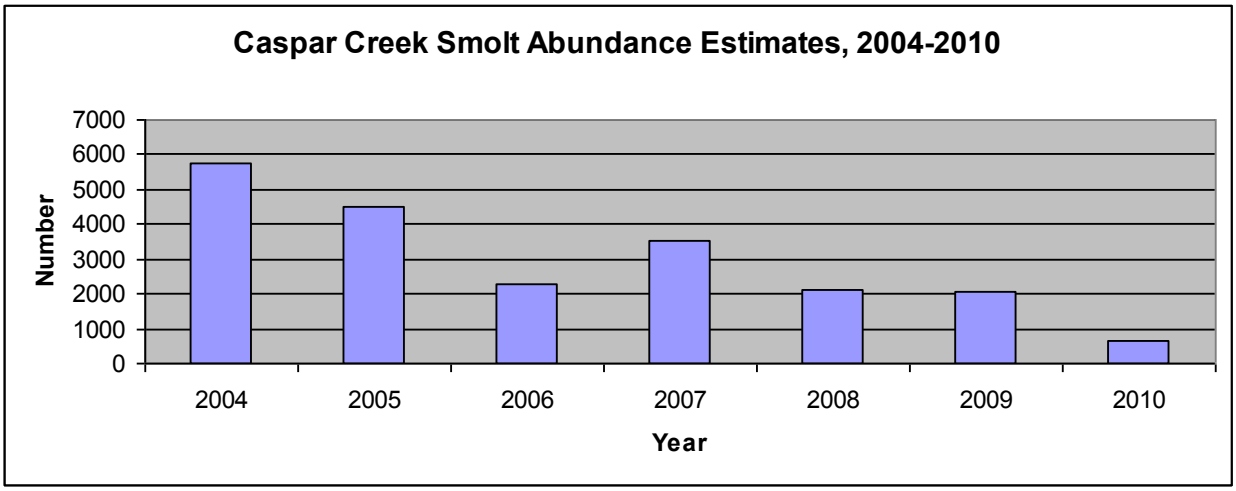
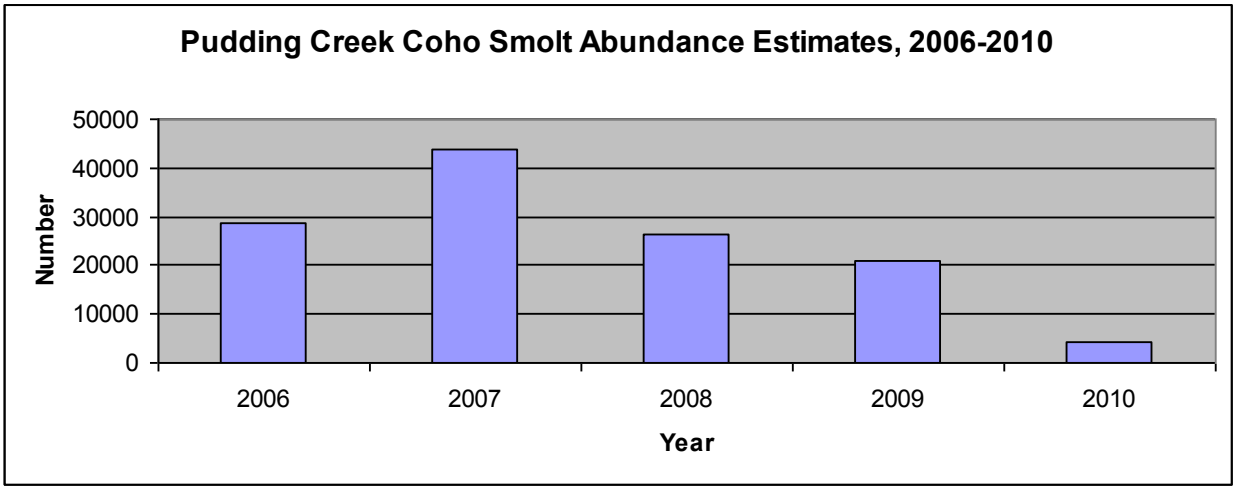


Figure 6.12. Adult Coho Salmon Escapement Estimates, Mendocino Streams, 2004-12





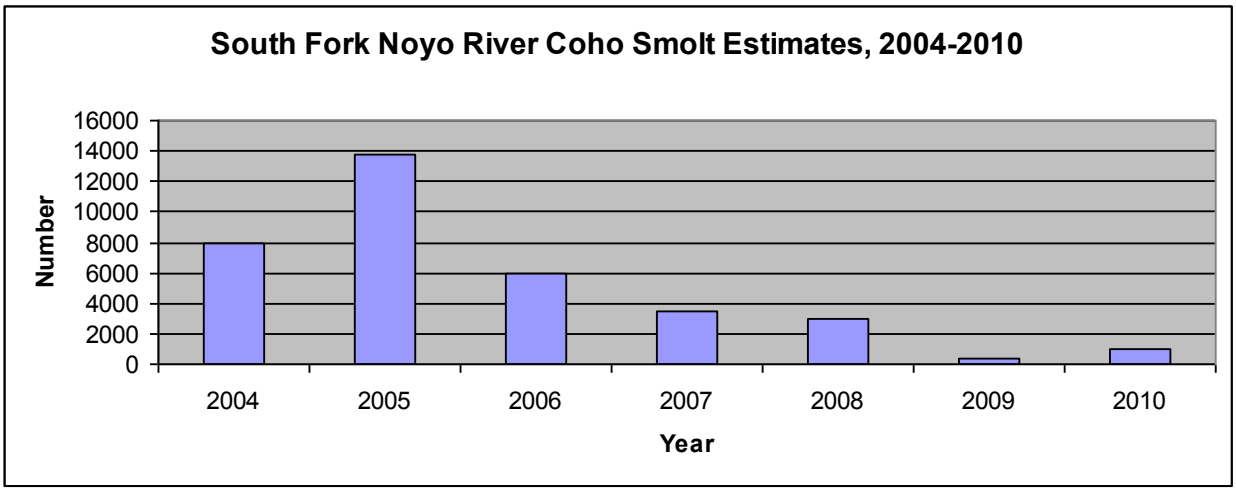


Figure 6.13. Coho Salmon Smolt Abundance Estimates, Mendocino Streams, 2004-2010.

Downstream migrant traps were used to estimate smolt abundance using capture-recapture methods. Traps were placed in the streams in early-March and checked daily until early-June each year. Smolt abundance was estimated using Darroch Analysis with Rank Reduction and a one-trap design (Bjorkstedt 2003).

6.2.3 Russian River Recovery Unit

The Department participated in the development of the NOAA Fisheries' *Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance* for activities conducted by the USACE, SCWA, the Mendocino County Flood Control and Water Conservation Improvement District in the Russian River watershed. A final consistency determination on this project was issued by the Department in 2010. The Department continues to participate in oversight of implementation of the Biological Opinion. This includes review of monitoring reports, development of implementation project proposals, and review and permitting of implementation projects. The Department routinely reviews projects that may have adverse effects on coho salmon and issues permits containing conditions aimed at avoiding or minimizing such adverse effects.

The Department has participated in meetings of the Russian River Frost Protection Pumping Task Force (Task Force), established in 2008 to avoid take of listed anadromous salmonids which may result from water diversion for frost protection of grapevines. The Task Force is a collaboration of agencies, stakeholders, and public interest groups and is coordinated by NOAA Fisheries. The Task Force has been inactive since fall of 2009.

Habitat Restoration

More than 50 restoration projects intended to benefit coho salmon recovery have been funded through the FRGP in the Russian River watershed since 2004. These include GIS-based instream habitat data management to support basin planning, inventory and implementation of road-related and other erosion control projects, installation of instream structures and creation of instream habitat, culvert and other fish barrier improvements and replacements, invasive plant control and removal and other riparian zone restoration, construction of livestock exclusion fencing, bank stabilization projects, and monitoring activities in support of the Russian River Coho Salmon Captive Broodstock Program (RRCSCBP).

Population Monitoring

Systematic coho salmon monitoring in Russian River tributaries has been performed since 2004 by the UCCE and California Sea Grant Extension to evaluate the success of the RRCSCBP. Monitoring activities include summer juvenile surveys, outmigrant monitoring and adult monitoring (Obedzinski et al. 2009). Monitoring has been funded through FRGP grants from 2004-2009 and by the USACE since 2010. The number of coho salmon released into selected Russian River tributaries through the RRCSCBP has increased from 6,160 in three tributaries in 2004 to 172,000 in 20 tributaries in 2011.

More than 200 adult coho salmon are estimated to have returned to the Russian River system in 2010/11, increasing to over 450 in 2012.

Case Study. *Dutch Bill Creek Restoration*.
Implemented in 2009, this FRGP funded project was undertaken by the Gold Ridge Resource Conservation District (GRRCD), working with the Camp Meeker Recreation and Park District. The project involved removing the Camp Meeker Dam, which had been identified as one of the worst barriers to salmon and steelhead passage in the Russian River watershed. In place of the dam, a prefabricated 80-foot steel pedestrian bridge was installed, improving public access across the creek, and stream banks were stabilized and revegetated, along with creation of a more natural meander and grade change. These improvements will help return the natural transport of gravel from upstream and provide better fish habitat. The GRRCD also removed a culvert barrier to fish passage in nearby Occidental. For further information see: http://www.goldridgercd.org/watersheds/CampMeekerDamRemoval.

Dutch Bill Creek Fish Passage Improvement Project
Photo: Gold Ridge Resource Conservation District

Source: http://www.goldridgercd.org/project/dutch_bill_bid.html

Hatchery Operations

Coho salmon have been reared at WSH located at the base of Warm Springs Dam on Lake Sonoma as part of the RRCSCBP since 2001 (Conrad and Obedzinski 2006). Annual coho salmon production at WSH has increased to over 160,000 fingerlings in the year 2010.

Russian River coho salmon show evidence of a very high level of inbreeding due to extremely small population size. Since 2008, Russian River coho salmon have been intentionally and carefully out bred with coho from Olema Creek (Marin County) in an effort to increase diversity to mitigate founder effects and increase genetic diversity. The hatchery currently also rears a small number of coho salmon of Scott Creek origin (Santa Cruz County). The small number of fish reared of Scott Creek origin are for the captive broodstock program for Scott Creek. Only a very few natural-origin coho salmon have been observed in the Russian River system in the last few years. The vast majority of coho salmon in this system today are descendants of fish produced by the RRCSCBP.

Spring 2012 Update

Since 2010, the RRCSCBP has seen a significant increase in the number of returning adult coho salmon to Russian River tributaries (Fig.6.14). In addition, in 2011 the program recorded more than 5,300 naturally produced coho salmon juveniles in 23 tributaries (Fig 6.15). Although these numbers do not indicate recovery of the Russian River coho populations, they do show that captive rearing, under average or favorable environmental conditions, can effectively increase the abundance of coho salmon populations. The recent increase in adult returns is possibly due to improved marine survival of coho salmon since 2010 as a result of improved ocean conditions.

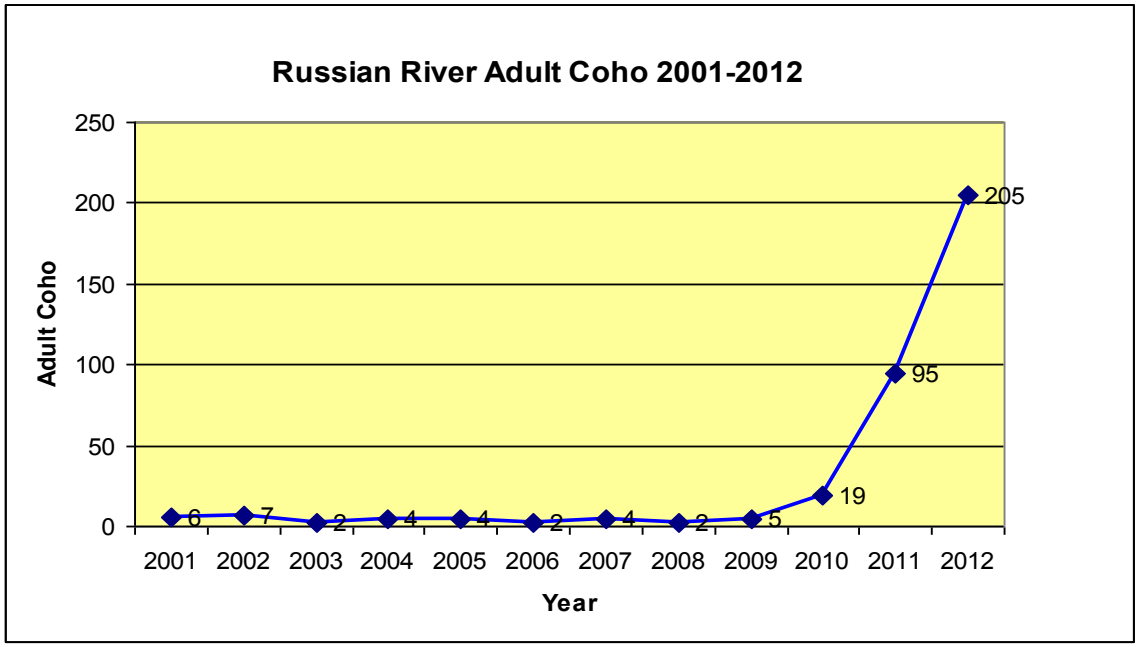


Figure 6.14. Russian River adult coho salmon returns, 2001-2012.

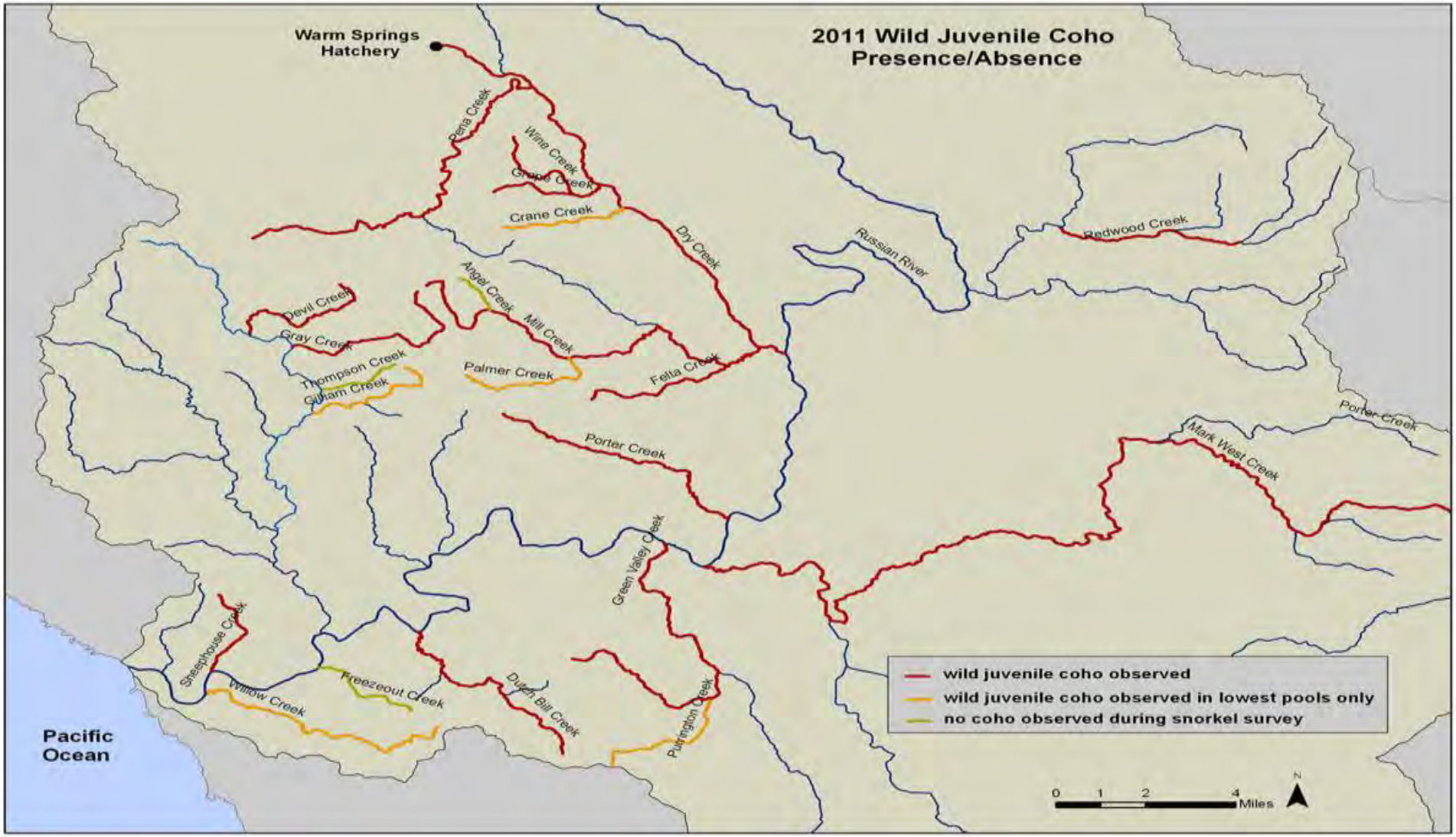


Figure 6.15. Distribution of juvenile coho salmon in Russian River tributaries, recorded in 2012.

Other Projects (text provided by Sonoma County Water Agency (SCWA)

In 2007, SCWA completed the *Draft Russian River Coho Salmon Recovery Strategy Implementation Plan* which identifies and prioritizes possible coho salmon recovery activities that could be implemented in the Russian River Recovery Unit under the existing regulatory framework. The plan was developed collaboratively by state, federal, county, and non-governmental organizations. Additional projects and activities in the Russian River basin have been funded by other entities.

The *Russian River Coho Water Resources Partnership* (Partnership), funded by the National Fish and Wildlife Foundation (NFWF), is working with its partners to study baseline streamflow conditions, develop water management plans, and develop priority infrastructure improvements in the Russian River watershed to benefit instream flow conditions (see text box below). As of June 2012, the Partnership's targeted outreach has yielded more than ten current or potential projects. Projects completed or in progress include (funding provided by NFWF unless otherwise indicated*)*: installation of a fan to eliminate diversion of water for frost protection from on-stream flashboard dam at the Martorana Family Vineyard on Grape Creek (which also removed a fish passage barrier); an irrigation efficiency project that replaced an overhead sprinkler irrigation with a drip system on a vineyard along Purrington Creek in the Green Valley Creek watershed (estimated water savings is a minimum of 757,082 liters per year)(200,000 gallons per year); an irrigation efficiency project on a 8,094 square meter (2-acre) apple orchard adjacent to Purrington Creek; and a project planned for completion in 2012 to replace use of an on-stream pond on Grape Creek with an offstream storage reservoir that will mitigate the effect of frost protection and irrigation water use. Partners of these projects include NFWF, NOAA Fisheries, FWS, NRCS, SCWA, CDFW, RWQCB, UC Cooperative Extension and landowners. For more information on the Partnership, visit www.cohopartnership.org.

The California Coastal Conservancy has funded the Green Valley Creek Watershed Management Plan. The SWRCB has provided financial support for removal of invasive plant species and revegetation with native species in several tributaries, and one similar effort in Mark West Creek watershed has been funded by the City of Santa Rosa in 2005.

The SCWA has been engaged in additional activities that are likely to benefit coho salmon recovery in the CCC ESU, including studies of potential habitat improvements in Dry Creek, a feasibility study for construction of a pipeline for water transmission from Lake Sonoma, rearing and releasing annually 10,000 coho smolts into Dry Creek (2009 to at least 2023) and operating a rotary screw trap at Mirabel Dam since 2000 to monitor juvenile salmonids in lower mainstem Dry Creek.

Russian River Coho Water Resources Partnership

In 2008 and 2009, the NFWF and a number of organizations concerned about coho recovery came together as a "Partnership" and prepared the NFWF Keystone Initiative Business Plan for the Russian River Coho (March 2009). The goal of this initiative is to "return a viable, self-sustaining population of coho salmon to the Russian River watershed."

The Partnership is comprised of six organizations: Gold Ridge Resource Conservation District, Sotoyome Resource Conservation District, Center for Ecosystem Management and Restoration, Occidental Arts and Ecology Center, Trout Unlimited, and the UCCE program (Sonoma County) in partnership with the California Sea Grant. As of June 2012, NFWF has awarded the Partnership nearly $2 million to implement the business plan. The SCWA provides major support, currently valued at over $3.5 million, through implementation of habitat enhancement projects along six miles of Dry Creek, a major tributary to the Russian River, to improve rearing conditions for salmon and steelhead. The Partnership interfaces directly with federal and state regulatory agencies through a Technical Advisory Committee (TAC) that also includes local stakeholder representatives.

Because the keystone region incorporates the freshwater portion of the coho life cycle, the Partnership efforts focus on increasing juvenile survival to a level that supports a self-sustaining population of coho salmon in the Russian River watershed by restoring streamflow to critical reaches. The Central California Coast Coho Salmon Recovery Plan produced by NOAA Fisheries in 2008 set a goal of 10,100 returning adult coho to the watershed as signifying "population viability and final recovery." In support of this long-term adult recovery goal, the Partnership's initial efforts are concentrated on improving habitat for a consistent, naturally spawning population of adult coho in five core watersheds identified in the Department's and NOAA Fisheries coho recovery plans—Dutch Bill, Grape, Green Valley, Mill, and Mark West creeks.

The Partnership's goals in the Russian River watershed include: (1) restoring a more natural streamflow regime during the dry season, (2) increasing viability and numbers of coho salmon, (3) increasing water reliability for users in each priority watershed, (4) developing mechanisms for navigating the regulatory processes for water use and water rights, and (5) developing a watershed recovery model applicable to other watersheds throughout the state. These goals are attained through three key strategies: (1) water management plan development and implementation; (2) riparian/instream habitat enhancement, conservation, and augmentation; and 3) coho population augmentation, monitoring, and evaluation. The Partnership integrates landowner outreach and recruitment, hydrologic and fisheries monitoring, and water policy and permitting expertise to improve streamflow and water supply reliability in the core watersheds.

6.2.4 Bodega/Marin Coastal Recovery Unit

Watershed Assessment

A full watershed assessment for the Salmon Creek (Bodega HU) watershed was completed in 2007. Multiple road and upslope assessments were completed between 2006 and 2010. Additionally, in 2006 a full Tomales Bay watershed (Marin Coastal HU) stewardship and restoration plan was completed by the Tomales Bay Watershed Council. Habitat surveys were conducted in the Lagunitas Creek watershed (Marin Coastal HU) in 2007. Multiple road and upslope assessments were completed throughout the Lagunitas Creek watershed from 2004 to 2008. A full salmonid migration barrier assessment was completed for Marin County watersheds in 2006.

Case Study. *Giacomini Wetlands Restoration.*
This project was carried out in 2007 and 2008 by the NPS, funded by the Wildlife Conservation Board, and involved the restoration of tidal marshes within Tomales Bay in Marin County, located in the Lagunitas Creek watershed. It is hoped that the restoration of 222.7 ha (550 ac) of tidal marshes will have substantial ecological benefits to fish and wildlife and that the habitat improvements will benefit coho salmon recovery in the system. For further information see;
http://www.nps.gov/pore/parkmgmt/planning_giacomini_wrp.htm

Photo from NPS, taken by Robert Campbell, shows the extent of the new Giacomini Wetlands (222.7 ha, (550 ac)). The area in the photo' has been diked for over 60 years. See: http://pointreyesweekend.com/returning-tomales-bay-further-back-to-nature

Habitat Restoration

Since 2004, FRGP has provided funding for at least 50 projects intended to provide benefits to coho salmon in the Bodega and Marin Coastal areas. These included funding for FishNet 4C (ceased operations in 2012), a county-based salmon protection and restoration program that brings together the coastal counties of Mendocino, Sonoma, Marin, San Mateo, Santa Cruz and Monterey. Also, FRGP funding was provided for coho salmon population monitoring in Olema, Redwood, Pine Gulch, and Walker creeks, installation of large woody debris structures in the Salmon Creek watershed, bank stabilization and sediment reduction projects in various tributaries of the Lagunitas Creek watershed, riparian zone fencing and re-vegetation, fish passage improvement, and education and outreach projects.

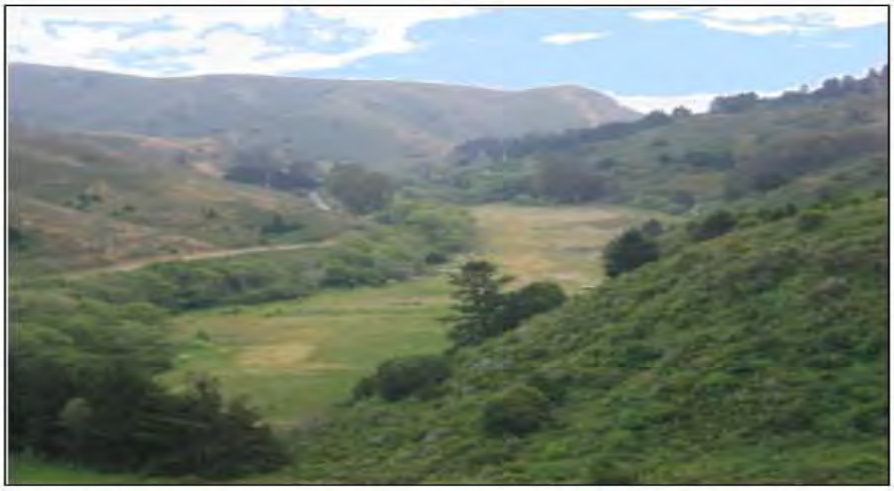
SPAWN has been the leader in water conservation education and implementation in the San Geronimo Creek watershed, located in the headwaters of the Lagunitas Creek system. A highly successful restoration of the Lagunitas Creek estuary (Giacomini Wetlands Project) was initiated and implemented by Point Reyes National Seashore, resulting in the restoration of 222.7 ha (550 ac) of tidal march floodplain at the confluence of Tomales Bay with Lagunitas and Olema Creeks (see text box). Habitat restoration and associated education and outreach programs have been conducted in Salmon Creek and Walker Creek, both coho salmon watersheds.

The Department has provided grant funding for habitat restoration and for salmonid population monitoring in Redwood Creek and Pine Gulch Creek in southern Marin County (see text box). Several other projects not funded through the FRGP are likely to provide significant benefits to coho salmon populations in the Bodega and Marin Coastal HUs. These include the Salmon Creek Ranch Enhancement Plan to reduce sedimentation, improve riparian habitat and stabilize eroding banks in Salmon Creek, creation of a Salmon Creek Watershed Management Plan funded by the SWRCB, and an extensive project to address limiting factors in Salmon Creek through riparian vegetation enhancement, installation of large wood debris structures, stream flow augmentation through water conservation practices, and reduction of fine sediment delivery.

Case Study. *Redwood Creek/Muir Beach Restoration.*
The restoration of Muir Beach and Redwood Creek is a FRGP funded project. Proposed actions and benefits: TheNPS, in cooperation with Marin County, is undertaking a wide variety of site improvements in lower Redwood Creek and Muir Beach in Marin County. This project is on the level of the Giacomini restoration project in Point Reyes. While significantly enhancing habitat for threatened and endangered species, including coho salmon, the changes to natural areas will restore ecological processes to the site that have been missing for decades. For further information see:
http://www.nps.gov/goga/naturescience/muir-beach.htm

Case Study. *Lower Redwood Creek Floodplain and Salmonid Habitat Restoration – Banducci Site.*

The purpose of this FRGP funded project in the Golden Gate National Recreation Area in Marin County is to restore natural hydrological processes to the project area for the benefit of aquatic and terrestrial fauna and for long-term creek recovery. Goals are to: 1) enhance summer rearing and winter refuge habitat for federally endangered coho salmon and federally threatened steelhead; 2) restore channel and floodplain connectivity, 3) create sustainable breeding habitat for the federally threatened California red-legged frog; 4) to restore tributary connections to the creek corridor, and 5) create self-sustaining conditions that minimize the need for maintenance. For further information see; http://www.nps.gov/goga/parkmgmt/banducci_restoration.htm



Looking downstream over the 28-acre agricultural field called the Banducci Site. Muir Woods Road and Redwood Creek are to the left of the field.

Photo: National Parks Service

Source: http://parkplanning.nps.gov/projectHome.cfm?projectID=15658

Population Monitoring

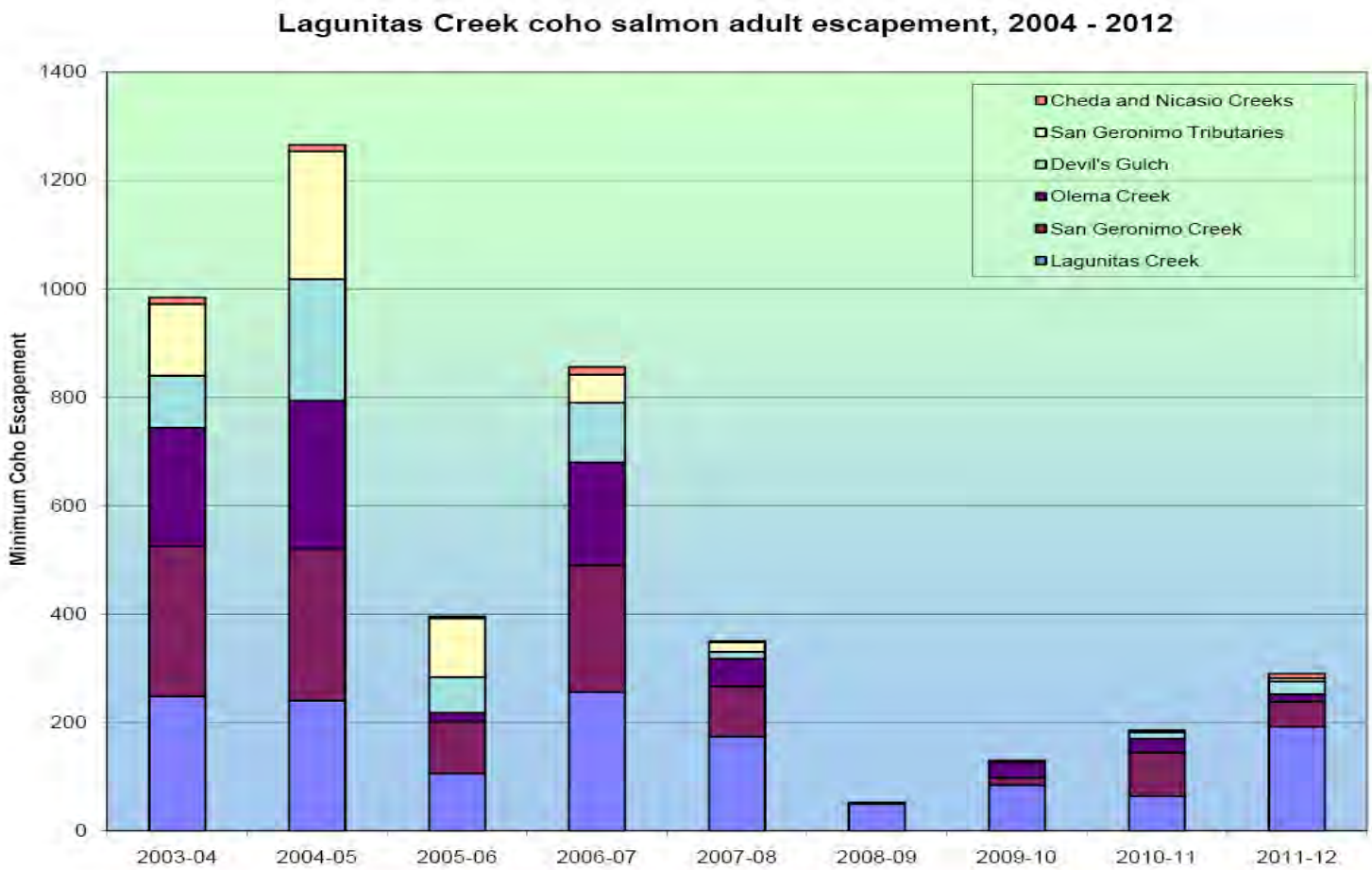
Systematic long-term monitoring of coho salmon populations in the Lagunitas/Olema Creek watershed as well as Redwood and Pine Gulch creeks (Marin Coastal Recovery Unit) has been performed since 1992 by MMWD, NPS and PRNSA. In addition, monitoring of coho salmon has been performed by MMWD in the Walker Creek watershed (Bodega Recovery Unit), with funding from the FRGP from 2006 to 2008, and sporadically before 2006.

Monitoring activities in Walker Creek were associated with annual adult and juvenile coho salmon releases in the years 2004 to 2008. Sporadic and opportunistic salmonid surveys were also performed in Salmon Creek (Bodega Recovery Unit), specifically following adult coho releases in winter 2008. Monitoring in Walker and Salmon Creek showed that coho salmon released as adults spawned successfully, although at levels too low to establish self-sustaining populations.

Coho salmon monitoring in Lagunitas/Olema Creek system by MMWD, NPS and SPAWN has shown a decline in adult escapement and coho salmon redds over the years 2004-2009, with some recent increase over 2009-2011 (Figure 6.16, Table 6.9) (Ettinger and Andrew 2012; Pincetich et al. 2009; Reichmuth et al. 2011). The decline in adult coho salmon returns in Lagunitas Creek started in 2007-2008, with a low in 2008-09. Both year classes were affected by the 2005 and 2006 decline in ocean productivity.

A SPAWN salmon monitoring team checks the monitoring station in San Geronimo Creek in Lagunitas Creek watershed.

Photo: Chris Pincetich, SPAWN.



Escapement = twice the numbers of coho redds.

Source: Marin Municipal Water District, National Park Service, and SPAWN.

Figure 6.16. Adult coho salmon escapement in the Lagunitas Creek watershed, 2004-2012.

Table 6.9. Coho salmon escapement estimates in the Lagunitas Creek Watershed*.

Minimum Coho Escapement in the Lagunitas Creek Watershed

Years	Lagunitas Creek	San Geronimo Creek	San Geronimo Tributaries	Devil's Gulch	Olema Creek	Cheda and Nicasio Creeks	Total
1982-83	130	94	No Data	54	No Data	No Data	278
1995-96	140	12	No Data	20	No Data	No Data	172
1996-97	196	230	No Data	82	No Data	No Data	508
1997-98	160	214	28	104	268	No Data	774
1998-99	184	92	28	64	46	No Data	414
1999-00	278	116	6	6	20	No Data	426
2000-01	238	112	36	22	160	No Data	568
2001-02	158	204	86	118	118	6	690
2002-03	142	78	44	48	40	2	354
2003-04	248	278	132	96	218	12	984
2004-05	240	280	236	224	274	12	1266
2005-06	106	96	108	66	16	4	396
2006-07	256	234	52	110	190	14	856
2007-08	174	92	18	12	52	2	350
2008-09	50	2	0	0	0	0	52
2009-10	84	14	0	4	28	0	130
2010-11	64	80	4	12	26	0	186
2011-12	192	46	6	24	14	8	290
1995 - 2012 Averages	**171**	**128**	**52**	**60**	**98**	**5**	**515**

Notes:
Minimum escapement is assumed to be two spawners per redd.
Survey data provided by Marin Municipal Water District, unless noted otherwise.
Lagunitas Creek is surveyed from Nicasio Creek to Peters Dam.
San Geronimo Creek is surveyed from its mouth to its confluence with Woodacre Creek.
Devil's Gulch is surveyed from its mouth to an impassable cascade two miles upstream.
Olema Creek & Cheda Creek data is provided by Point Reyes National Seashore.
San Geronimo tributaries: Arroyo Creek, Larsen Creek, Evans Canyon, Woodacre Creek, and San Geronimo Creek above Woodacre Creek; data provided by SPAWN.

Source: Marin Municipal Water District, National Park Service, and SPAWN.

* Coho salmon escapement estimates were based on redd surveys carried out weekly during the coho spawning season and escapements were estimated by assuming two spawners per redd.

Hatchery Operations

There are currently no hatchery operations for coho salmon in the Bodega/Marin Coastal Recovery Unit.

Other Projects

In 2010, field biologists from the Department and PRNSA collected approximately 200 juvenile coho salmon from Olema Creek to be reared at Warm Springs Hatchery. The majority of these fish will be reared to maturity and released back into Olema Creek. Some of the coho may be used as broodstock in the continuing systematic outbreeding of Russian River coho broodstock. Collection of a small number of juvenile coho salmon from Olema Creek will continue for at least two more years to complete the brood-year complement.

6.2.5 San Mateo Recovery Unit

Watershed Assessment

Three watershed assessments were completed between 2003 and 2010, the Pescadero-Butano Watershed Assessment (2004), Gazos Creek Watershed Plan (2003) and the San Gregorio Creek Watershed Plan (2010). Each assessment describes limiting factors for sensitive species including coho salmon at Pescadero-Butano Creek, Gazos Creek and San Gregorio Creek watersheds, respectively, and propose ways to address these limiting factors.

The FRGP program and Environmental Protection Agency have also funded studies to complete two instream flow and habitat studies on San Gregorio Creek in order to provide a basis for instream flow restoration, specifically for permitting terms for cooperative streamflow restoration projects with landowners. Streamflow in Pescadero Creek is being monitored by the Center for Ecosystem Management and Restoration with support from the California Coastal Conservancy and the Integrated Watershed Restoration Program.

Habitat Restoration

In the San Mateo Coastal HU, several projects in the Pescadero Creek watershed have focused on improving roads to reduce fine sediment delivery, removing a seasonal diversion dam and replacing use of diverted stream water with groundwater as drinking water supply, removing dams/barriers, replacing culvert/barriers with free span bridges, increasing late summer stream flow conditions by improving irrigation efficiency, modifying agricultural diversions and developing conjunctive use projects and collecting baseline habitat data. In San Gregorio Creek, a variety of partners are working to improve instream flow through a project to improve irrigation efficiency and reduce dry

season use through expanded agricultural pond storage. In Gazos Creek, rural road improvement projects have been funded to reduce fine sediment input.

CDFW and NMFS are working together on short term and long term solutions to water quality issues associated with the early winter sand bar breaching event in the Pescadero lagoon, which is the cause of an annual "fish kill" of juvenile steelhead and other fish species. This highly productive lagoon offers important rearing area for juvenile salmonids. Addressing this non-functioning aspect of the lagoon/marsh complex will greatly improve conditions for coho salmon survival.

CDFW is also working with NMFS on projects which will remedy the current migration barrier through the Pescadero/Butano lagoon complex into the Butano Creek watershed (currently little or no anadromy occurs thru the marsh into Butano Creek).

Population Monitoring

Staff from NOAA Fisheries South West Science Center has conducted monitoring of juvenile coho salmon in the Santa Cruz Mountain diversity stratum (San Gregorio Creek to Aptos Creek) during the summers of 2006, 2007, and 2008, using spatially balanced design. In each year, approximately 40 stream reaches were surveyed. In 2006, juvenile coho salmon were found in two watersheds (Scott and San Vicente creeks), no watersheds in 2007, and five watersheds in 2008 (San Gregorio, Waddell, Scott, San Vicente, and Soquel). Catch numbers were low (less than 200 individuals) and genetic evidence taken at three of the 2008 locations indicated that in each case juveniles were the result of 1-2 spawning pairs. Systematic adult salmonid monitoring in the Big Basin and San Mateo HUs was funded through the FRGP in 2010. These surveys commenced in winter 2010 and will continue through winter 2012/13. Finalized data is not yet available.

Hatchery Operations

There are no coho salmon hatchery operations in the San Mateo Coastal Recovery Unit. However, relatively small numbers of coho salmon smolts from the MBSTP at the Kingfisher Flat Hatchery in the Scott Creek watershed (Santa Cruz County) were released into Pescadero Creek in 2003 (approximately 10,000 smolt) and again in 2006 (another 10,000). Many of the coho salmon released in 2003 returned as jacks in the winter of 2003 and as adults to Pescadero Creek in 2005 and spawned.

6.2.6 Big Basin Recovery Unit

The Department is participating in ongoing discussions with the City of Santa Cruz Water Department and NOAA Fisheries regarding development of a Habitat Conservation Plan for the City's water diversion operations. This plan is intended to provide the basis for an authorization for take of coho salmon under ESA and CESA. The Department routinely reviews projects in this recovery unit that may have adverse effects on coho salmon and

issues permits containing conditions aimed at avoiding or minimizing such adverse effects.

Habitat Restoration

Since 2004, habitat restoration projects implemented in Big Basin streams have been primarily concerned with fish passage. However, NOAA Fisheries has provided funding for habitat restoration of off-channel pools in San Vicente Creek and for preserving large woody material in county streams and creeks. Improvements in salmonid habitat, road and upland restoration and watershed assessments, planning, education and outreach, public involvement, and water conservation have all been instrumental in guiding watershed planning actions in the Big Basin recovery unit.

Population Monitoring

NOAA Fisheries SWFSC has performed life-cycle monitoring of coho salmon in the Scott Creek watershed in Santa Cruz County, with funding from the FRGP (Hayes et al. 2011). The main goal of the ongoing project since its inception in 2003 has been to monitor coho salmon and steelhead populations in the Scott Creek watershed and to provide support for the coho salmon artificial propagation program at the MBSTP Kingfisher Flat fish hatchery.

Annual adult escapement estimates of coho salmon in Scott Creek have decreased from 272 and 329 fish in 2004 and 2005, respectively, to 46 fish in 2006, less than 20 fish in the years up to 2009 and fewer than five fish from 2010 to present. Just one fish was recorded in 2012 (Figure 6.17). The severe declines in 2007 and 2008 reflect the severe impact of poor ocean conditions in 2005 and 2006. The 2009 low reflects a weak year class in 2006 (and previously in 2003, 2000, 1997).

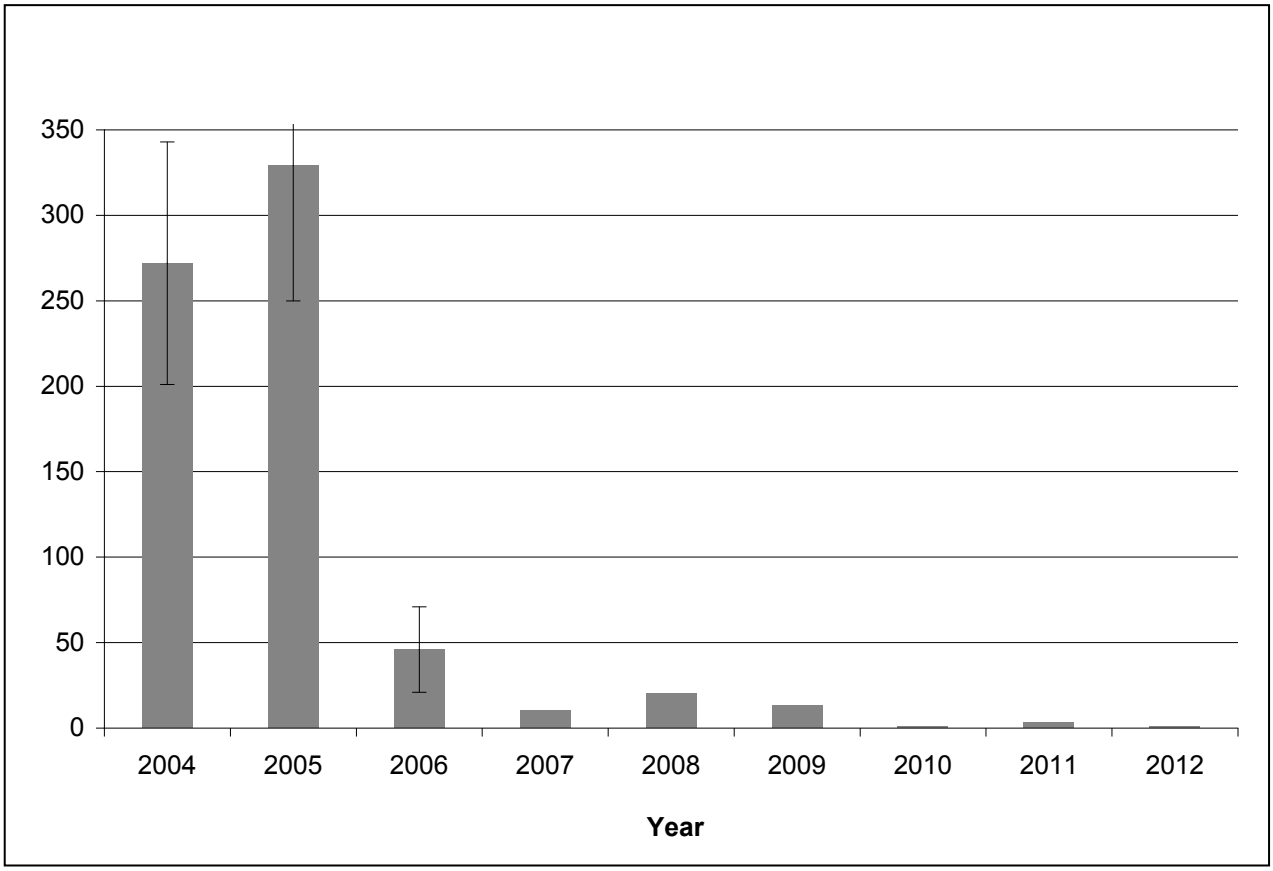


Figure 6.17. Scott Creek adult coho salmon escapement estimates, 2004-2012. Data provided by NOAA Fisheries.

In 2010, a systematic adult salmonid monitoring program, including coho salmon, was funded through the FRGP in the Big Basin and San Mateo Recovery Units. These surveys commenced in winter 2010 and will continue through winter 2012/13. This monitoring is being carried out according to the protocols of the CMP (Adams et al. 2011) and covers all anadromous streams between San Pedro Creek in Pacifica to Aptos Creek in San Cruz County.

In addition, since 1988 monitoring of coho salmon and other juvenile salmonids has been performed in Waddell and Gazos creeks by Dr. Jerry Smith of San Jose State University (Smith 2013). The most recent juvenile monitoring data show no coho captured in Scott Creek from 2007-2011, none in Waddell since 2008, and none in Gazos Creek (San Mateo County) since 2005 (Smith, 2013). In Scott Creek in 2012, coho salmon from the release of captive brood stock adult spawning in the wild produced a weak juvenile year-class.

Kingfisher Flat (Big Creek) Conservation Hatchery (Santa Cruz County)

Monterey Bay Salmon and Trout Program (MBSTP) is a nonprofit organization concerned with the preservation of native coho salmon and steelhead and the watersheds that support them. MBSTP initiated the Big Creek Conservation Hatchery program in the Kingfisher Flat area of Big Creek near Davenport in 1982. Coho salmon production at MBSTP has varied widely over the last decade, reaching a maximum in 2006 with almost 26,000 smolts released. Since then, annual releases have numbered approximately 3,000 coho salmon or fewer. The last wild brood stock year for the hatchery was 2006.

A small captive brood stock program accounts for the low numbers of smolts produced from 2007-2011. The broodstock program recently ramped up during that period so that in 2012 it was sufficient to produce 30,000 smolts per year, and also release some fry to San Vicente Creek in 2012 and adults to spawn in Scott Creek in 2012. The captive brood stock program took six years to gradually ramp up with facilities and techniques, but has made substantial contributions in the last three years.

Rearing juvenile coho salmon at Kingfisher Flat hatchery.
Photo: MBSTP

Partially in response to the Lockheed Fire of 2009, the Kingfisher Flat Conservation Hatchery has made several changes to its operating procedures, including the addition of a new rearing tank for coho salmon and a moist air egg incubator, improving feed quality, and installing new pumps to create a current for the fish to swim against to help improve fish condition. The rearing program has so far had limited success in recovering coho salmon, but is still regarded as an important element of coho salmon recovery in the region. Recently the transfer of specific husbandry techniques developed at WSH has increased hatching success and juvenile survival in the program. It is likely that this program to date has prevented coho salmon stocks south of San Francisco Bay from localized extirpation.

Chapter 7. Priority Recovery Activities

The precipitous declines in coho salmon populations in the CCC ESU since 2004 prompted the Department to meet with NOAA Fisheries and other agencies and organizations, commencing in 2010, to investigate priority recovery measures which might be taken to prevent the imminent extirpation of coho salmon populations in CCC ESU watersheds.

The Department and NOAA Fisheries have jointly developed an inter-agency team named the Priority Action Coho Team (PACT), which has the following mission:

"The Department and NOAA Fisheries, in the context of their authorities and the State and Federal coho salmon recovery plans, will collaborate with other agencies and community entities, seek to identify clear objectives, develop specific priority action plans, identify new and available resources to expedite immediate actions to prevent imminent extirpation of coho salmon populations within the CCC ESU."

The Department and NOAA Fisheries are currently developing the PACT program, including the establishment of a number of technical working groups (TWGs). The TWGs consist of representatives from the Department, NOAA Fisheries and various other stakeholder groups and are tasked with developing action plans to develop and implement priority recovery measures to prevent population extirpation.

The following TWG functions have been established:

1. Habitat protection and restoration guidelines
2. Fish rescue and captive rearing procedures
3. Water quality and instream flow conservation
4. Fisheries regulations, permitting and enforcement
5. Funding of restoration, monitoring, rescue and rearing efforts
6. Public outreach and education

Management and coordination committees have been established to steer and oversee the activities of the technical working groups. The working groups will make recommendations on priority recovery actions to prevent the extirpation of coho salmon populations in the CCC ESU. The development and implementation of the recovery actions will involve a wide range of stakeholder groups.

Recent declines in coho salmon populations in many streams and rivers in the SONCC ESU may warrant the development of similar priority recovery action measures to prevent short-term population extirpation in some watersheds. Such measures are currently being investigated by the Department and other agencies. Priority action coho salmon recovery programs are currently being investigated for the Shasta and Mattole Rivers in Siskiyou and Humboldt counties, respectively, where coho salmon populations have fallen to very low levels.

Chapter 8. Summary and Recommendations

8.1 Summary

A wide range of recovery activities to restore coho salmon populations in the State has been carried out since the *Recovery Strategy* was produced in 2004. These activities include habitat restoration, regulatory and permitting improvements, watershed planning, improved timber management plans, improved land use planning, fish passage restoration and hatchery rearing of juveniles. However, despite these on-going activities, coho salmon populations in many areas throughout the State continue to decline. It is clear that range-wide and watershed-wide recovery activities need to be expanded and enhanced if the downward population trend of coho salmon is to be reversed. The Department and NOAA Fisheries are currently establishing inter-agency teams to develop priority recovery actions to halt the on-going state-wide declines in coho salmon populations.

The precise causes of the on-going reductions in coho salmon populations in most watersheds have not been established, but it is apparent that the declines continue to be associated with the deterioration of freshwater and estuarine habitat conditions through continuous human land-use and water development activities. The down-turn in ocean productivity, which occurred in 2005 and 2006, affected adult returns in 2007-2009. Severely low returns in those years, especially to the south, severely reduced some populations, which has affected abundance in subsequent years.

The downturn in ocean productivity between 2005 and 2006, and concomitant poor marine survival of the already depressed numbers of coho salmon, likely exacerbated the ongoing decline in coho salmon abundance. The positive effects of habitat restoration, as measured by increased fish distribution and abundance, are usually associated with a time lag of several years, even for robust populations, and probably longer where populations are below depensation levels. Recent and on-going drought conditions are also likely to adversely affect coho salmon recovery.

Increased inter-agency collaboration to implement recovery strategies is needed to bring about coho salmon recovery. Wide-scale monitoring of coho salmon populations is also required to track the progress toward recovery. The many range-wide and watershed-wide recommendations listed in the state and federal recovery plans need to be fully implemented to return California coho salmon populations to long-term viability.

8.2 Recommendations for future recovery activities

1. Fully implement the range-wide and watershed recommendations listed in the *Recovery Strategy* in an expedited fashion.
2. Expand collaboration with NOAA Fisheries and other agencies in implementing joint recovery efforts.
3. Implement adequate streamflow regimes and water quality to support healthy populations.
4. Identify and remove all instream barriers and impediments to coho salmon migration.
5. Threats to the survival of coho salmon populations must be identified and greatly reduced and, wherever possible, removed.
6. Watershed and stream habitat restoration programs should identify and target high priority areas for recovery. These watersheds and/or streams should contain the strongest and/or ecologically or genetically significant populations, where conditions still support all life stages.
7. Implement as soon as possible a comprehensive population monitoring program, including life-cycle stations, in streams in the SONCC and CCC ESUs to provide essential data on the current status of coho salmon populations.
8. Increase education and outreach programs to facilitate awareness of the needs of coho salmon and the effects of water use practices.
9. Recovery efforts that can be made to maintain or increase recovery of the species specific to watershed conditions must be described and fully implemented.
10. Recovery projects must focus efforts on restoring essential natural ecological processes in river systems.
11. Preserve and restore, wherever possible, the genetic integrity and diversity of coho salmon populations.
12. Expand the engagement and development of local communities in coho salmon recovery.
13. Implement research projects with experimental design to evaluate the effects of habitat restoration activities, such as large wood addition, floodplain restoration and fish passage improvement, on coho salmon distribution, abundance and species recovery.
14. Additional research programs may include – analysis of population datasets gathered to date, assessment of the relative importance of marine versus freshwater factors on recruitment variability and determination of suitable recovery goals and delisting criteria.

9. Conclusions

California coho salmon continue to decline throughout the state, despite the implementation of numerous range and watershed-wide recovery activities which have been implemented by the Department and other agencies and organizations since the *Recovery Strategy* was produced in 2004. The prevention of further population extirpations and reverse of on-going declines will require accelerated implementation of recovery tasks, particularly the restoration of suitable freshwater and estuarine conditions for juvenile rearing and adult reproduction. Furthermore, range and watershed-wide recovery activities need to be expanded, and implementation of recovery efforts intensified and accelerated. Increased inter-agency collaboration in implementing recovery tasks will greatly assist population recovery.

Literature Cited

Adams, P.B., L. W. Botsford, K. W. Gobalet, R. A. Leidy, D. R. McEwan, P. B. Moyle, J. J. Smith, J. G. Williams and R. M. Yoshiyama. 2007. Coho salmon are native south of San Francisco Bay: a reexamination of North American coho salmon's southern range limit. Fisheries 32(9): 441–451.

Adams, P.B., L.B. Boydstun, S.P. Gallagher, M.K. Lacy, T. McDonald, and K.E. Shaffer. 2011. California Coastal Salmonid Population Monitoring: Strategy, Design and Methods. Fish Bulletin 180. State of California, The Natural Resources Agency, Department of Fish and Game. 80 p.

Anderson, K. R. 1995. A status review of the coho salmon *(Oncorhynchus kisutch)* in California south of San Francisco Bay. Report to the California Fish and Game Commission. CDFG.

Battin, J., M.W. Wiley, M.H. Ruckelhaus, R.N. Palmer, E. Korb, K.K. Bartz, H. Imaki. 2007. Projected impacts of climate change on salmon habitat restoration. PNAS 104 (16)6720-6725.

Beechie, T. et al. 2012. Restoring salmon habitat for a changing climate. River Research & Applications. Wiley online library DOI:10.1002/rra.2590.

Benegar, J.R. 2011. Evaluation of constructed wood jams in a forest, gravelbed stream. Master of Science Thesis. Humboldt State University, Arcata, CA. 108 p.

Beamish, R.J., D.J. Noakes, G.A. McFarlane, L. Klyashtorin, V.V. Ivanov, and V. Kurashov. 1999. The regime concept and natural trends in the production of Pacific Salmon. Canadian Journal of Fisheries and Aquatic Sciences 64: 1683-1692.

Bucklin, K.A., M.A Banks,., D. Hedgecock. 2007. Assessing genetic diversity of protected coho salmon populations in California. Canadian Journal of Fisheries and Aquatic Sciences 64 (1): 30-42.

Bell, E. and W. G. Duffy. 2007. Previously undocumented two-year freshwater residency of juvenile coho salmon in Prairie Creek, California. Transactions of the American Fisheries Society 136: 966-970.

Bjorkstedt, E.P. 2003. DARR (Darroch analysis with rank-reduction) A method for analysis of stratified mark-recapture data for small populations, with application to estimating abundance of smolts from out-migrant trap data. Administrative Report SC-00-02.National Marine Fisheries Service, Southwest Fisheries Science Center, Santa Cruz, California, USA Administrative Report SC-00-02

Brown, L.R. and P.B. Moyle. 1991. Status of coho salmon in California. Report to the National Marine Fisheries Service, Department of Wildlife and Fisheries Biology, University of California at Davis.

Brown, L.R., P.B. Moyle, and R.M. Yoshiyama. 1994. Historical decline and current status of coho salmon in California. North American Journal of Fisheries Management 14: 237-261.

Cafferata, P.H. and L.M. Reid. 2013. Applications of long-term watershed research to forest management in California: 50 years of learning from the Caspar Creek experimental watersheds. California Forestry Report No. 5. California Department of Forestry and Fire Protection. Sacramento, CA. 110 p.

Cannata, S., R. Henly, J. Erler, J. Falls, D. McGuire and J. Sunahara. 2006. Redwood Creek watershed assessment report. Coastal Watershed Planning and Assessment Program and North Coast Watershed Assessment Program. California Resources Agency and California Environmental Protection Agency, Sacramento, California.

CDFG (California Department of Fish and Game). 2002. Status Review of California Coho Salmon North of San Francisco. Report to the Fish and Game Commission, April 2002. 231 pp.

CDFG (California Department of Fish and Game). 2004. Recovery Strategy for California Coho Salmon. Report to the California Fish and Game Commission. 594 pp. http://www.dfg.ca.gov/nafwb.cohorecovery.

CDFG (California Department of Fish and Game). 2008. Humboldt Bay juvenile salmonids investigations. Annual Performance Report. Federal Aid in Sport Fish Restoration Act. Grant Number F-122-R. Project No. 67.

Chesney, W. R., C. Adams, W. Crombie, H. Langendorf, S. Stenhouse and K. Kirby. 2009. Shasta River Juvenile Coho Habitat and Migration Study. Report prepared for the U.S Bureau of Reclamation, California Department of Fish and Game, Yreka, Ca. 75pp.

Christie, M.R., M.L. Marine, R.A. French, R.S. Waples and M.S. Blouin. 2012. Effective size of a wild salmonid population is greatly reduced by hatchery supplementation. Heredity 00: 1-7.

Conrad, L., and M. Obedzinski. 2006. Annual Report for the Russian River Coho Salmon Captive Broodstock Program: Hatchery Operations and Monitoring Activities, July 2004 – June 2005.

Conrad, J.L., E.A. Gilbert-Horvath, and J.C. Garza. 2013. Genetic and phenotypic effects on reproductive outcomes for captively-reared coho salmon, *Oncorhynchus mykiss*. Aquaculture 404-405: 95-104.

Coronado, C. and R. Hilborn. 1998. Spatial and temporal factors affecting survival in coho salmon (Oncorhynchus kisutch) in the Pacific Northwest. Canadian Journal of Fisheries and Aquatic Sciences 64: 2067-2077.

Duffy, W.G. 2008. Validation Monitoring: Testing Protocols in Prairie Creek. Final Project Report, Pacific States Marine Fisheries Commission Agreement No. P0410515. California Department of Fish and Game Fisheries Restoration Grants Program. 21 p.

Eldridge, W.H. and K.A. Naish. 2007. Long-term effects of translocation and release numbers on fine-sacle population structure among coho salmon (*Oncorhynchus kisutch).* Molecular Ecology 16: 2407-2421.

Ettinger, E. and G. Andrew. 2012. Lagunitas Creek Salmon Spawner Survey Report 2010-2011. Prepared by Marin Municipal Water District.

Federal Register.(2012). Federal Register Vol. 77, No. 63, p. 19552 ff.

Gallagher, S. P. and D.W. Wright. 2011. Coastal Mendocino County Salmonid Life Cycle and Regional Monitoring: Monitoring Status And Trends. 2010. California Department of Fish and Game, Coastal Watershed and Assessment Program, 1487 Sandy Prairie Court, Suite A, Fortuna, CA 95540. 49 pp.

Garwood, J. 2012. Historic and Recent occurrence of Coho salmon in California Streams Within the Southern Oregon/Northern California Evolutionarily Significant Unit. California Department of Fish and Game, Northern Region, Anadromous Resource and Monitoring Program, Arcata, CA.

Garza, J.C. Unpublished data. NOAA Southwest Fisheries Science Center, Santa Cruz, California.

Hare, S.R., N.J. Mantua, and R.C. Francis. 1999: Inverse production regimes: Alaskan and West Coast Pacific Salmon. Fisheries, Vol. 21, No. 1, 6-14.

Hayes, S., D. Pearse, J.C. Garza, M.H. Bond, A.L. Collins, R.B. MacFarlane. 2011. Monitoring Life History Traits of ESA-listed Salmonids on the Central California Coast. Report submitted to the California Department of Fish and Game as part of the requirements of FRGP Award # P0430428

Hobday, A. J. and G. W. Boehlert. 2001. The role of coastal ocean variation in spatial and temporal patterns in survival and size of coho salmon (*Oncorhynchus kisutch)*. Canadian Journal of Fisheries and Aquatic Sciences 58:2021–2036.

Ice, G. 2011. Forestry makes strides to protect water quality. California Forests. Summer 2011. p. 6-7.

Johnson, D.H., B.M. Shrier, J.S. O'Neal, J.A. Knutzen, X. Augerot, T.A. O'Neil, T.N. Pearsons. 2007. Salmonid Field Protocols Handbook. Techniques for assessing Status and Trends in salmon and Trout Populations. American fisheries Society, Bethesda, Maryland.

Kaczynski, V. W. and F. Alvarado. 2006. Assessment of the southern range limit of North American coho salmon: difficulties in establishing natural range boundaries. Fisheries 31: 374-391.

Keppeler, Elizabeth T. 1998. The summer flow and water yield response to timber harvest. *In:* Ziemer, Robert R., technical coordinator. Proceedings of the conference on coastal watersheds: the Caspar Creek story, 1998 May 6; Ukiah, CA. General Tech. Rep. PSW GTR-168. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 35-43.

Knechtle, M. and D. Chesney. 2013. Bogus Creek Salmon Studies 2103 Final Report. California Department of Fish and Wildlife., Northern Region, Yreka. 22 p.

Koslow, J.A.; Hobday, A.J.; Boehlert, G.W. 2002. Climate variability and marine survival of coho salmon (Oncorhynchus kisutch) in the Oregon production area. Fisheries Oceanography 11(2). 65-77

Lake, P.S. 2003. Droughts and Aquatic Ecosystems – Effects and Responses. Wiley-Blackwell Press, 400 pp.

Lawson, P.W., Logerwell, E.A.., Mantua, N.J., Francis, R.C. and V.N. Agostini. 2004. Environmental factors influencing freshwater survival and smolt production in Pacific Northwest coho salmon (*Oncorhynchus kisutch*). Canadian Journal of Fisheries and Aquatic Sciences 61: 360-373.

Leidy, R.A., G. Becker and B.N. Harvey. 2005. Historical status of coho salmon in streams of the urbanized san Francisco estuary, California. California Fish and Game (4): 219-254.

Lindley, S.T. et al. 2009. What caused the Sacramento River fall chinook stock collapse? NOAA-TM-NMFS-SWFSC-447

MacFarlane, R.B., S. Hayes, and B. Wells. 2008. Coho and Chinook Salmon Decline in 30 California during the Spawning Seasons of 2007/'08. Unpublished memo.

Madej, M.A., C. Currens, J. Ozaki and D.G. Anderson. 2006. Assessing possible thermal rearing restrictions for juvenile coho salmon through thermal infrared imaging and in-stream monitoring, Redwood Creek, California. Canadian Journal of Fisheries and Aquatic Sciences 63 (6): 1384-1396.

Mantua, N.J. and S.R. Hare, Y. Zhang, J.M. Wallace, and R.C. Francis. 1997: A Pacific interdecadal climate oscillation with impacts on salmon production. Bulletin of the American Meteorological Society, 78, pp. 1069-1079.

Mattole Salmon Group (MSG). 2009. Fisheries: Number 5 in the 2009 State of the Mattole Watershed Series. Companion to the Mattole Integrated Coastal Watershed Management Plan.

Mattole Salmon Group (MSG) 2011. Mattole Coho Recovery Strategy. Petrolia, California.100 pp.

McElhany, P., M. H. Ruckelshaus, M. J. Ford, T. C. Wainwright, and E. P. Bjorkstedt. 2000. Viable salmonid populations and the recovery of evolutionarily significant units. NOAA-TM-NMFS-SWFSC-42

McLeod, R.F., and C. F. Howard. 2010. Mill Creek Fisheries Monitoring Program, Final Report, Del Norte County, California. 84 p.

Meyers, E.M., Dobrowski, B. and C.L. Tague. 2010. Climate change impacts on flood frequency, intensity, and timing may affect trout species in Sagehen Creek, California. Transactions of the American Fisheries Society 139: 1657-1664.

Moyle, P.B., Williams, J.E., 1990. Biodiversity loss in the temperate zone: decline of the native fish fauna of California. Conservation. Biol. 4, 275–284.

Moyle, P. B., R. M. Yoshiyama, J. E. Williams, E. D. Wikramanayake. 1995. Fish species of special concern in California, second edition. CDFG.

Moyle, P.B., Israel, J.A., Purdy, S.E., 2008. Salmon, Steelhead, and Trout in California: Status of An Emblematic Fauna. Center for Watershed Sciences, University of California, Davis. <http://watershed.ucdavis.edu/> (accessed January 2011).

Moyle, P.B. Katz, J.V.E., Quiñones, R.M. 2011. Rapid decline of California's native inland fishes: A status assessment. Biological Conservation 144 (2011) 2414–2423.

Moyle, P.B., J.D. Kiernan, P.K. Crain and R.M. Quionones. 2013. Climate change vulnerability of native and alien freshwater fishes of California: a systematic assessment approach. Plos One 895): e63883.

Mueter, F.J., R.M. Peterman & B.J. Pyper. 2002. Opposite effects of ocean temperature on survival rates of 120 stocks of Pacific salmon in northern and southern areas. Canadian Journal of Fisheries and Aquatic Sciences. 59: 456-463.

National Marine Fisheries Service (NMFS) 2007. Magnuson-Stevens Reauthorization Act Klamath River Coho Salmon Recovery Plan. Prepared by Rogers, F.R., I.V. Lagomarsino and J.A. Simondet for the National Marine Fisheries Service, Long Beach, CA. 48 pp.

National Marine Fisheries Service (NMFS) 2011. 5-YearReview: Summary and Evaluation of Southern Oregon/Northern California Coast Coho Salmon ESU. National marine Fisheries Service Southwest Region, Long Beach, CA.

National Marine Fisheries Service (NMFS). 2012a. Final Recovery Plan for Central California Coast coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit. National Marine Fisheries Service, Southwest Region, Santa Rosa, California.

National Marine Fisheries Service (NMFS). 2012b. Public Draft Recovery Plan for Southern Oregon/Northern California Coast Coho Salmon (*Oncorhynchus kisutch*). National Marine Fisheries Service. Arcata, CA.

Nickelson, T.E. 1986. Influences of upwelling, ocean temperature, and smolt abundance on marine survival of coho salmon (*Oncorhynchus kisutch)* in the Oregon Production Area. Canadian Journal of Fisheries and Aquatic Sciences 43: 527-535.

Obedzinski, M., J.C. Pecharich, J.A. Davis, S. Nossaman, P.G. Olin, and D.J. Lewis. 2009. Russian River Coho Salmon Captive Broodstock Program Monitoring Activities: Annual Report, July 2007 to June 2008. University of California Cooperative Extension and Sea Grant Program. Santa Rosa, California.

Parrish, R.R., and M.J. Tegner. 2001. California's variable ocean environment. In California's living marine resources: a status report, Leet, W.S., C.M. Dewees, R. Klingbeil, and E.J. Larsen, eds., p.21–28. The Resources Agency, CDFG.

Pincetich, C., T. Steiner & P. Bouley. (2009). Coho and Steelhead Smolt Outmigration from the San Geronimo Valley, Marin County, 2009. Salmon Protection And Watershed Network.

Rand, P.S. et al. 2012. Ecological interactions between wild and hatchery salmonids and key recommendations for research and management actions in selected regions of the North Pacific. Environ. Biol. Fish. DOI 10.1007/s10641-012-9988-2.

Reichmuth, M., S. Carlisle, A. Dedrick & A. Rodoni. (2011). Long-term Coho salmon and Steelhead Trout Monitoring in Coastal Marin County. National Park Service, Natural Resource Technical Report.

Ricker, S.J. and C. W. Anderson. 2011. Freshwater Creek Salmonid Life Cycle Monitoring Station. Annual Report. California Department of Fish and Game, Anadromous Fisheries Resource Assessment and Monitoring Program, 50 Ericson Ct., Arcata, CA 95521. 59 p plus appendices

Ryding, K.E. and J.R. Skalski. 1999. Multivariate regression relationships between ocean conditions and early marine survival of coho salmon (Oncorhynchus kisutch). Canadian Journal of Fisheries and Aquatic Sciences, 1999, 56:2374-2384, 10.1139/f99-177.

Schwartz, M.W., Iverson, L.R., Prasad, A.M., Matthews, S.N. and R. J. O'Connor. 2006. Predicting extinctions as a result of climate change. Ecology 87 (7): 1611-1615.

Sinnen, W., S. Borok, A. Hill, J. Hileman, & M. Claire Kier. 2011. Final Annual Report Trinity River Basin Salmon and Steelhead Monitoring Project 2009-2010 season. CDFG, Northern California – North Coast Region 601 Locust Street, Redding, CA 96001.

Smith, J.J. (2009). Distribution and abundance of juvenile coho salmon and steelhead in Gazos, Waddell and Scott Creeks in 2009. Unpublished report.

Sparkman M.D. 2011a. Lower Redwood Creek juvenile salmonid (smolt) downstream migration study, 2004-2010 seasons. CDFG AFRAMP, 2008 Annual Report 2a7.

Sparkman M.D. 2011b. Upper Redwood Creek juvenile salmonid (smolt) downstream migration study, 2004-2010 seasons. CDFG AFRAMP, 2007 Annual Report 2a5.

Spence, B.C. W.G. Duffy, J.C. Garza, B.C. Harvey, S.M Sogard, L.A. Weitkamp, T.H. Williams and D.A. Boughton. 2011. Historical occurrence of coho salmon (*Oncorhynchus kisutch*) in streams of the Santa Cruz mountain region of California: response to an endangered species act petition to delist coho salmon south of San Francisco Bay. NOAA-TM-NMFS-SWFSC-472.

Spence, B.C. and T.H. Williams. 2011. Status review update for Pacific salmon and steelhead listed under the endangered species act: Central California Coast Coho Salmon ESU. NOAA-TM-NMFS-SWFSC-475.

Stenhouse, S.A., C.E. Bean, W.R. Chesney, and M.S, Pisano. 2012. Water temperature thresholds for coho salmon in a spring-fed river, Siskiyou County, California. California Fish and Game 98(1):19-37

Swales, S. 2010. California Forest Management Practices and the Conservation of Anadromous Salmonids. Fisheries Branch Administrative Report No. 2010-3.

Thomas, C.D. et al. 2004. Extinction risk from climate change. Nature 427: 145-148.

VTAC. 2012. Site-specific riparian zone management: Section V guidance. Final report prepared by the Anadromous Salmonid Protection Rule Section V Technical Advisory Committee (VTAC). California Department of Forestry and Fire Protection. Sacramento, CA. 171 p.

Wallace, M. and S. Allen. 2012. Juvenile salmonid use of the tidal portions of selected tributaries to Humboldt Bay, California, 2009-2011. Final Report for Contract P0610522. February, 2012. 45 pp.

Williams, T.H., S.T. Lindley, B.C. Spence and D.A. Boughton. 2011. Status Review Update for Pacific Salmon and Steelhead Listed under the Endangered Species Act: Southwest. National Marine Fisheries Service Report. 106 pp.

Yurok Tribe Fisheries Program. (2009). A complete life history monitoring of salmonids in McGarvey Creek, lower Klamath River. Final Report, April 2009. 132 pp.

APPENDICES

Appendix A. Adult coho salmon spawner estimates in the Central California Coast Evolutionarily Significant Unit, 2004-2012

Stream/ County/Recovery Unit/Region	Year								Sampling method	Notes
	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12		
Russian River (Warm Springs Hatchery) (Sonoma)	4	2	4	2	5	19	95	205	Trap/Video	Numbers are minimum counts, not estimates
Pudding Creek (Mendocino Coast)	1167	709	295	228	50	9	199	415	Redd counts	Mark-recapture point estimates
Caspar Creek (Mendocino) (Mendocino Coast)	548	126	54	17	6	43	36	17	Redd counts	Adult escapement estimates Mark-recapture estimates 05-10
South Fork Noyo River (Mendocino) (Mendocino Coast)	536	285	114	54	19	63	39	38	Mark-recapture	Adult escapement estimates
Little River (Mendocino) (Mendocino Coast)	152	14	4	2	4	2	3	2	Redd counts	Adult escapement estimates
Olema Creek (Marin) (Bodega-Marin Coastal)*	81 137	11 8	32 95	5 26	0 0	5 14	14 21	15 7	Minimum escapement estimate	
Lagunitas Creek (Marin) (Bodega-Marin Coastal) *	633 1266	198 396	433 866	175 350	26 52	65 130	101 202	145 290	Minimum escapement estimate	
San Geronimo Creek* (Marin) (Bodega-Marin Coastal)	258 516	102 204	143 286	55 110	1 2	7 14	42 84	26 52	Minimum escapement estimate	
Redwood Creek (Marin) (Bodega-Marin Coastal) **	76 90	5 11	6 24	0 0	2 2	10 23	1 3	10 4	Carcass counts Redd counts	
Scott Creek (Santa Cruz) (Big Basin) ***	90 139	0 15	2 2	8 2	13 1	1 0	3 0	1 0	Trap Trap	Hatchery fish Wild fish

* Data provided by Marin Municipal Water District ** Data provided by Point Reyes National Seashore *** Data provided by NOAA

Appendix B. Adult coho salmon spawner estimates in the Southern Oregon Northern California Coast ESU, 2004-2012

Stream/ County/Region	Year								Sampling method	Notes
	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12		
Mill Creek (Smith River) West Branch East Fork Mainstem	 20 9 0	 175 55 7	 22 27 0	 11 7 0	 28 6 2	 12 16 2	 5 1 0	 25 14 0	Trap	Spawner survey Minimum escapement estimates
Prairie Creek (Humboldt)	488	385	165	41	198	98	43	366	Redd counts	Escapement estimates based on redd counts
Freshwater Creek (Humboldt) (Eureka Plain)	974	767	391	241	376	89	455	624	Mark-recapture Trap	Adult escapement estimate
Shasta River (Siskiyou) (Shasta Valley)	373	69	47	255	30	9	44	62	Trap/video	In 2009/10 catches were all males. *see Footer note
Scott River (Siskiyou) (Scott River)	NA	NA	NA	1,622	62	81	927	355	Spawner survey/redd counts	Video monitoring
Bogus Creek (Siskiyou) (Middle Klamath River)	409	102	46	233	111	6	154	142	Fish counting facility	Video weir & Carcass surveys
Klamath River (Iron Gate Hatchery) (Middle Klamath River)	1,734	1,425	332	779	1,296	70	485	586	Fish counting facility	Video weir & Carcass surveys
Trinity River (u/s of Willow Creek weir) (Trinity River)	9,055 29,827 38,882	2,729 28,690 31,419	1,624 18,454 20,078	1,199 4,551 5,750	1,312 8,671 9,983	636 5,697 6,333	861 7,086 7,947	1,664 15,546 17,210	Trap Mark-recapture & Hatchery counts	[1]Wild fish [2]Hatchery fish [3]Total count (wild + hatchery)
Mattole River (Mendocino) (Cape Mendocino) #	86	49	29	52	11	3	<10	<5	Spawner survey	Live adult salmon observations
South Fork Eel River (Humboldt County)	–	–	–	–	–	–	1,023[1] 2,404[2]	1,084[1] 2,547[2]	Spawner survey	Estimate based on coho redd counts[1], based on minimum of 2.35 fish per redd[2], live and dead coho observations in randomly selected reaches.

*Note: High flows in some years may affect the ability to accurately estimate fish abundance and therefore these results should be considered minimum estimates. However, we believe that these numbers do accurately reflect the relative strengths of each brood year.

Appendix C. Priority Streams List for Instream Flow Assessment

Rank	Stream or Watercourse	DFW Region and County
1	Butte Creek	2 Butte
2	Tuolumne River (below La Grange Dam)	4 Stanislaus
3	San Gregorio Creek (lower)	3 San Mateo
4	North Fork of Navarro River	1 Mendocino
5	Big Sur River	4 Monterey
6	Santa Maria River	5 Santa Barbara
7	Redwood Creek (tributary to Maacama)	3 Sonoma
8	Bear River (below Camp Far West)	2 Placer and Nevada
9	Shasta River	1 Siskiyou
10	Carmel River	4 Monterey
11	Santa Margarita River	6 Riverside
12	Merced River (below Crocker-Huffman Dam)	4 Merced
13	Redwood Creek (tributary to Napa)	3 Napa
14	Scott River	1 Siskiyou
15	Mattole River (near Whitethorn)	1 Humboldt
16	Dry Creek (tributary to Napa River)	3 Napa
17	Deer Creek (tributary to Yuba River)	2 Nevada
18	Mojave River	6 San Bernardino
19	Carpinteria Creek	5 Santa Barbara
20	Santa Ana River	6 Riverside, San Bernardino
21	Middle Fork Feather River	2 Plumas
22	Dos Pueblos Creek	5 Santa Barbara

Appendix D. Known and potential fish passage barriers and fish passage improvement projects in California coho salmon ESUs.

COHO ESU	RECOVERY UNIT	Known Barriers [1]	Potential Barriers[2]	Diversions Unscreened	Natural Barriers	Passage Projects Completed 2004-2011[3]	Passage Projects Ongoing[4]
SONCC	CAPE MENDOCINO	31	34	63	0	18	6
SONCC	EEL RIVER	272	223	7	0	11	5
SONCC	EUREKA PLAIN	111	241	0	0	15	3
SONCC	KLAMATH RIVER	271	311	70	0	41	5
SONCC	MAD RIVER	35	93	35	0	7	3
SONCC	MENDOCINO COAST	0	1	0	0	0	0
SONCC	REDWOOD CREEK	25	69	0	0	2	0
SONCC	ROGUE RIVER	7	7	0	0	0	0
SONCC	SMITH RIVER	98	181	53	0	11	1
SONCC	TRINIDAD	32	34	0	0	2	0
SONCC	TRINITY RIVER	169	196	148	0	15	2
SONCC	WINCHUCK RIVER	4	3	0	0	2	0
CCC	BAY BRIDGES	40	29	0	2	0	0
CCC	BIG BASIN	190	142	3	54	8	1
CCC	BODEGA	8	28	0	7	0	0
CCC	CACHE CREEK	0	1	0	0	0	0
CCC	MARIN COASTAL	89	105	0	3	8	1
CCC	MENDOCINO COAST	178	269	0	66	18	5
CCC	RUSSIAN RIVER	235	556	85	28	24	0
CCC	SAN MATEO	107	120	0	22	7	4
	Total	1902	2643	464	182	189	36

Source: Passage Assessment Database, December 2012

1 – Known barriers include man-made structures assessed as complete, partial and temporal barriers to fish passage.

2 – Potential barriers include in-stream structures that were not assessed for fish passage.

3 – Completed passage projects include all types of restoration activities and funding sources improving passage of the fish.

4 – Ongoing projects include on-the-ground restoration projects not yet fully completed.

Appendix E. Organizations in California involved with coho salmon recovery (not complete)

1. Bioengineering Institute
2. California Department of Forestry and Fire Protection (Cal FIRE)
3. California Cattlemen's Association
4. California Conservation Corps
5. California Department of Fish and Wildlife (CDFW)
6. California Department of Water Resources (DWR)
7. California Farm Bureau
8. California Forestry Association
9. California Department of Transportation (CalTrans)
10. CalTrout
11. City of Arcata
12. Del Norte Rural Human Services
13. Eel River Salmon Restoration
14. Eel River Watershed Improvement Group (ERWIG)
15. FishNet4C
16. Five Counties Salmonid Conservation Program (5C)
17. Forest Landowners of California
18. Gualala River Watershed Council
19. Hoopa Tribe
20. Humboldt County Department of Public Works
21. Humboldt County Resource Conservation District
22. Humboldt County Water Agency
23. Humboldt Fish Action Council
24. Humboldt State University
25. Institute for Fisheries Resources (IFR)
26. Jacoby Creek Land Trust
27. Karuk Tribe and possibly the Round Valley Tribe
28. Klamath and Six Rivers National Forests
29. Marin Municipal Water District (MMWD)
30. Mattole Restoration Council (MRC)
31. Mattole Salmon Group (MSG)
32. Mendocino County Resource Conservation District
33. Mendocino Department of Transportation
34. Mendocino Land Trust, Inc.
35. Mid Klamath Watershed Council
36. Monterey Bay Salmon and Trout Project (MBSTP)
37. National Marine Fisheries Service (NOAA Fisheries)
38. National Park Service (NPS)
39. Northcoast Regional Land Trust
40. Northwest California Resource Conservation and Development Council
41. Point Reyes National Seashore Association
42. Northern California Resource Center
43. Pacific Coast Federation of Fishermen's Associations (PCFFA)
44. Pacific Coast Fish Wildlife and Wetlands Restoration Association (PCFWWRA)
45. Pacific States Marine Fisheries Commission (PSFMC)

46. Redwood Community Action Agency (RCAA)
47. Redwood Forest Foundation Inc. (RFFI)
48. Russian River Coho Resources Partnership
49. Salmon Protection and Watershed Network (SPAWN)
50. Salmon River Restoration Council
51. Salmonid Restoration Federation (SRF)
52. Sanctuary Forest Inc.
53. Santa Cruz Resource Conservation District
54. San Francisco Bay Regional Water Quality Control Board
55. Scott River Watershed Council
56. Scott River Water Trust
56. Shasta Valley Resource Conservation District
57. Shasta River Coordinated Resources and Management Planning
58. Sierra Club
59. Siskiyou County Resource Conservation District
60. Smith River Alliance (SRA)
61. Sonoma County Water Agency
62. Redwood National and State Parks, Humboldt Redwoods State Park
63. State Water Quality Control Board (SWQCB)
64. The Conservation Fund
66. The Nature Conservancy (TNC)
67. Trout Unlimited (TU)
68. University of California Davis Cooperative Extension Program
69. U.S. Army Corps of Engineers (USACE)
70. U. S. Fish and Wildlife Service (FWS)
71. US Forest Service (USFS)
72. Yager Van Duzen Environmental Stewards (YES)
73. Yurok Tribe
74. Sea Grant
75. California Coastal Conservancy
76. National Fish and Wildlife Foundation
77. Gold Ridge Resource Conservation District
78. Sonoma Resource Conservation District
79. Marin RCD
80. San Mateo RCD
81. American Rivers
82. Stewards of the Coast and Redwoods
83. State Water Resources Control Board (SWRCB)
84. Occidental Arts and Ecology Center
85. Center for Ecosystem Management and Restoration.

Appendix F. List of acronyms and abbreviations

ac_ Acre
AFRAMP Anadromous Fisheries Resource Assessment and Monitoring Program
BLM Bureau of Land Management
BOF California Board of Forestry and Fire Protection
Caltrans California Department of Transportation
CalFire California Department of Forestry and Fire Protection
CCC Central California Coast
CDFW California Department of Fish and Wildlife
CEQA California Environmental Quality Act
CESA California Endangered Species Act
Commission California Fish and Game Commission
CMP Coastal California Salmonid Monitoring Program
CRT Coho Salmon Recovery Team
Department California Department of Fish and Wildlife
DIDSON Dual Frequency Identification Sonar
ERWIG Eel River Watershed Improvement Group
ESA Endangered Species Act (Federal)
ESU Evolutionarily Significant Unit
FRGP Fisheries Restoration Grant Program
FWS United States Fish and Wildlife service
GDRC Green Diamond Resources Co.
ha Hectare
HGMP hatchery genetic management plan
HSA hydrologic subarea
HU hydrologic unit
IGH Iron Gate Hatchery
kg Kilogram
km Kilometer
LCM Life cycle monitoring
LWD Large woody debris
MBSTP Monterey Bay Salmon and Trout Program
mi Mile
MKWC Mid Klamath Watershed Council
MMWD Marin Municipal Water District
MRC Mattole Restoration Council
MSG Mattole Salmon Group
MSRA Magnuson-Stevens Fishery Conservation and Management Reauthorization Act
NCRWQCB North Coast Regional Water Quality Control Board
NMFS National Marine Fisheries Service
NOAA National Oceanic and Atmospheric Administration
NOAA Fisheries Fisheries Service of NOAA, formerly NMFS
NPS National Park Service
NRCS Natural Resources Conservation Service
NSA Natural Stocks Assessment
PACT Priority Action Coho Team

PAD Passage Assessment Database
PCSRF Pacific Coastal Salmon Recovery Fund
PCFWWRA Pacific Coast Fish, Wildlife and Wetlands Restoration Association
PIT passive integrated transponder
PRC Public Resources Code
PRNSA Point Reyes National Seashore Association
PWA Pacific Watersheds Associates
RCD Resource Conservation District
Recovery Strategy Recovery Strategy for California Coho Salmon
RFFI Redwood Forest Foundation Inc.
RNP Redwood National Park
ROD Record of Decision
RRCSCBP Russian River Coho Salmon Captive Broodstock Program
RST Rotary Screw Trap
RWQCB California Regional Water Quality Control Board
SCWA Sonoma County Water Agency
SFI Sanctuary Forest Inc.
SRRC Salmon River Restoration Council
SONCC Southern Oregon/Northern California Coast
SQRCD Siskiyou Resource Conservation District
SSPP Shasta-Scott Pilot Program
SSRT Shasta-Scott Coho Recovery Team
SVRCD Shasta Valley Resource Conservation District
SWRCB State Water Resources Control Board
SWFSC South West Fisheries Science Center
THP Timber Harvest Plan
TRD Trinity River Dam
TRH Trinity River Hatchery
TU Trout Unlimited
TWG Technical Working Group
UCCE University of California Cooperative Extension
USACE United States Army Corps of Engineers
USBR United States Bureau of Reclamation
USFS United States Forest Service
WSH Warm Springs Hatchery
YES Yager Environmental Stewards

Appendix G. Fisheries Restoration Grants Program – Locations of coho salmon recovery projects by project category in CCC and SONCC ESUs.

Project data captured in this data set encompasses all FRGP project locations that fall within the two Coho ESUs and identify a coho salmon recovery task. All of the projects identified occurred during the FY's 2004/05-2011/12.

Project locations are based on project center points. Many of these projects have multiple locations; these sites have all been aggregated into one center point for ease of viewing on the maps. These points are labeled with the Coho task(s) identified for the project.

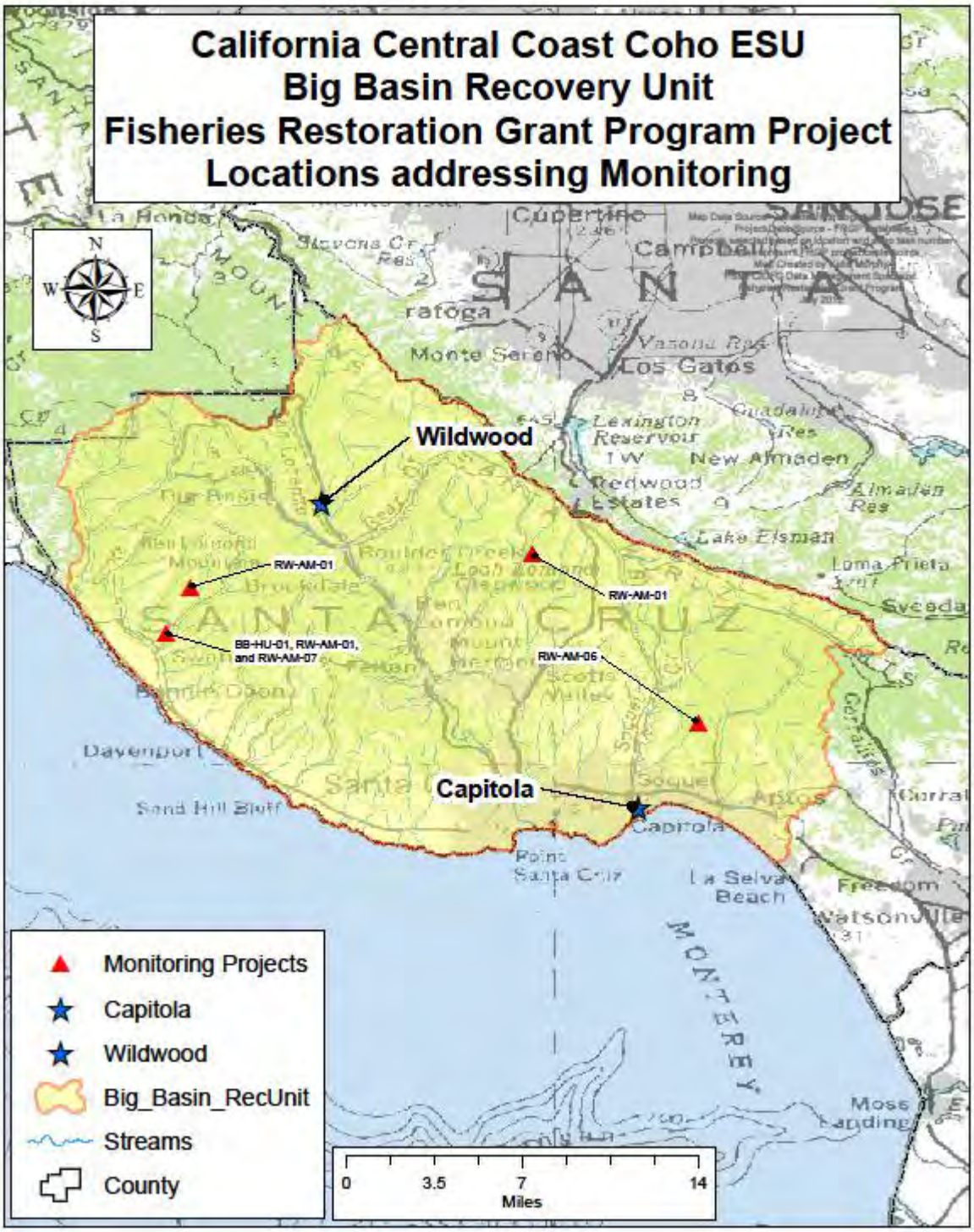
There is a map for each work category (Fish Passage, Instream Habitat, Organizational Support, Monitoring, Water and Cooperative Rearing), by recovery unit. The project types included in each category are listed below.

1. **Fish passage** – FP (fish passage at stream crossings), HB (Instream barrier modification for fish passage), SC (Fish screening of diversions), FL (Fish ladder)
2. **Instream habitat** – HA (Habitat acquisition and conservation easements), HI (Instream habitat restoration), HS (Instream bank stabilization), HR (Riparian restoration), HU (watershed restoration – upslope)
3. **Organizational support** – AC (Americorps program), OR (watershed and regional organization) PD (Project design), PL (Watershed evaluation, assessment and planning), PI (Public involvement), ED (Public School Watershed and Fishery Conservation Education Projects), TE (Private Sector Technical Training and Education Project Grants).
4. **Monitoring** – MO (Project Monitoring Following Project Completion), MD (Monitoring projects).
5. **Water** – WC (Water Conservation Measures (Ditch Lining, Piping, Stock Water Systems), WP (water Purchase), WD (water measuring devices).
6. **Cooperative rearing** – RE (Cooperative rearing).

Further information concerning the FRGP can be obtained at this site: http://www.dfg.ca.gov/fish/Administration/Grants/FRGP/

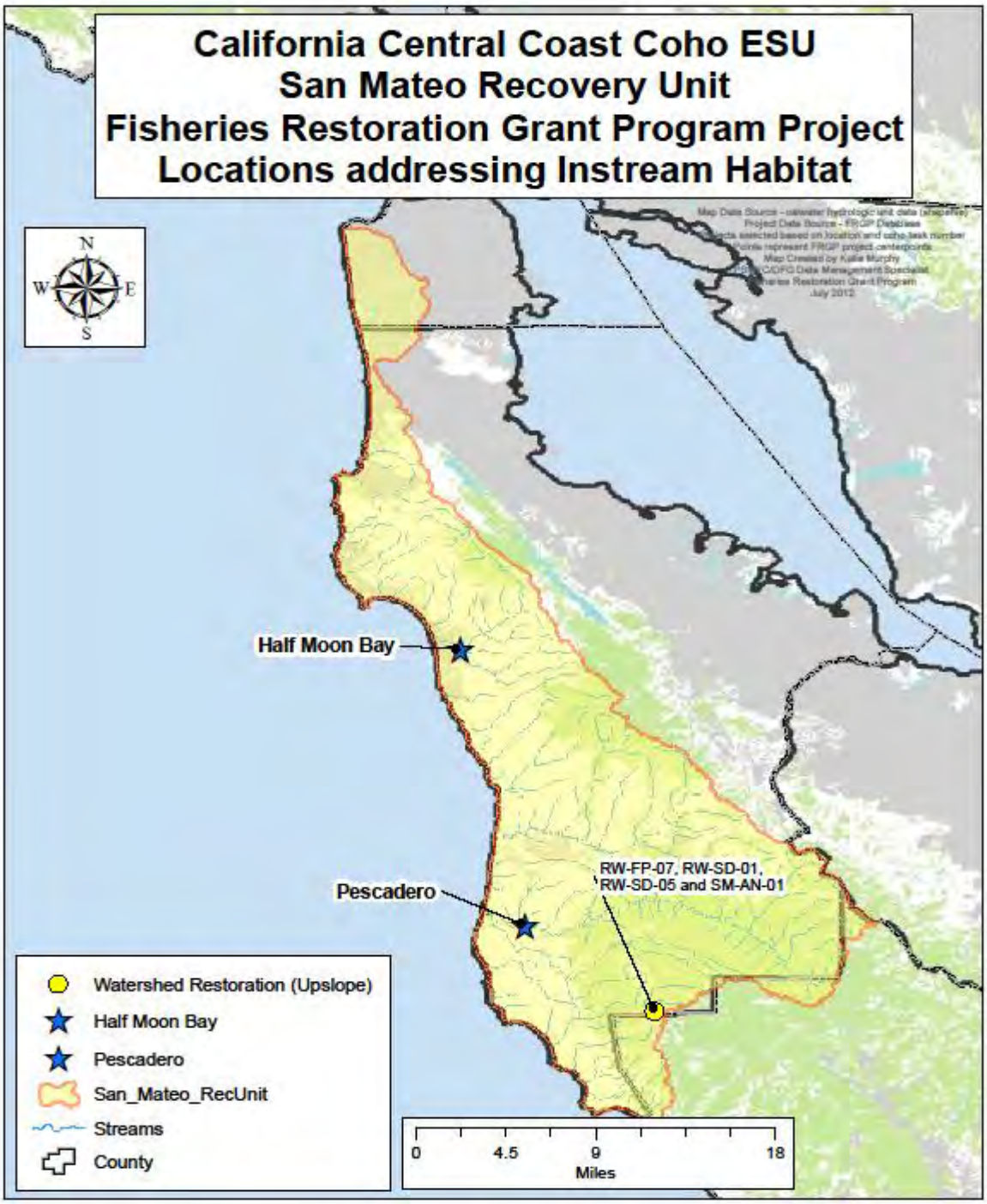
Figure G1. Recovery Units in the Central California Coast ESU

Appendix G (Continued) - Figure G2. Project locations in the Big Basin Recovery Unit – Organizational Support projects



Appendix G (Continued) - Figure G3. Project locations in the Big Basin Recovery Unit - Monitoring projects

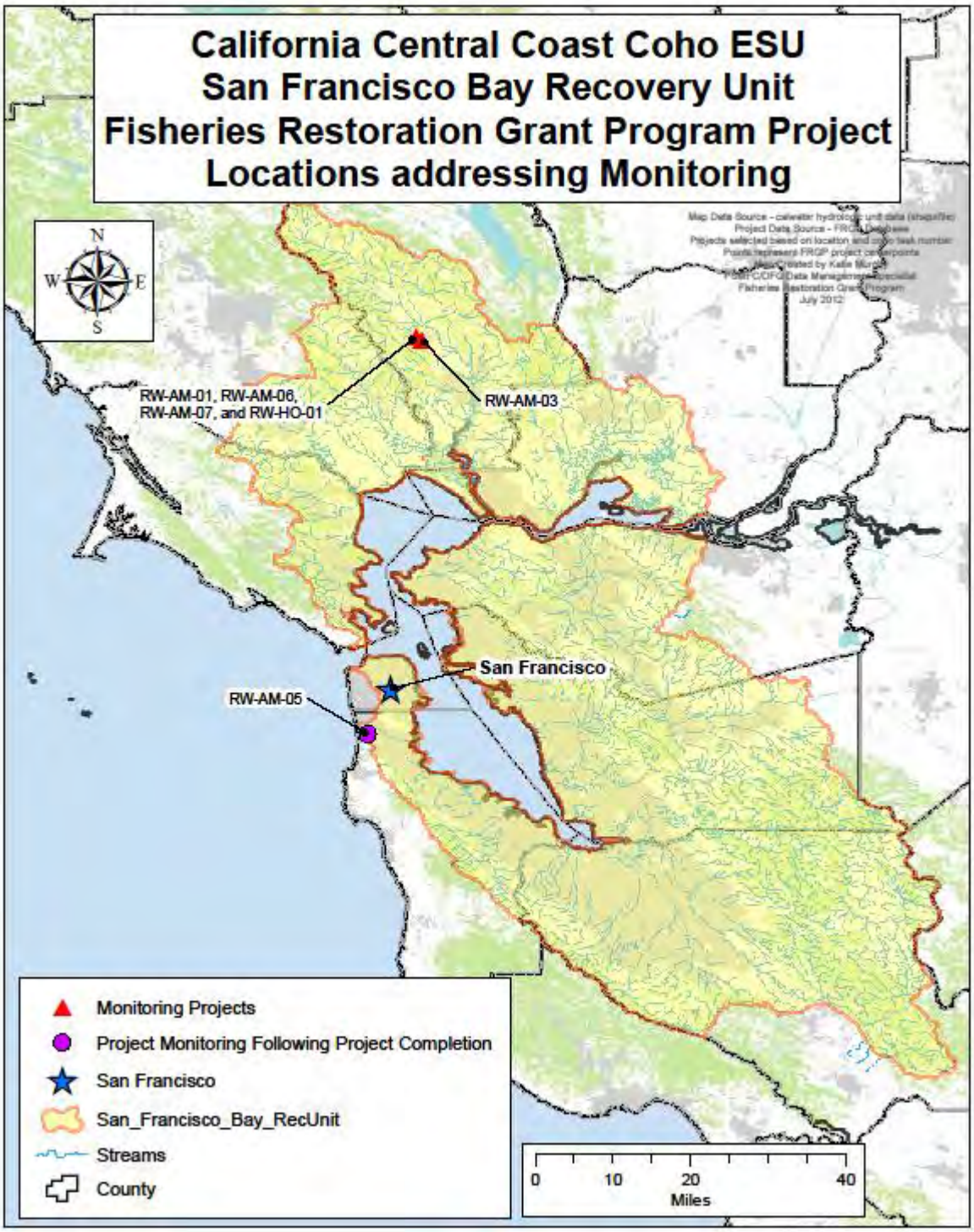
Appendix G (Continued) - Figure G4. Project locations in the Big Basin Recovery Unit - Cooperative Rearing projects



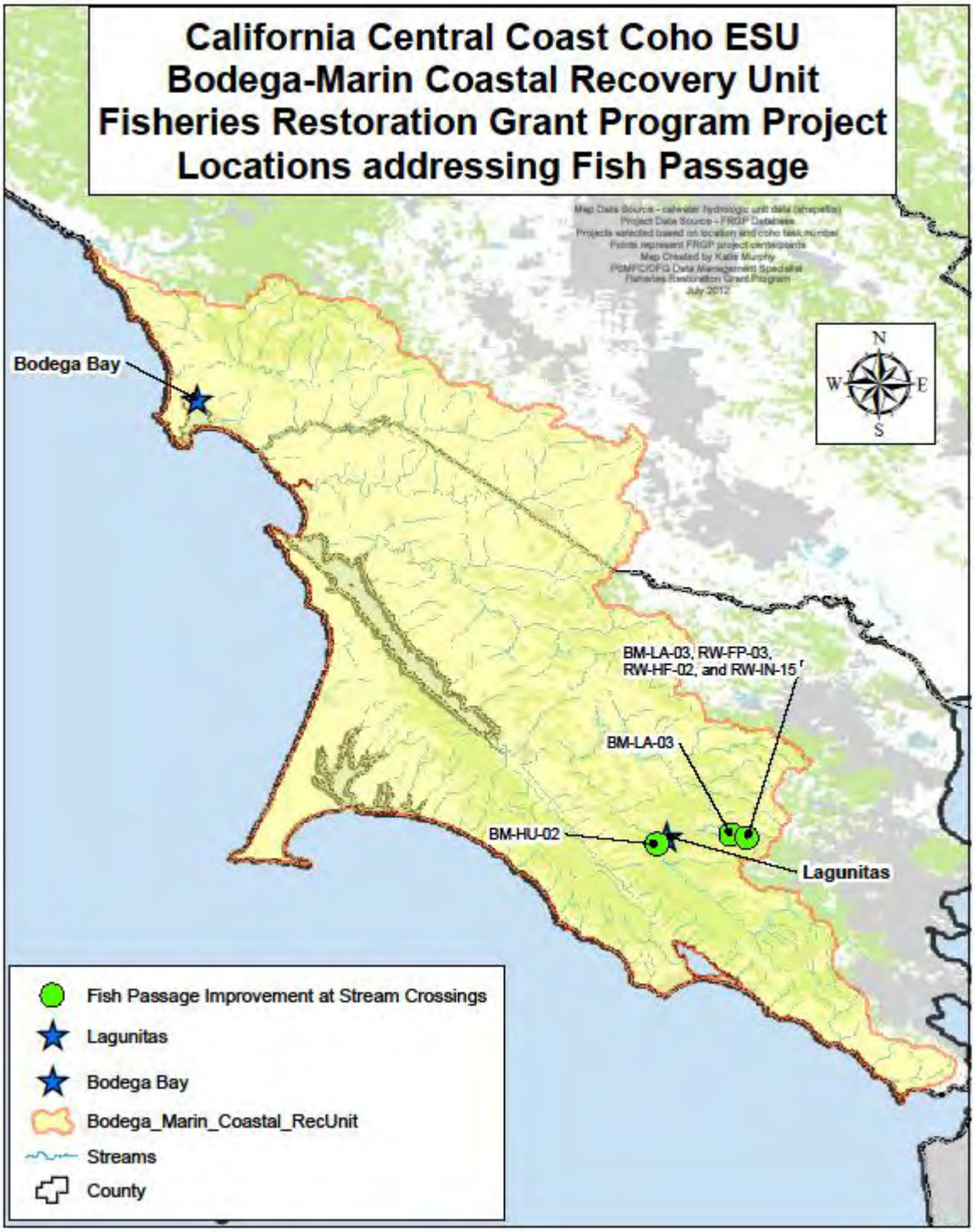
Appendix G (Continued) - Figure G5. Project locations in the San Mateo Recovery Unit - Instream Habitat projects

Appendix G (Continued) - Figure G6. Project locations in the San Mateo Recovery Unit - Organizational Support projects

Appendix G (Continued) - Figure G7. Project locations in the San Francisco Bay Recovery Unit - Organizational Support projects



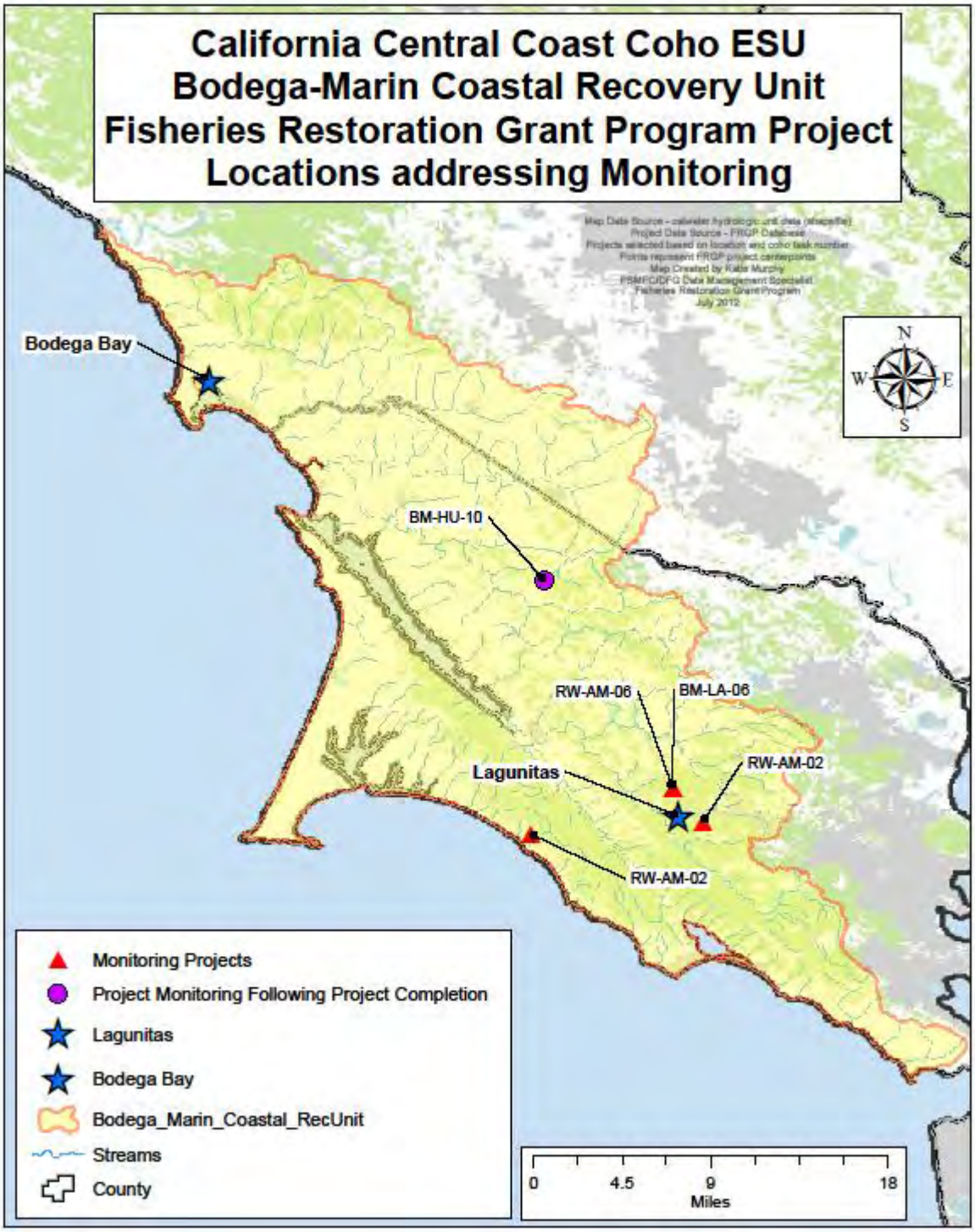
Appendix G (Continued) - Figure G8. Project locations in the San Francisco Bay Recovery Unit - Monitoring projects



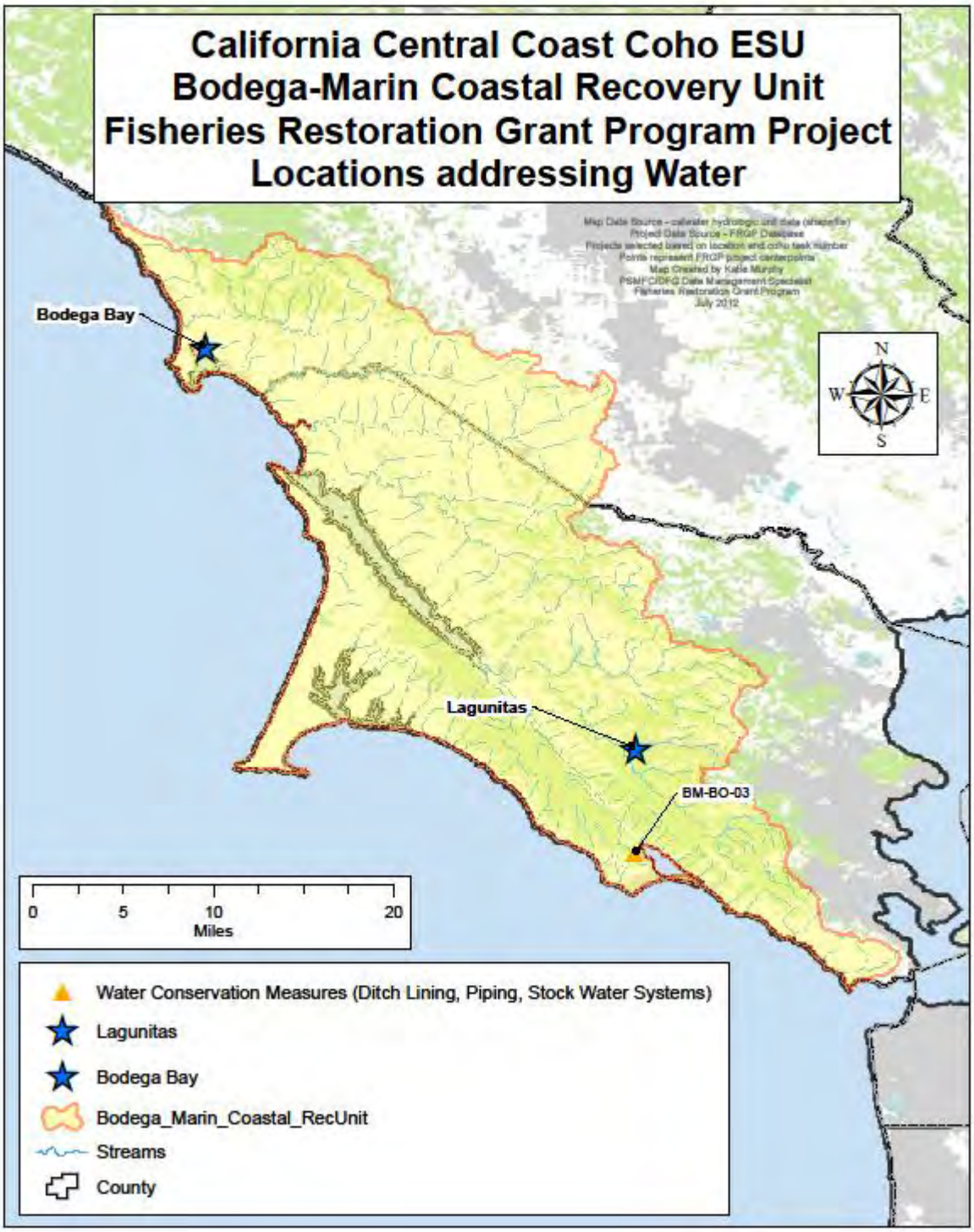
Appendix G (Continued) - Figure G9. Project locations in the Bodega-Marin Recovery Unit – Fish Passage projects

Appendix G (Continued) - Figure G10. Project locations in the Bodega-Marin Recovery Unit – Instream Habitat projects

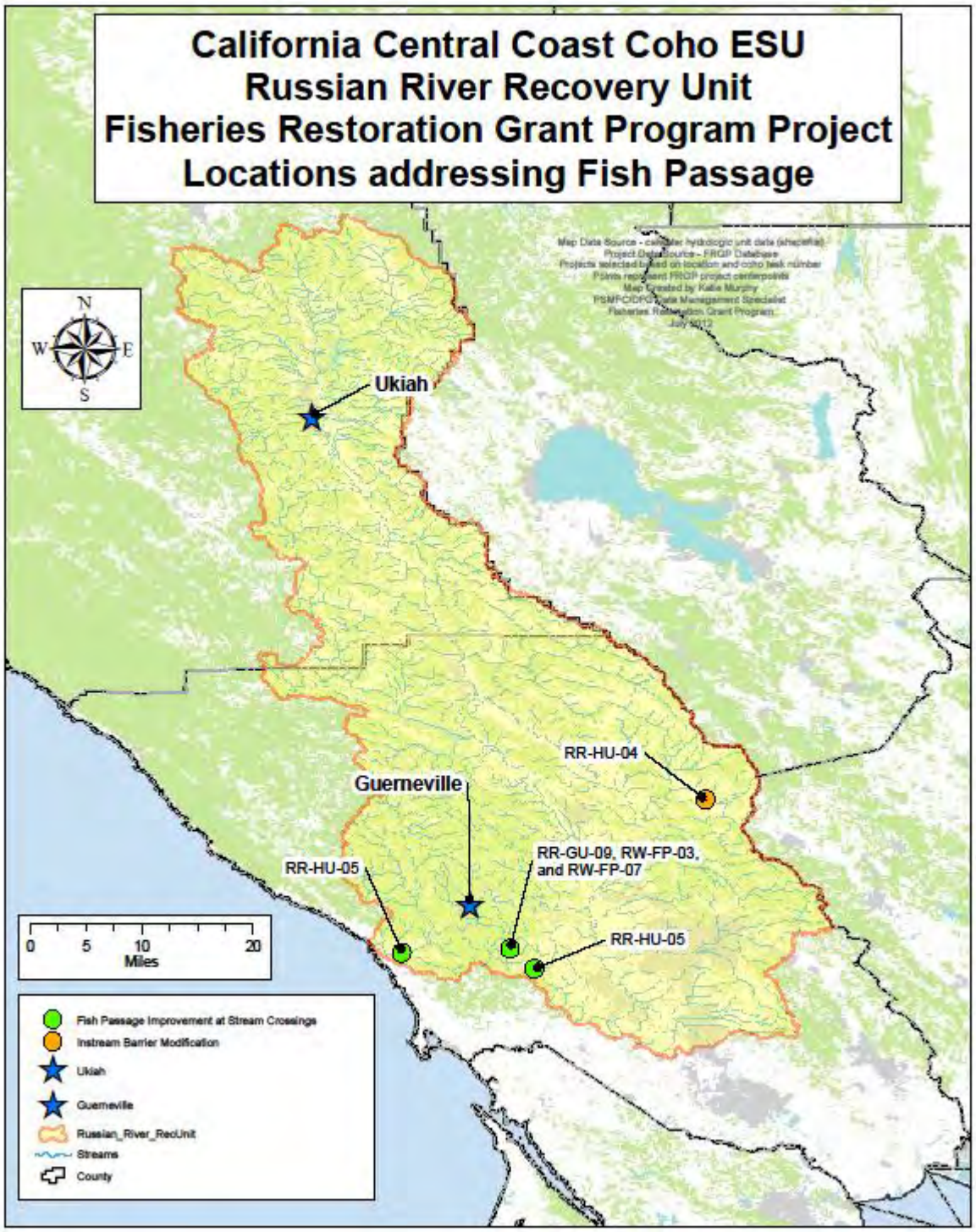
Appendix G (Continued) - Figure G11. Project locations in the Bodega-Marin Recovery Unit – Organizational Support projects



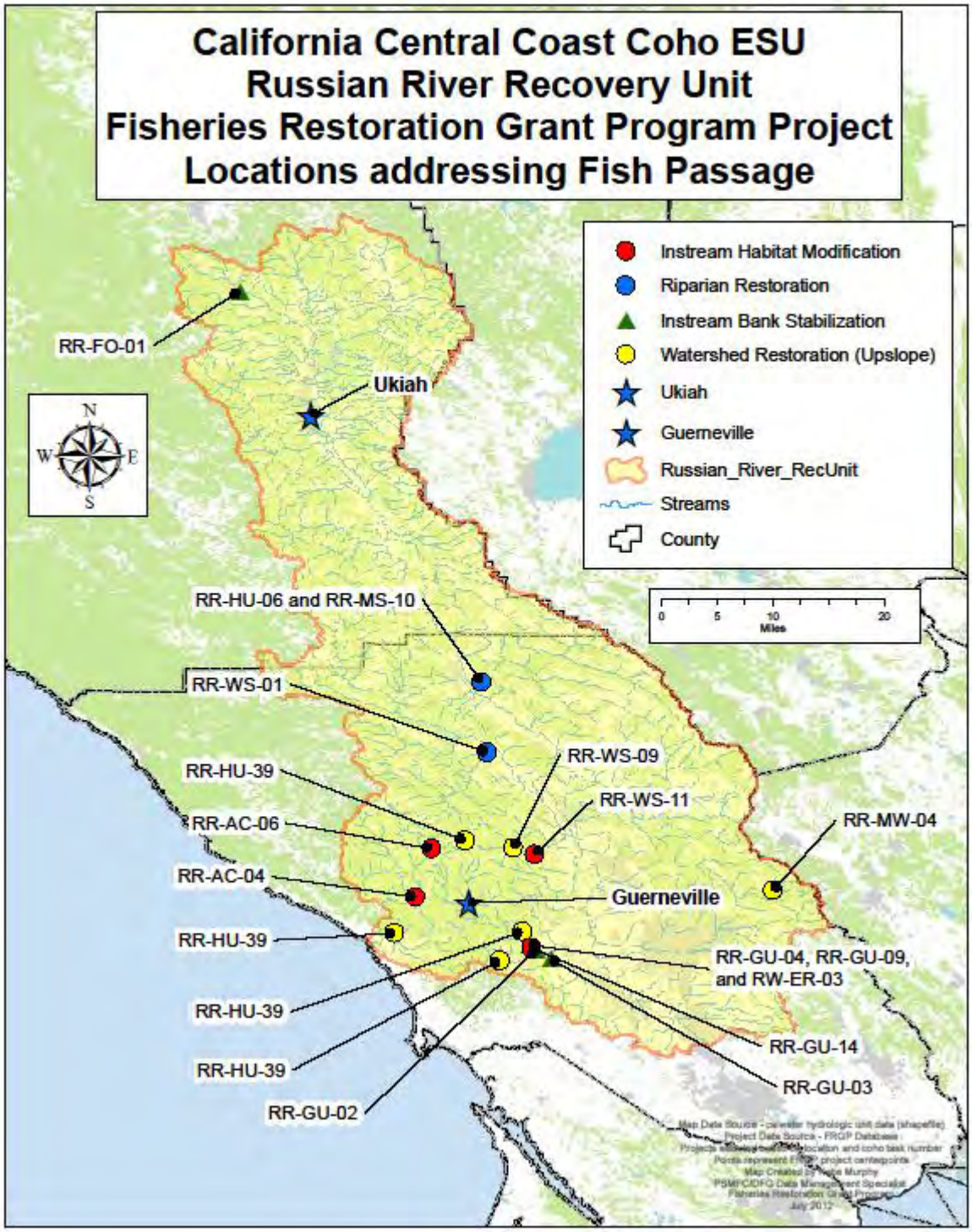
Appendix G (Continued) - Figure G12. Project locations in the Bodega-Marin Recovery Unit – Monitoring projects



Appendix G (Continued) - Figure G13. Project locations in the Bodega-Marin Recovery Unit – Water projects

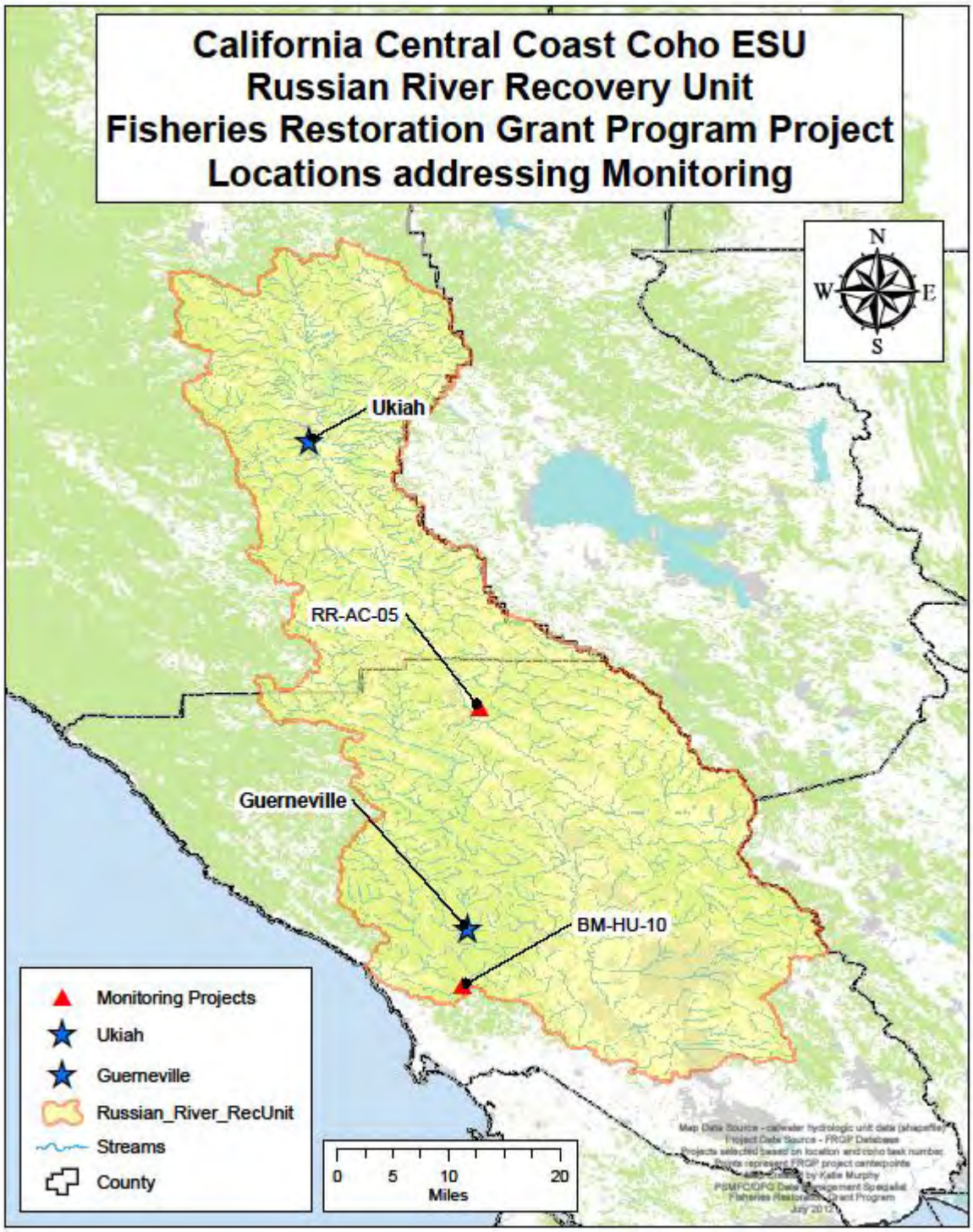


Appendix G (Continued) - Figure G14. Project locations in the Russian River Recovery Unit – Fish Passage projects



Appendix G (Continued) - Figure G15. Project locations in the Russian River Recovery Unit – Fish Passage projects

Appendix G (Continued) - Figure G16. Project locations in the Russian River Recovery Unit – Organizational Support projects



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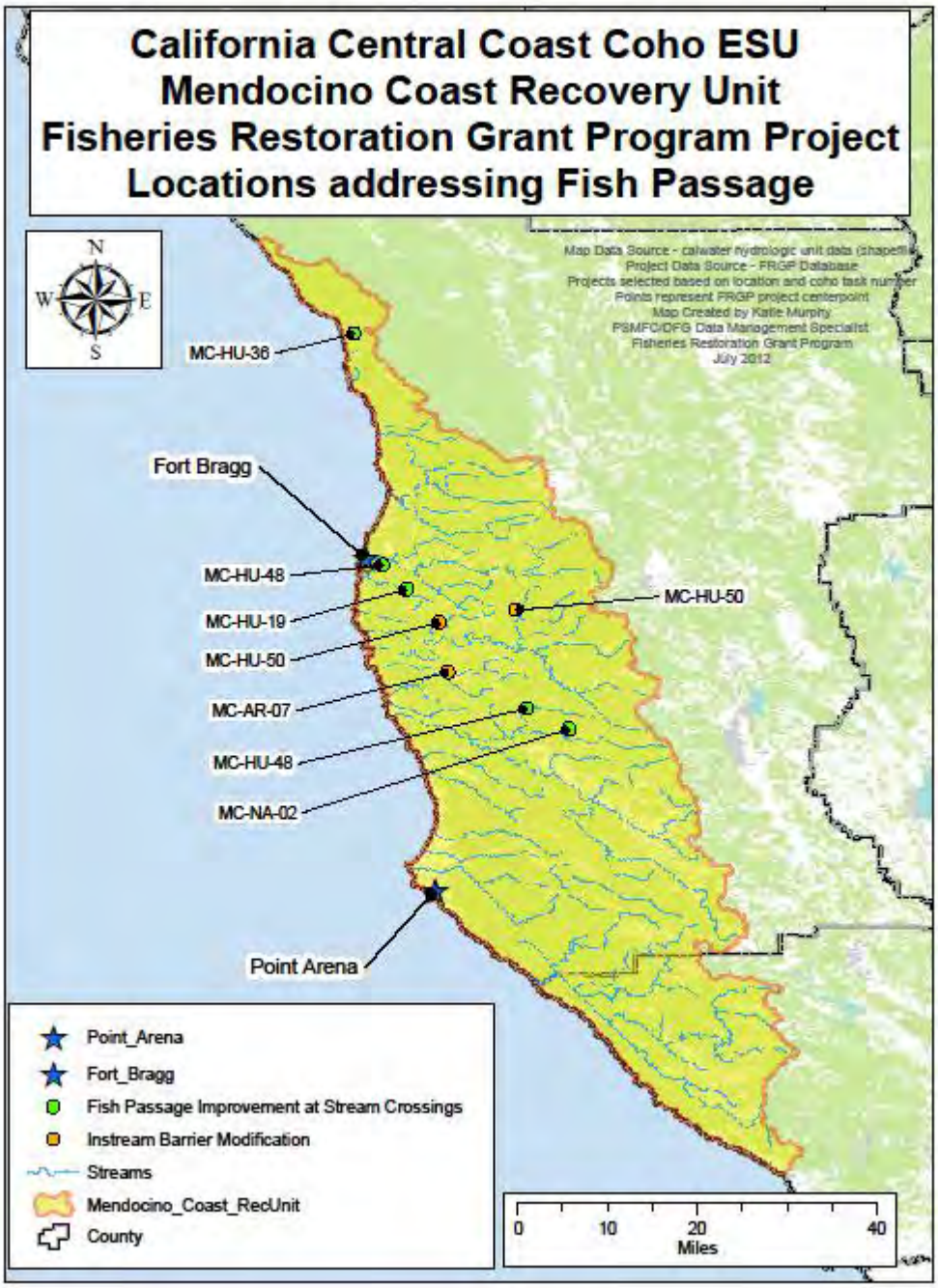
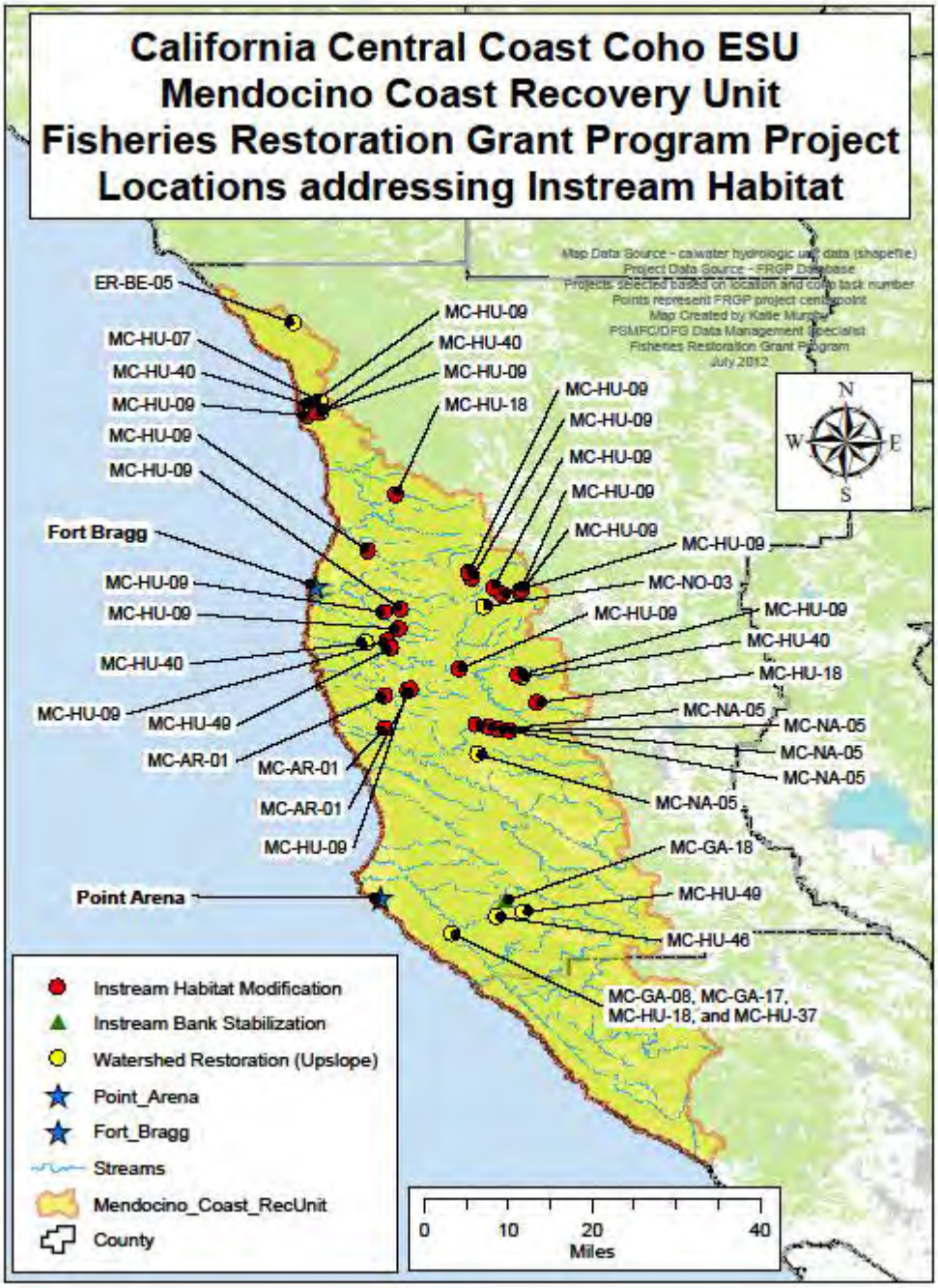
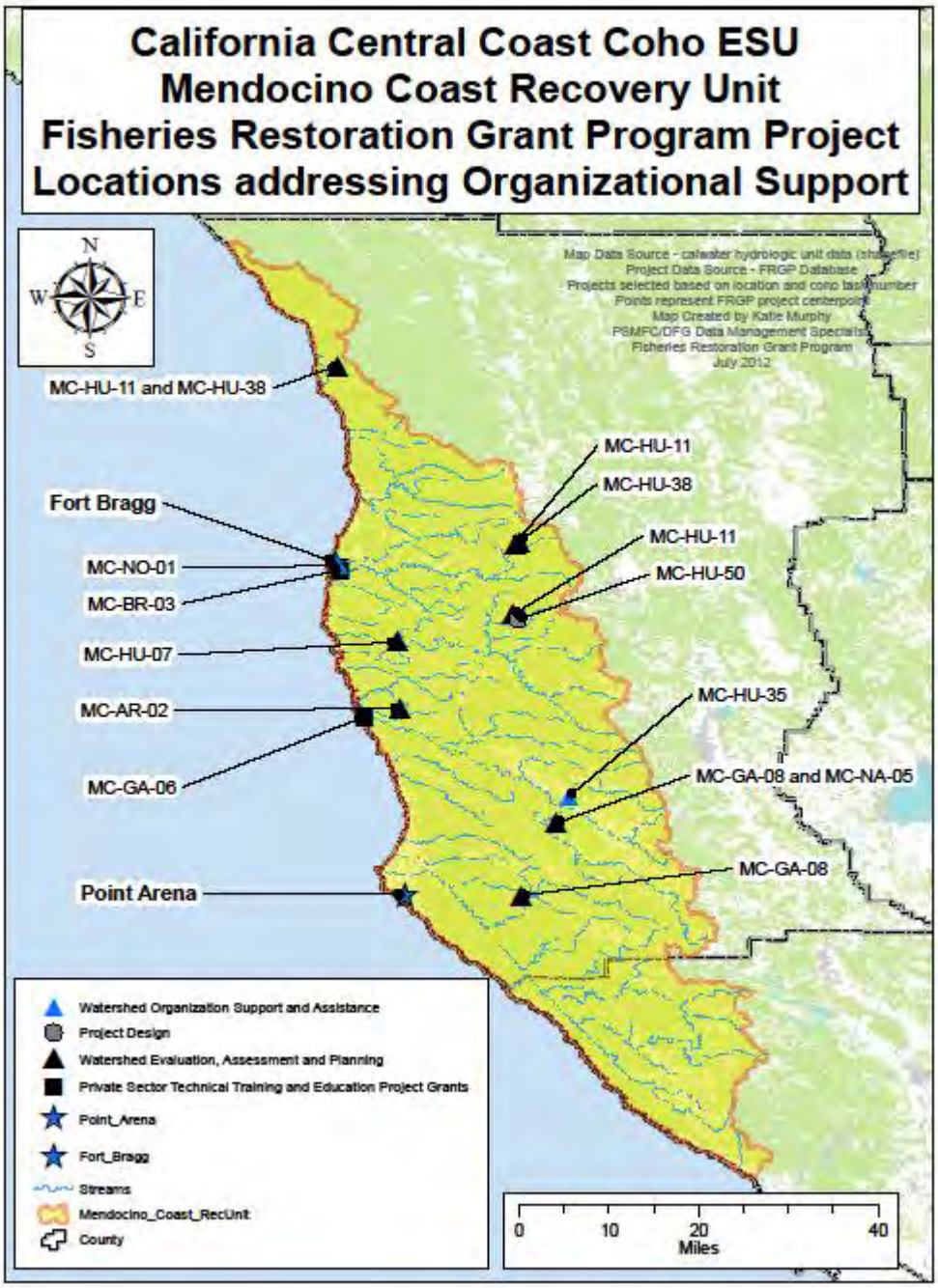


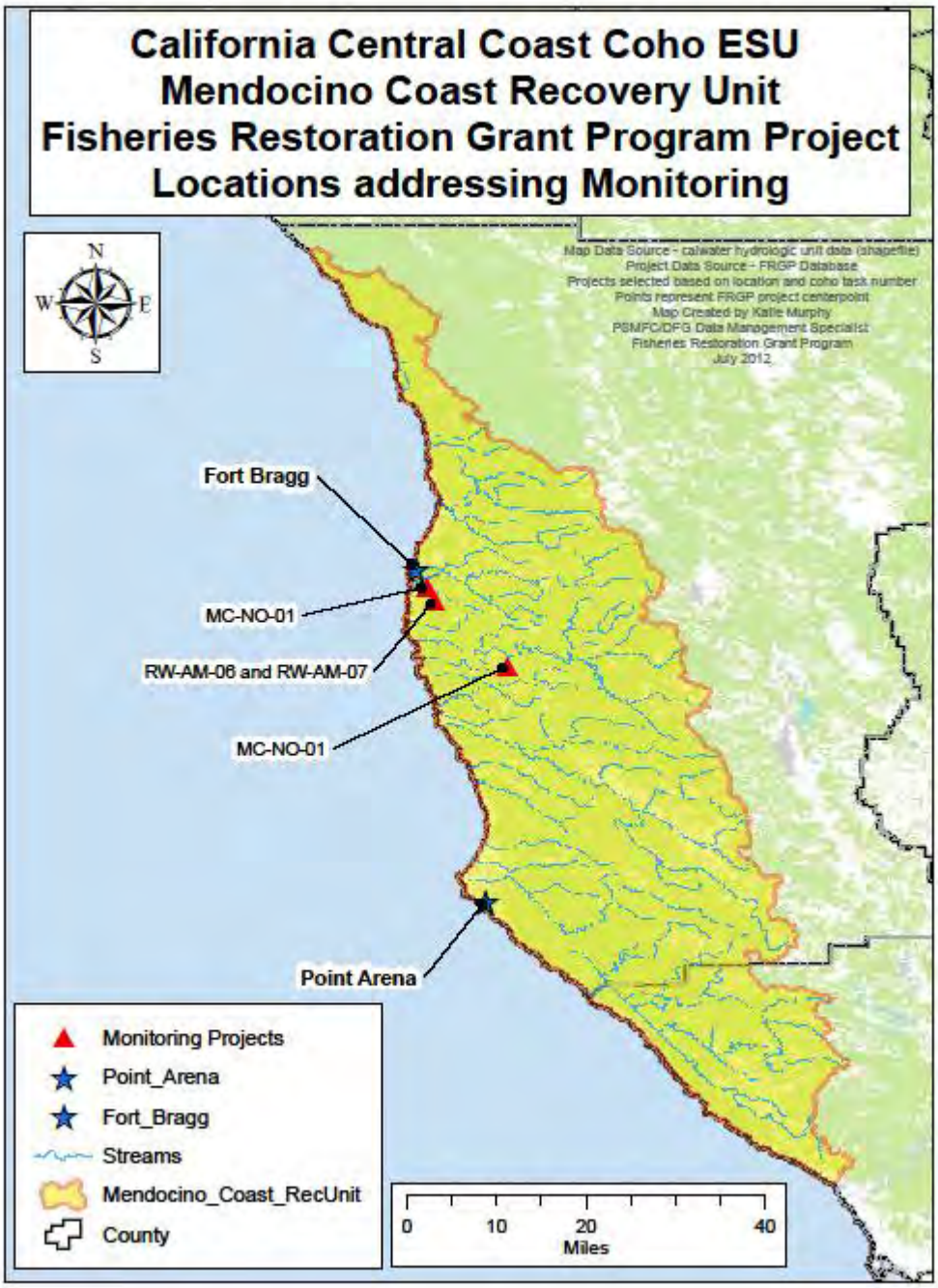
Appendix G (Continued) - Figure G18. Project locations in the Mendocino Coast Recovery Unit – Fish Passage projects



Appendix G (Continued) - Figure G19. Project locations in the Mendocino Coast Recovery Unit – Instream Habitat projects

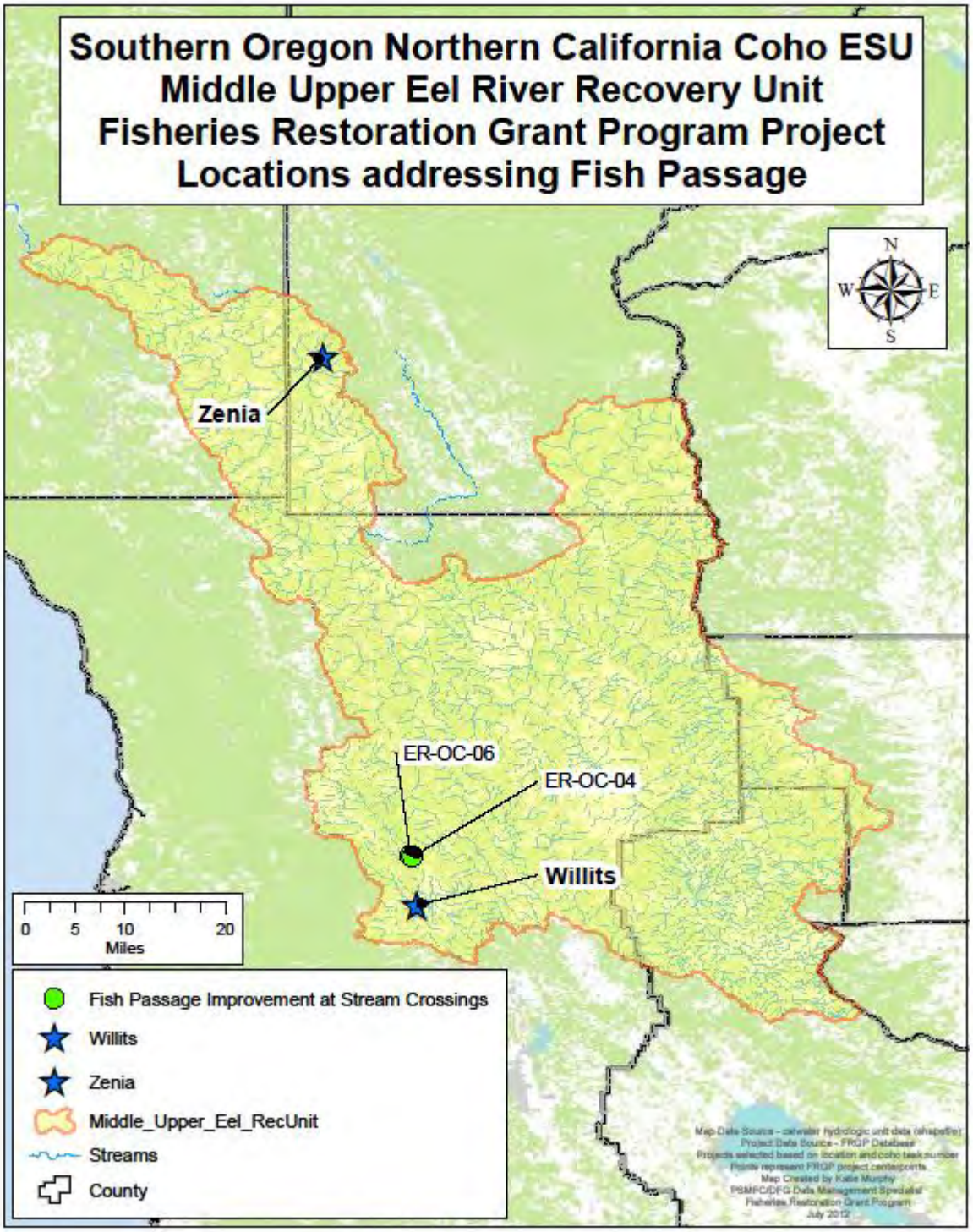


Appendix G (Continued) - Figure G20. Project locations in the Mendocino Coast Recovery Unit – Organizational Support projects

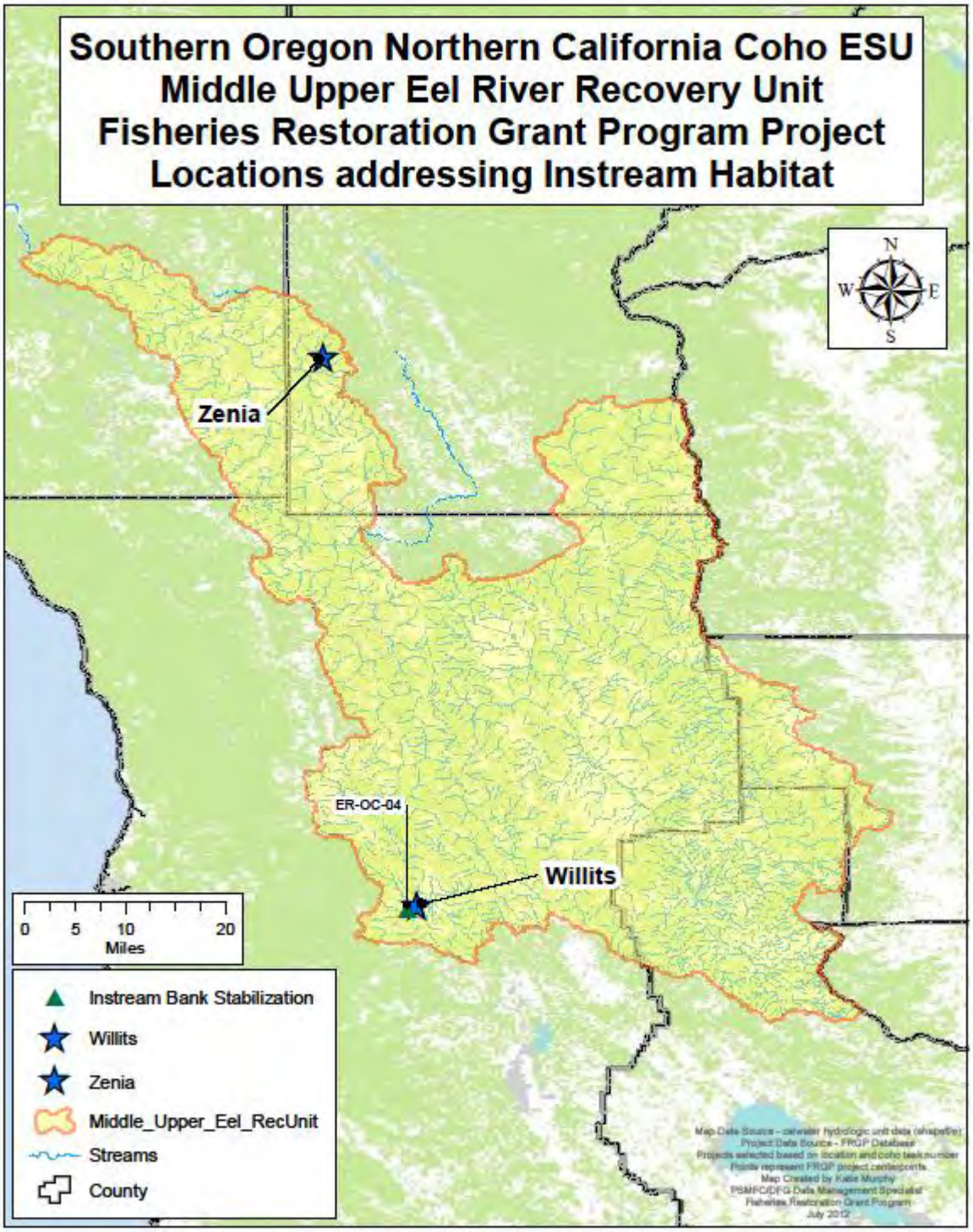


Appendix G (Continued) - Figure G21. Project locations in the Mendocino Coast Recovery Unit – Monitoring projects

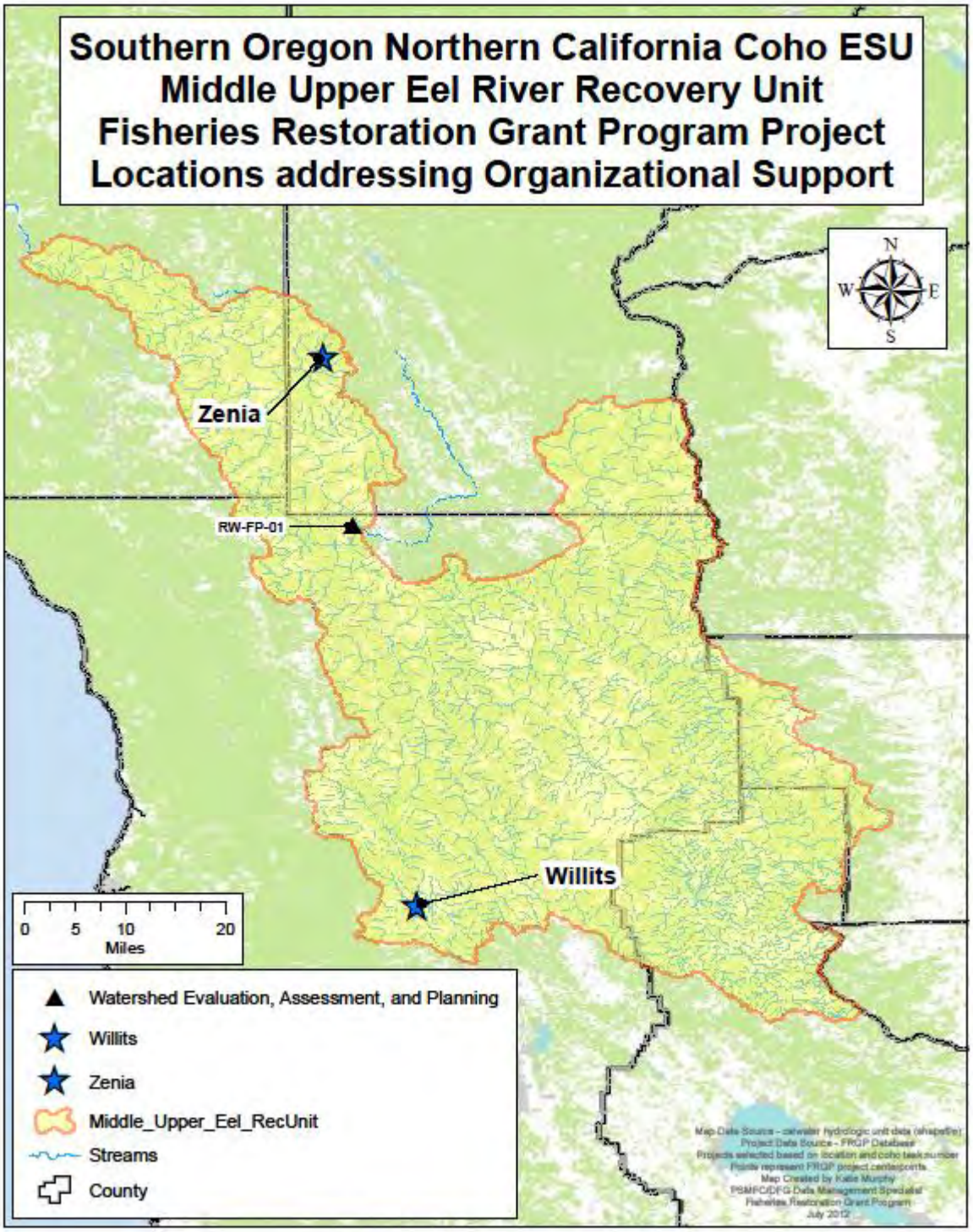
Appendix G (Continued) - Figure G22. Recovery Units in the Southern Oregon Northern California Coast ESU



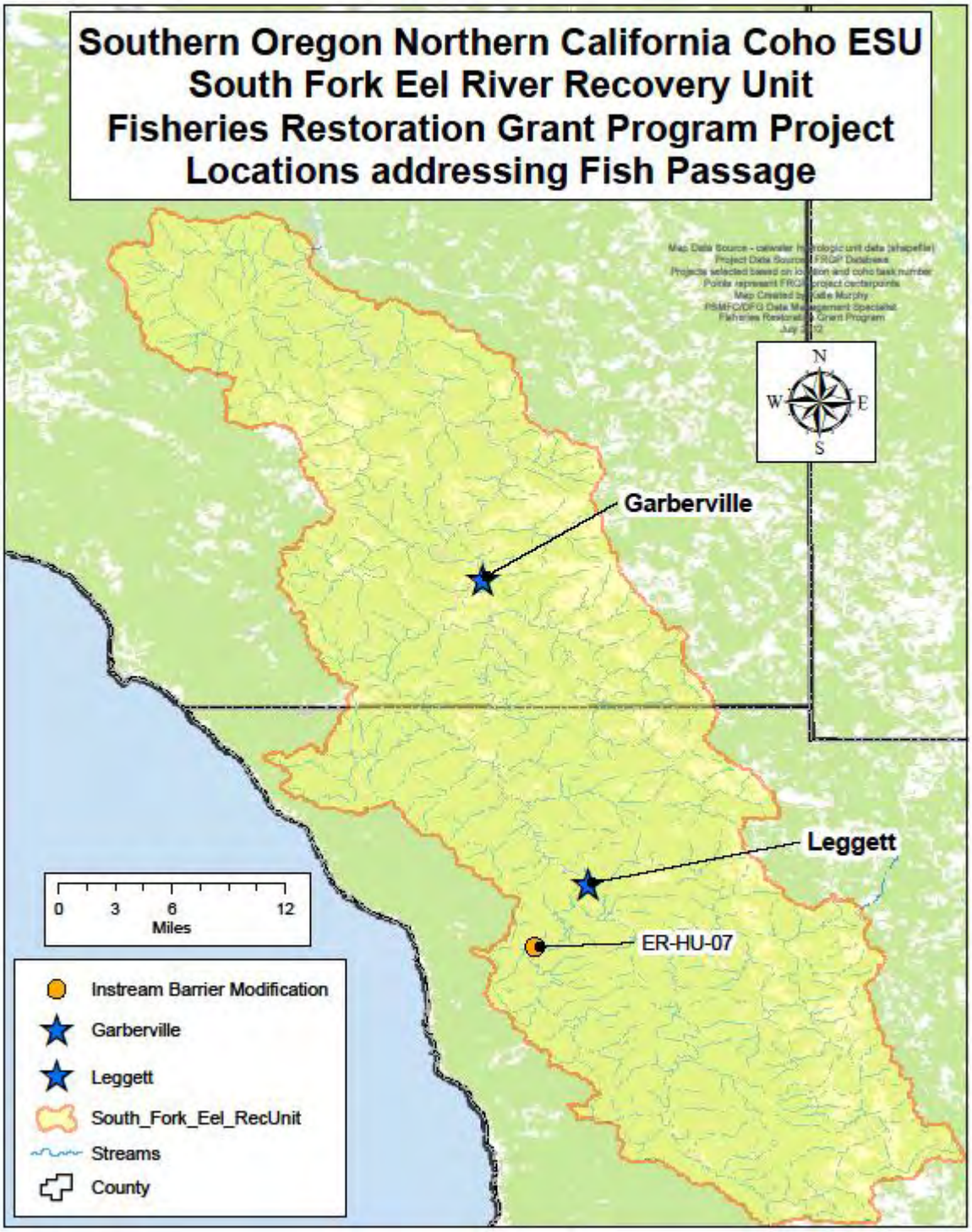
Appendix G (Continued) - Figure G23. Project locations in the Upper Middle Eel River Recovery Unit – Fish Passage Projects



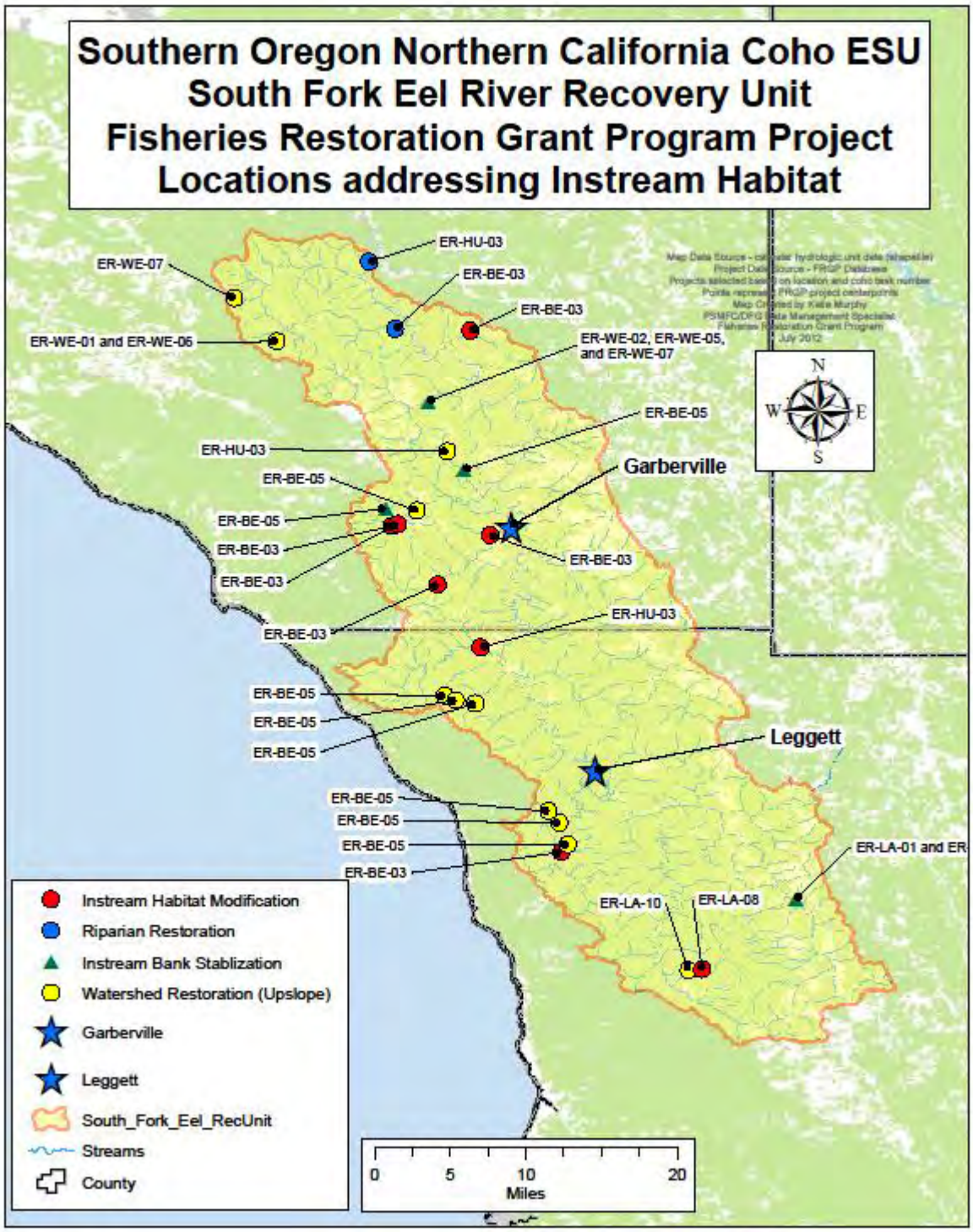
Appendix G (Continued) - Figure G24. Project locations in the Upper Middle Eel River Recovery Unit – Instream Habitat Projects



Appendix G (Continued) - Figure G25. Project locations in the Upper Middle Eel River Recovery Unit – Organizational Support projects

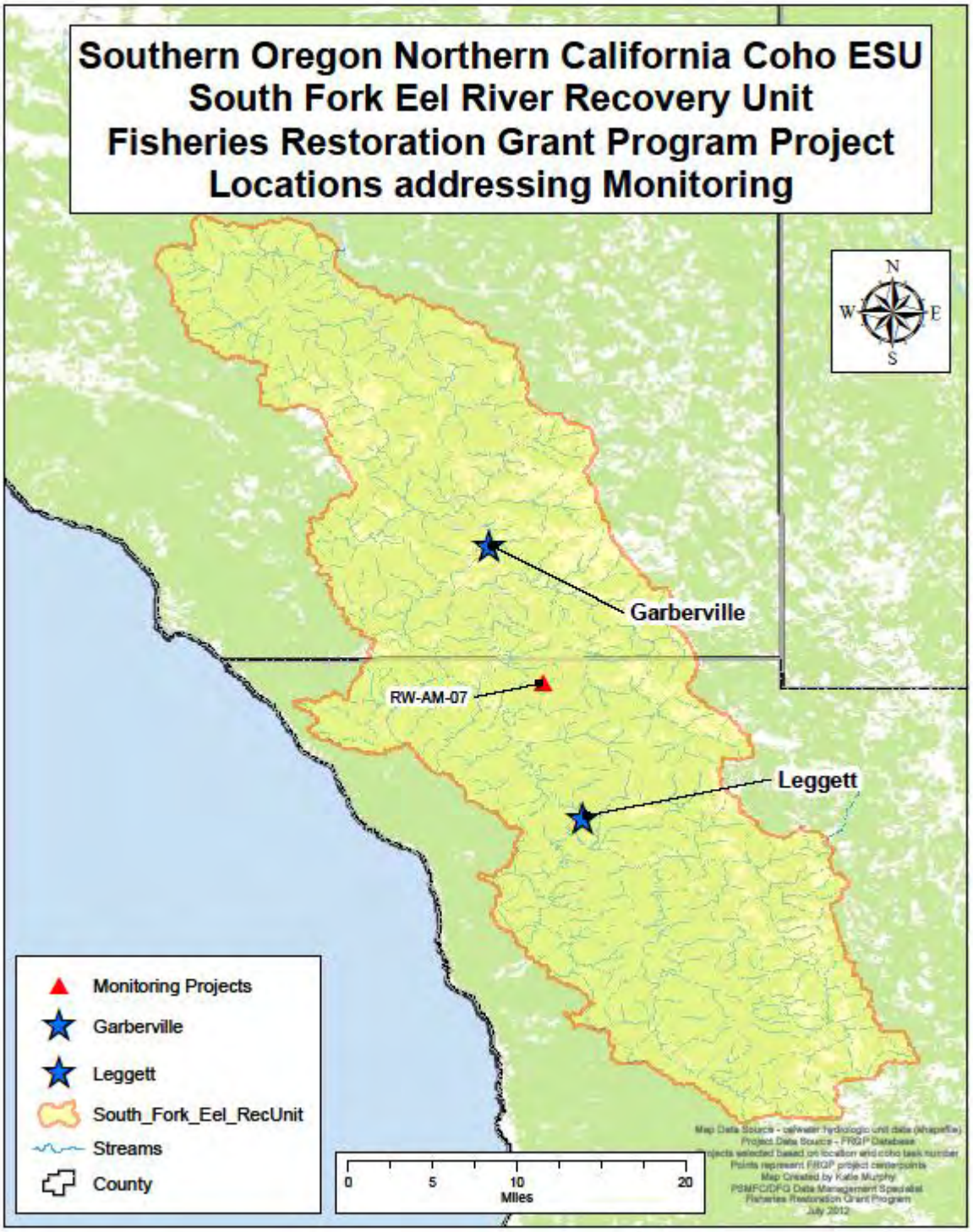


Appendix G (Continued) - Figure G26. Project locations in the South Fork Eel River Recovery Unit – Fish Passage projects

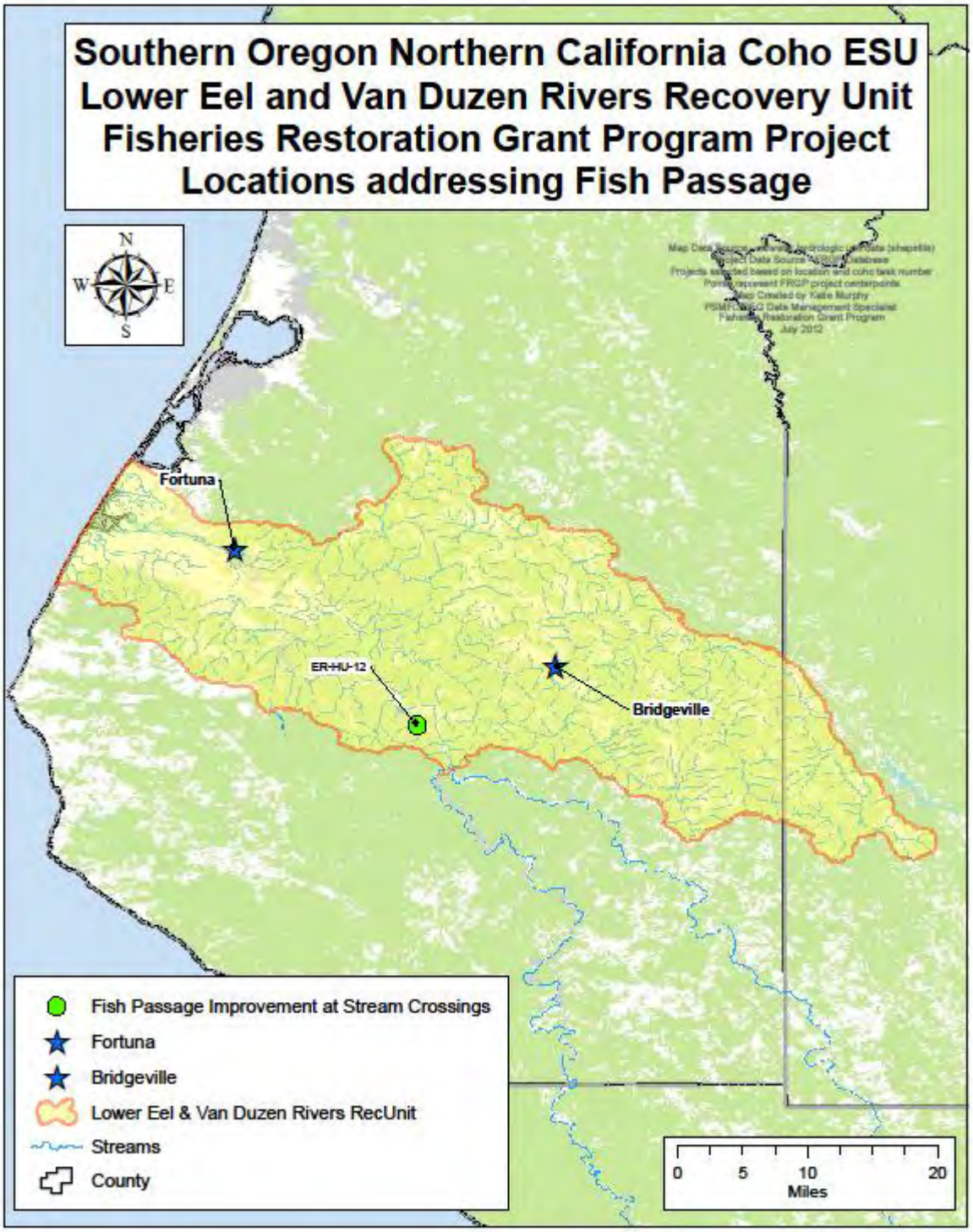


Appendix G (Continued) - Figure G27. Project locations in the South Fork Eel River Recovery Unit – Instream Habitat projects

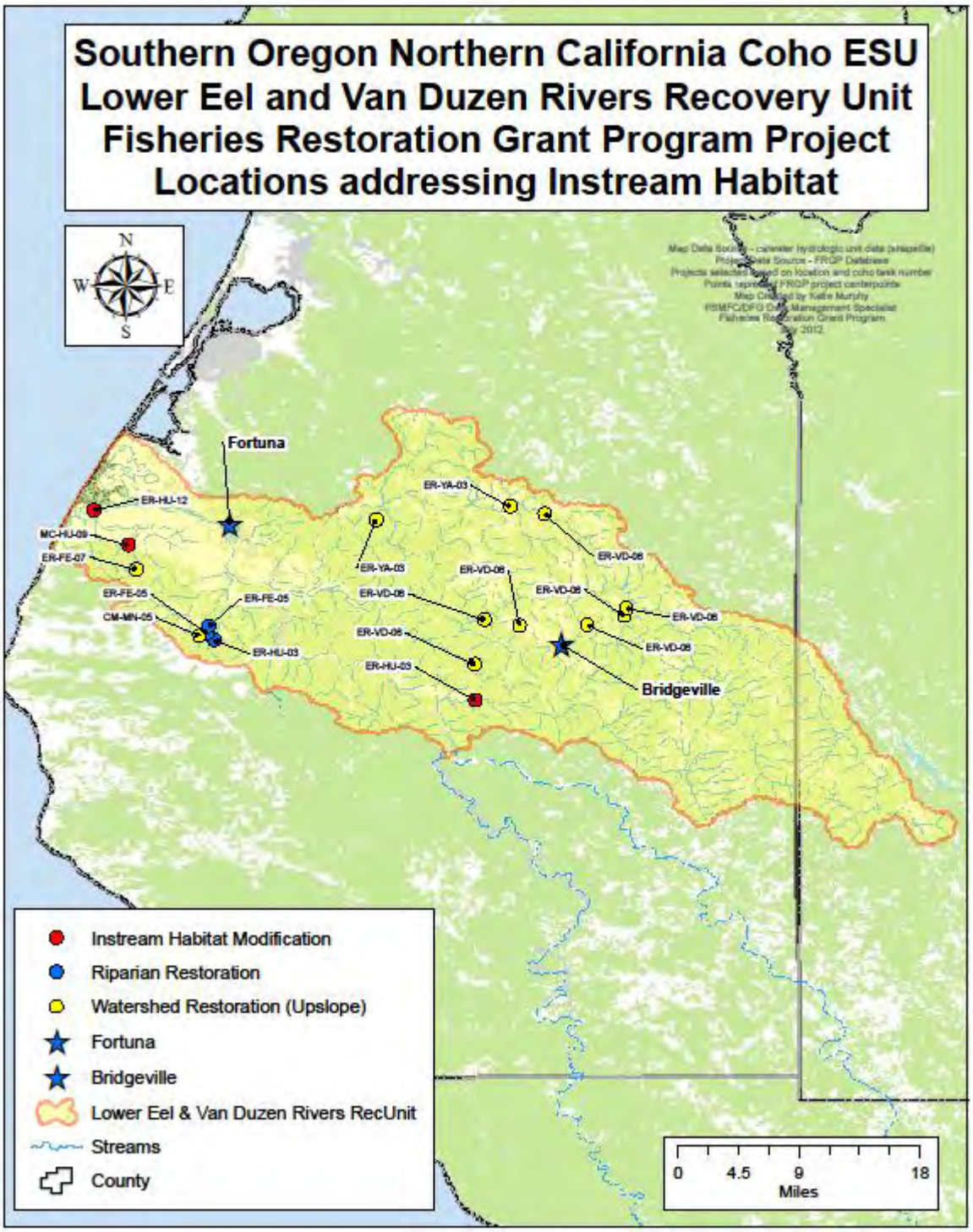
Appendix G (Continued) - Figure G28. Project locations in the South Fork Eel River Recovery Unit – Organizational Support projects



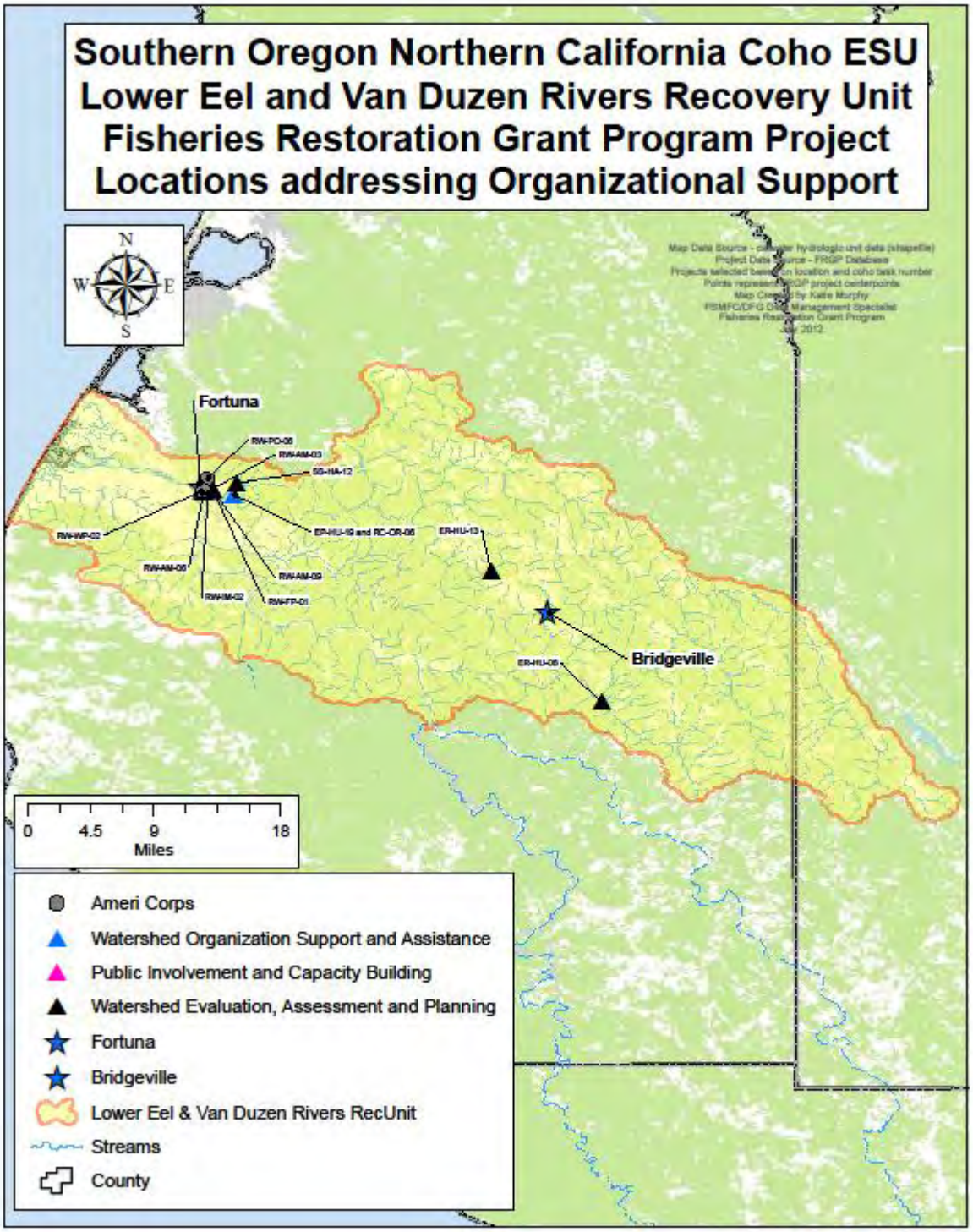
Appendix G (Continued) - Figure G29. Project locations in the South Fork Eel River Recovery Unit – Monitoring Projects



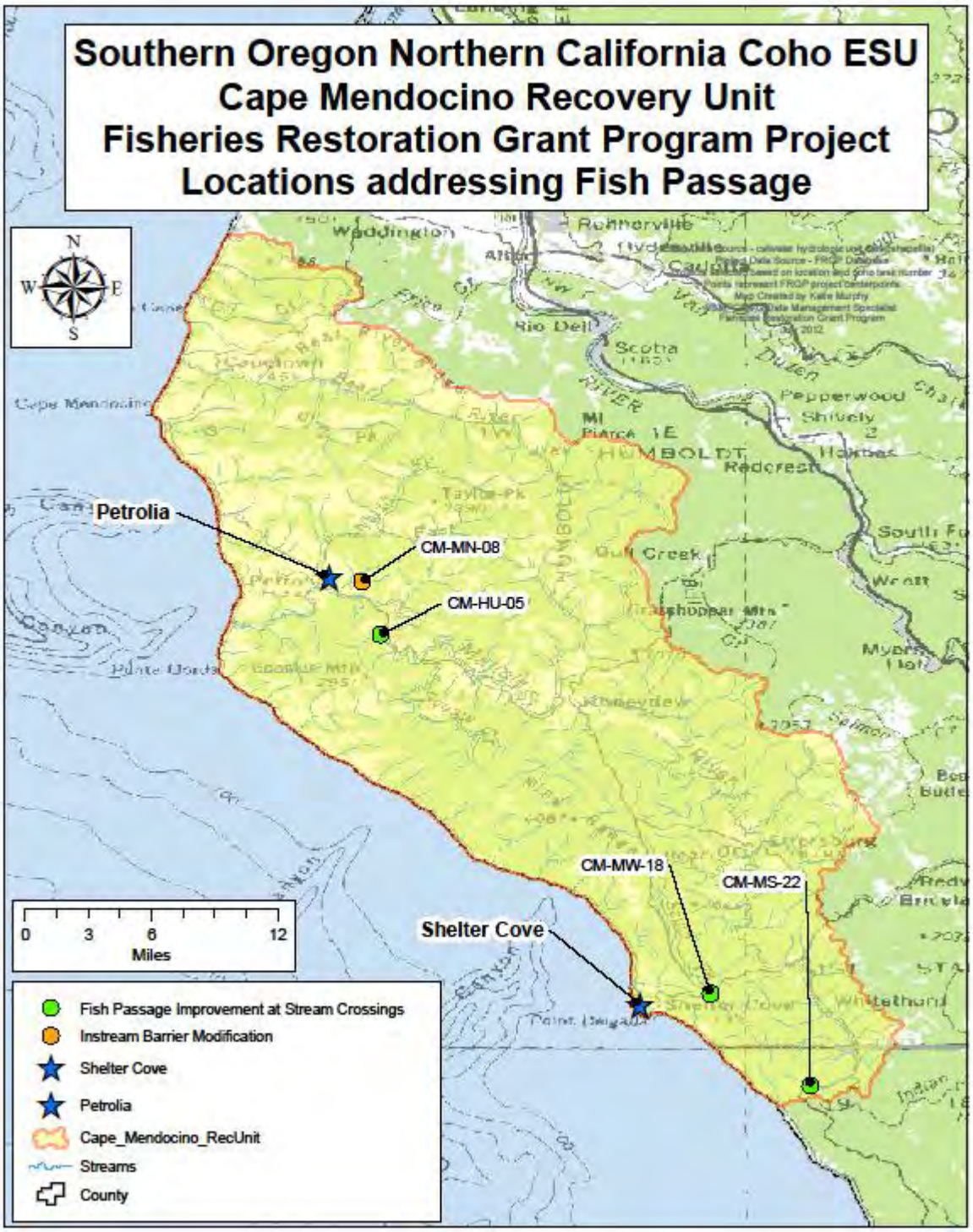
Appendix G (Continued) - Figure G30. Project locations in the Lower Eel/Van Duzen Rivers Recovery Unit – Fish Passage projects



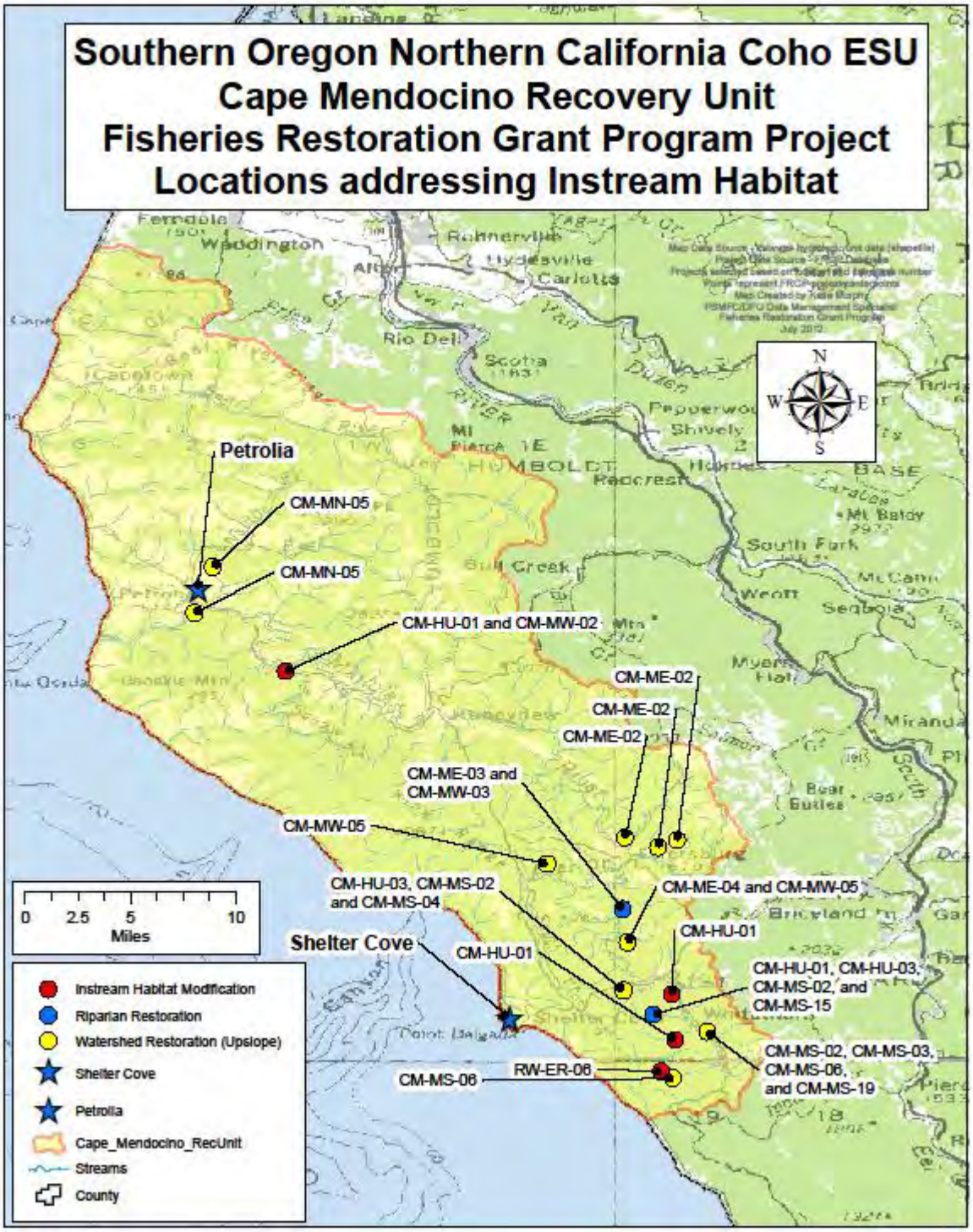
Appendix G (Continued) - Figure G31. Project locations in the Lower Eel/Van Duzen Rivers Recovery Unit – Instream Habitat projects



Appendix G (Continued) - Figure G32. Project locations in the Lower Eel/Van Duzen Rivers Recovery Unit – Organizational Support projects

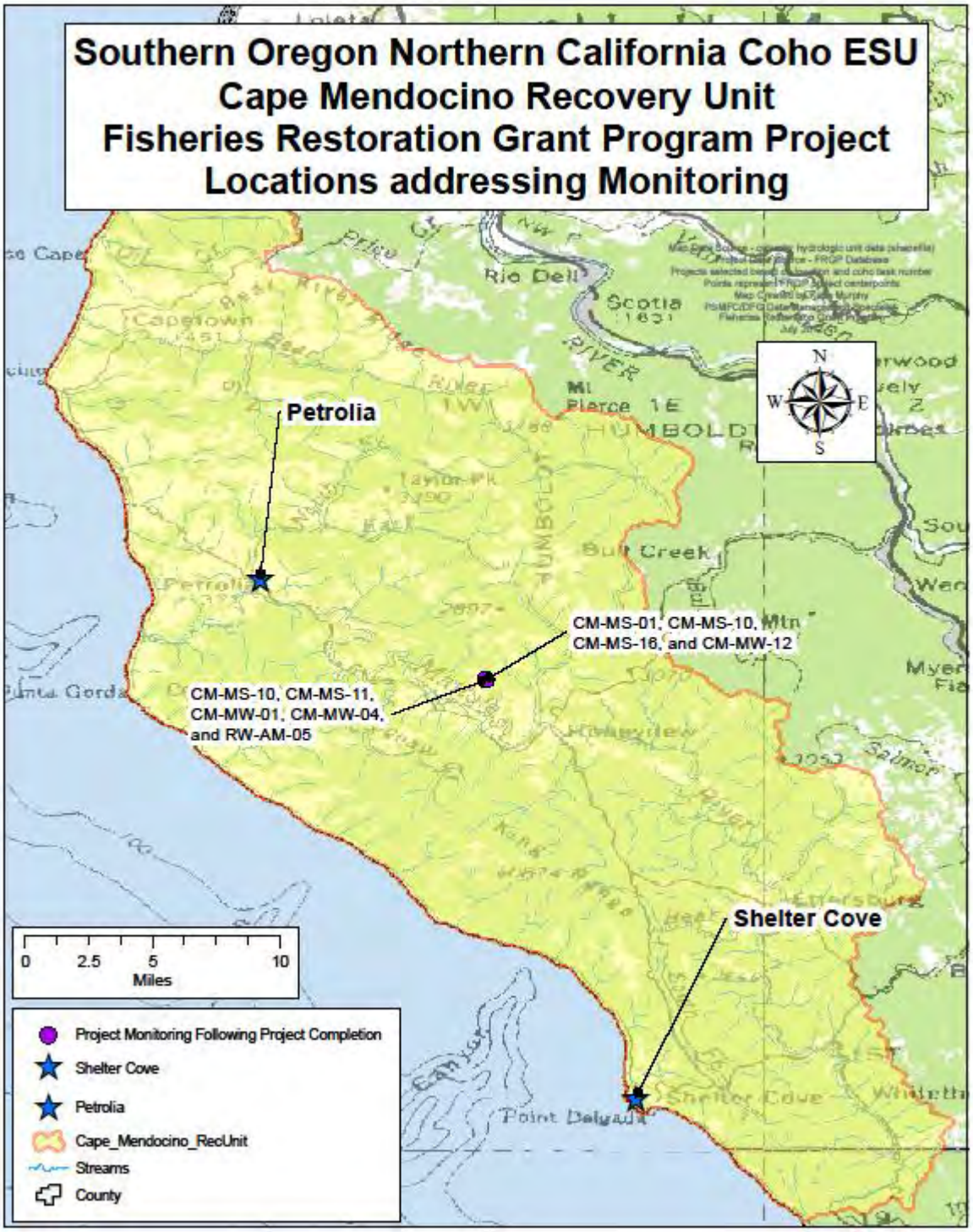


Appendix G (Continued) - Figure G33. Project locations in the Cape Mendocino Recovery Unit – Fish Passage projects

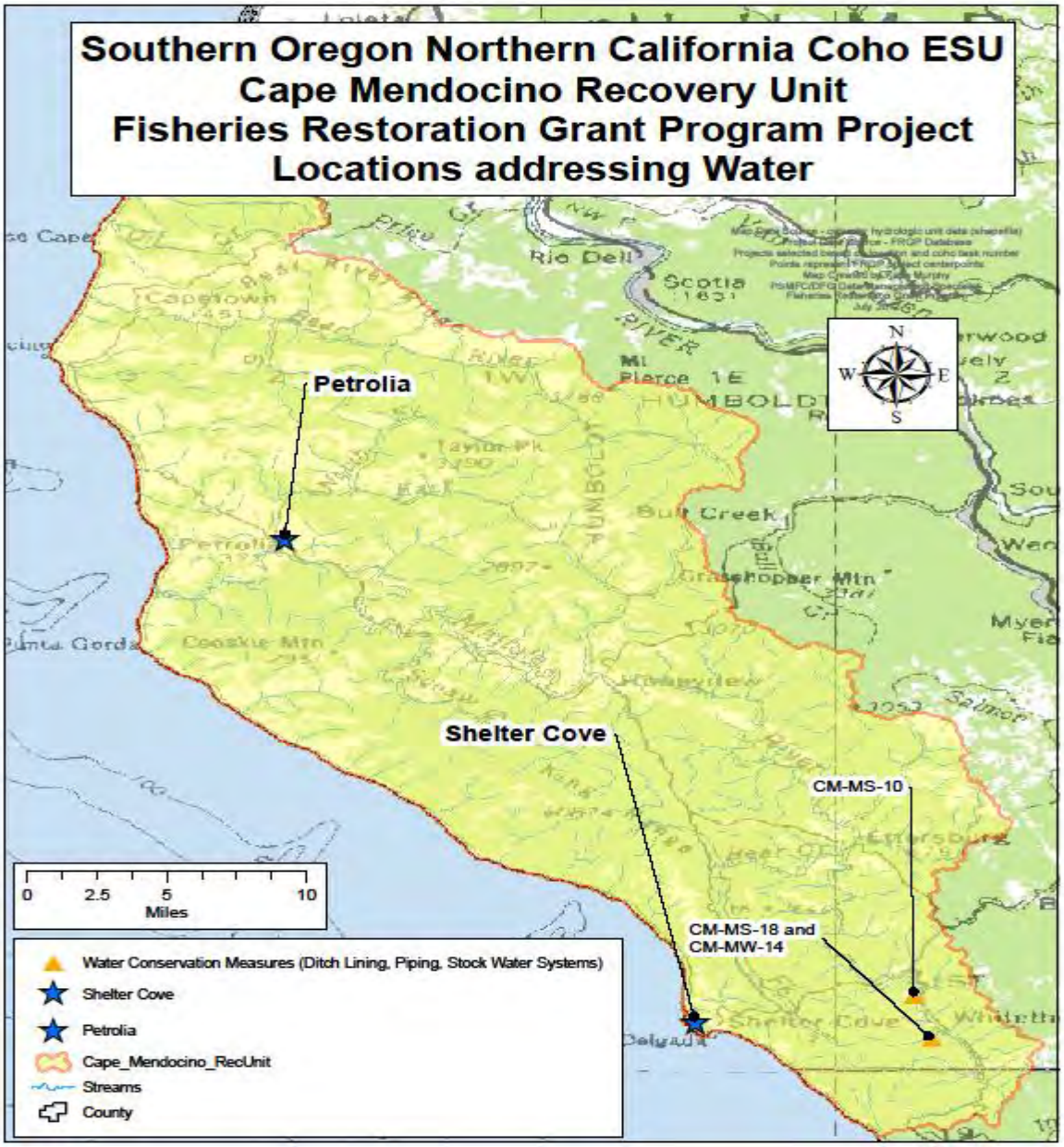


Appendix G (Continued) - Figure G34. Project locations in the Cape Mendocino Recovery Unit – Instream Habitat projects

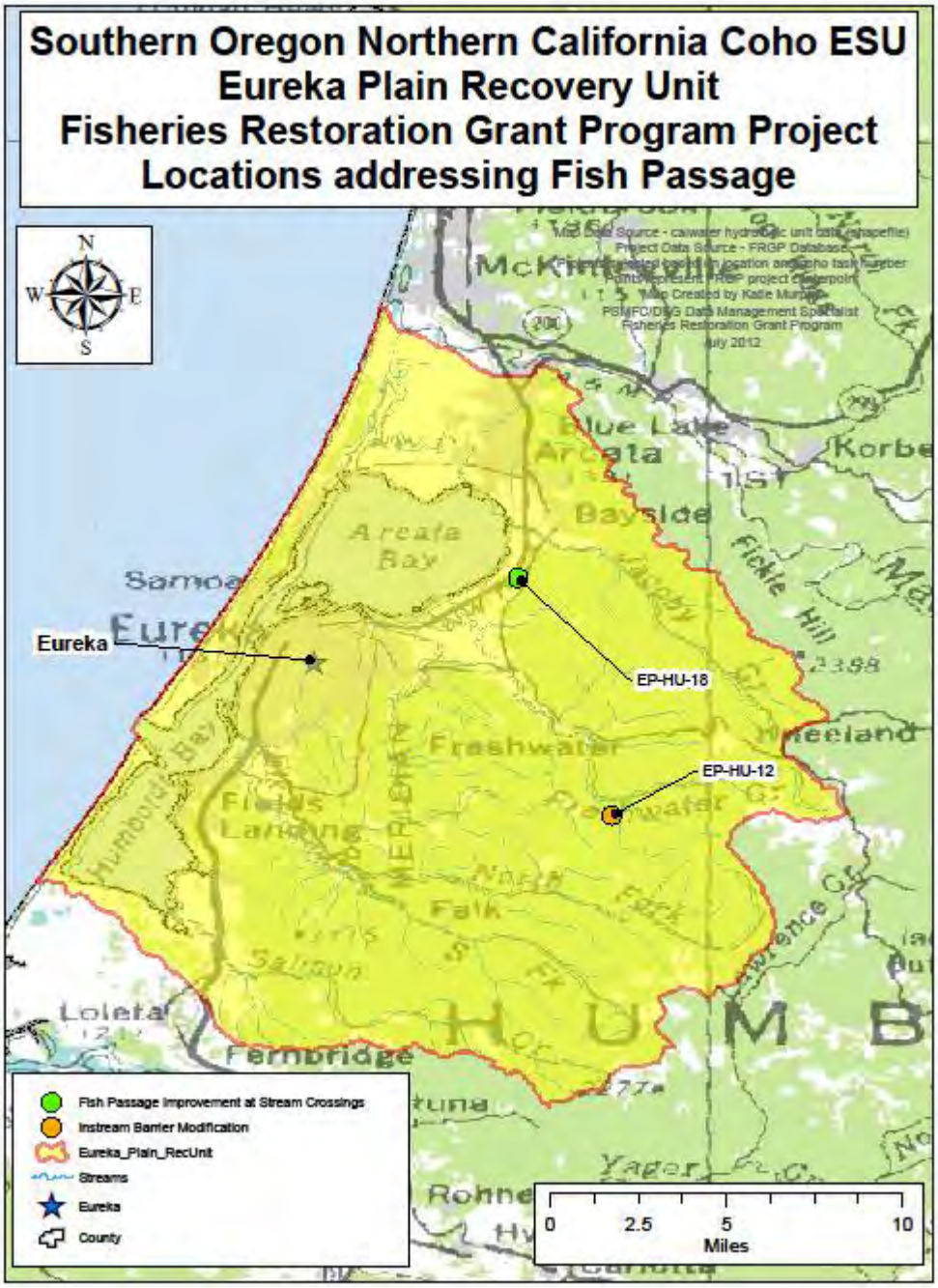
Appendix G (Continued) - Figure G35. Project locations in the Cape Mendocino Recovery Unit – Organizational Support projects



Appendix G (Continued) - Figure G36. Project locations in the Cape Mendocino Recovery Unit – Monitoring projects.

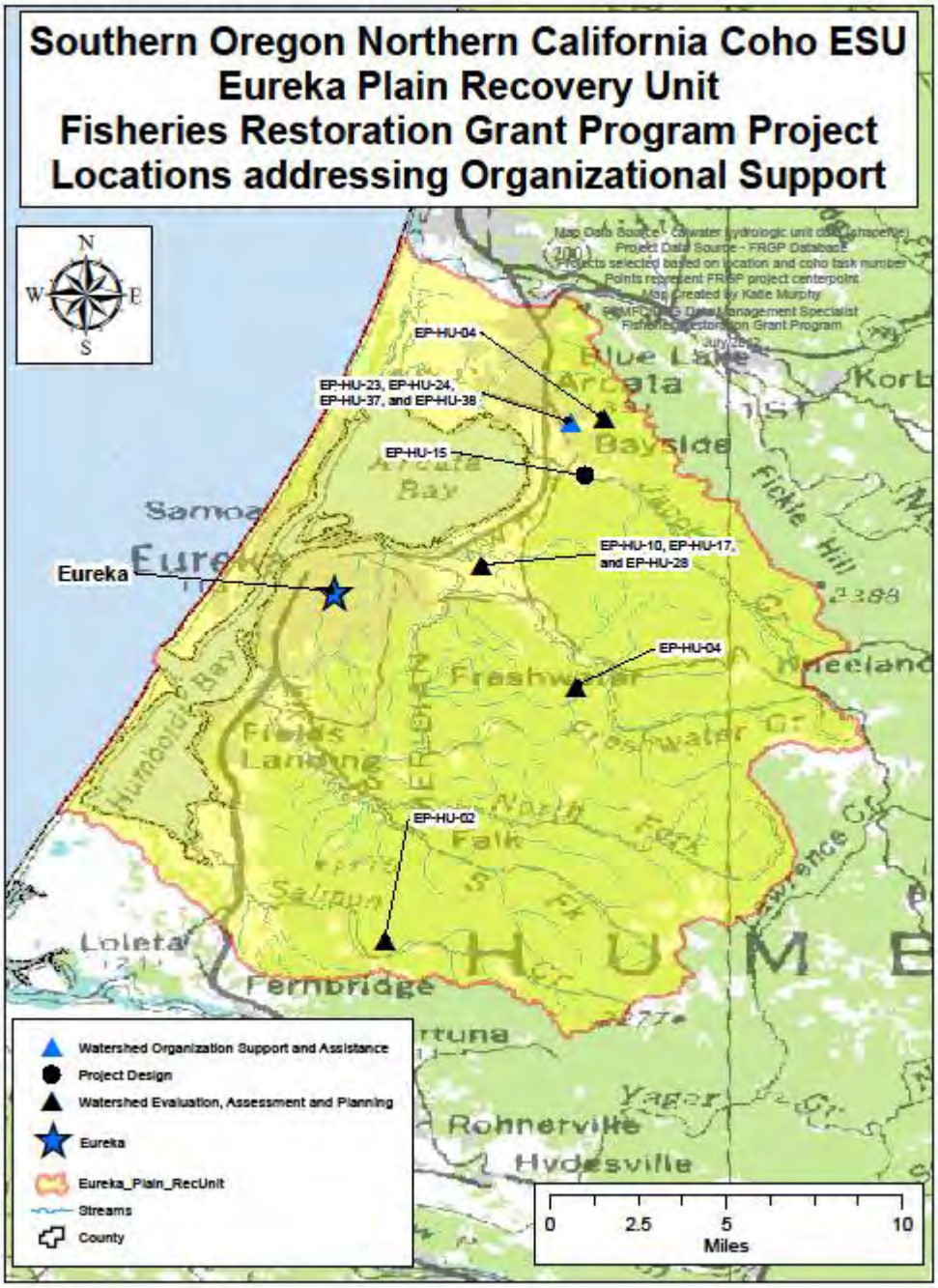


Appendix G (Continued) - Figure G37. Project locations in the Cape Mendocino Recovery Unit – Water projects.

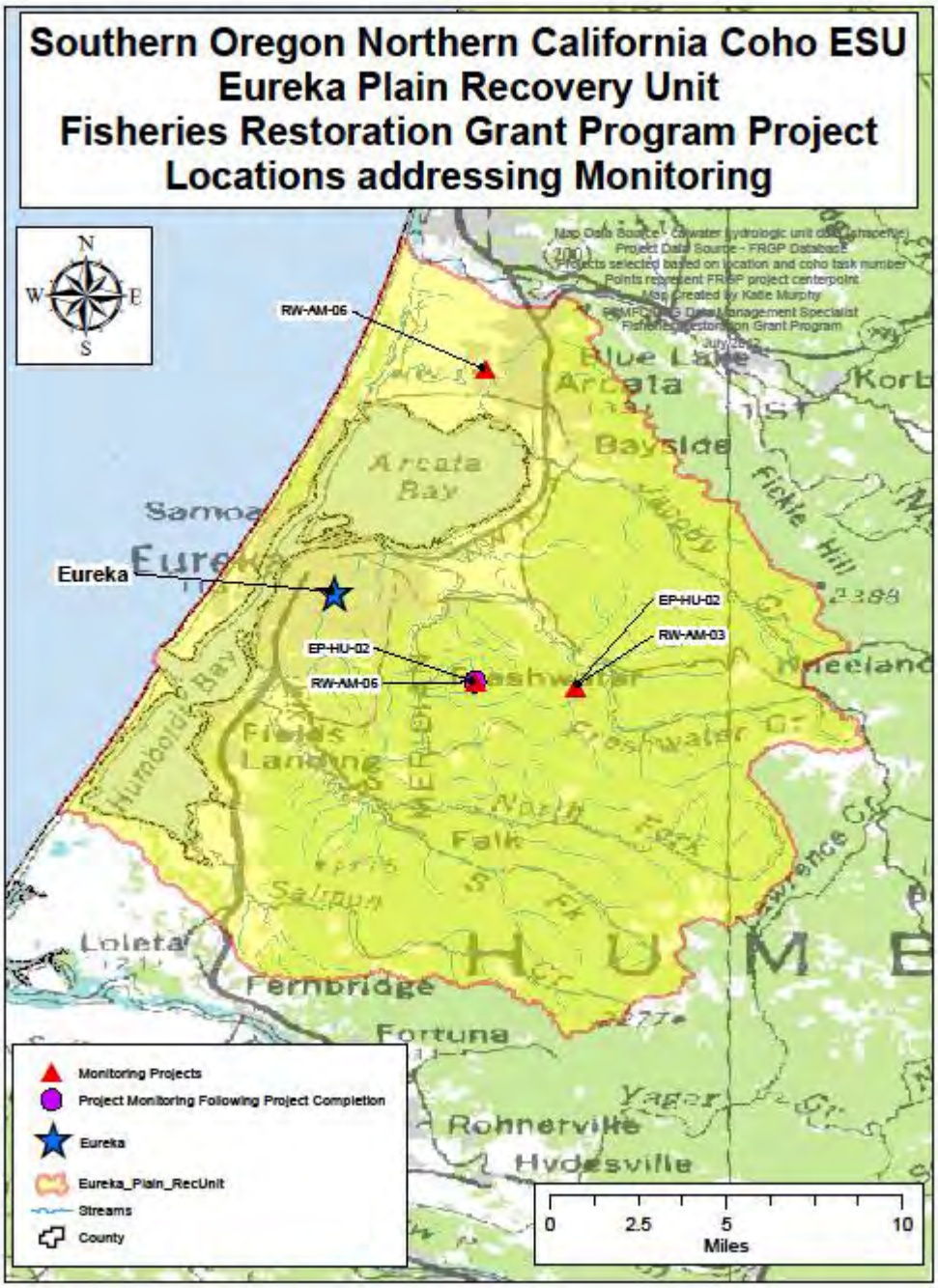


Appendix G (Continued) - Figure G38. Project locations in the Eureka Plain Recovery Unit – Fish Passage projects

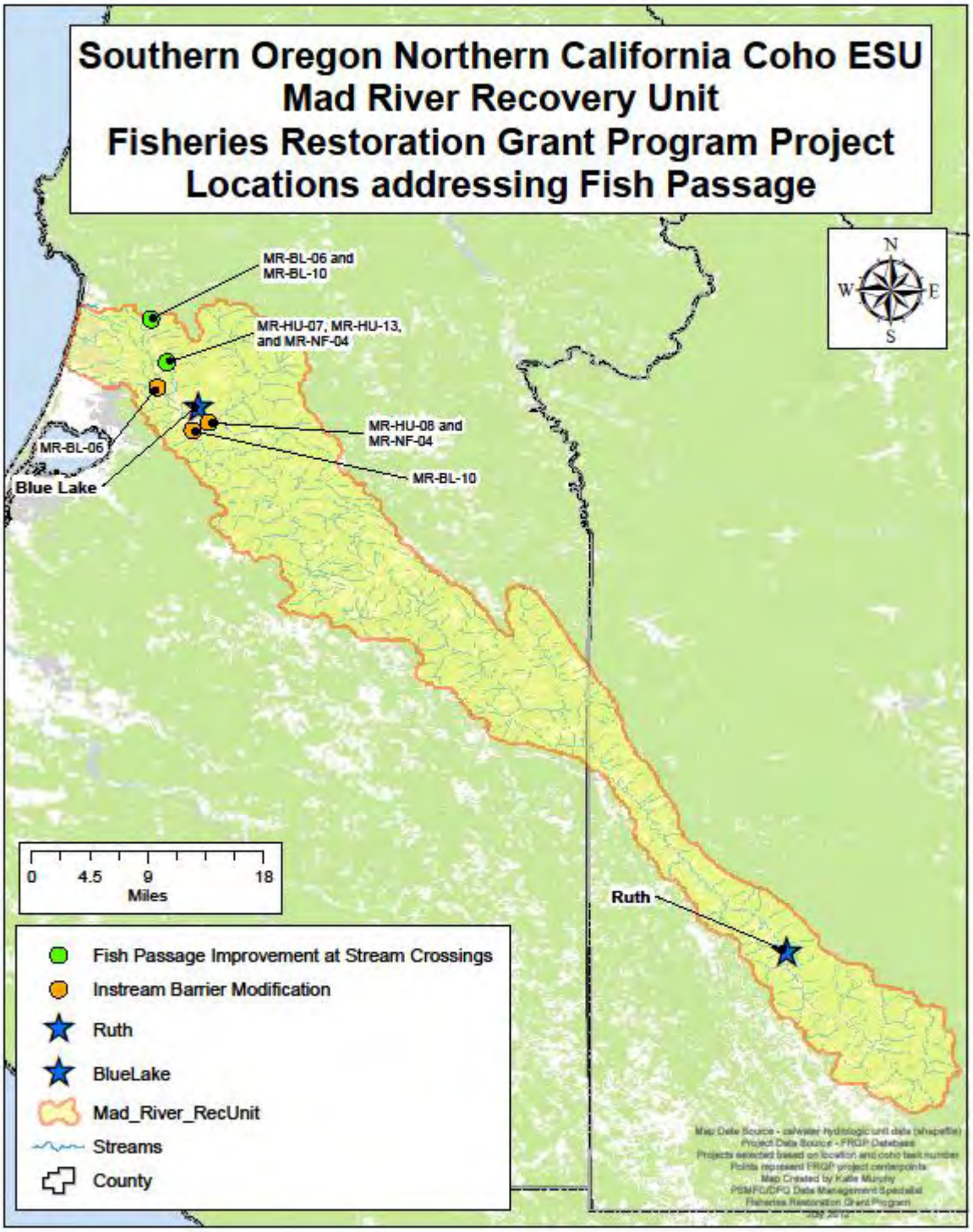
Appendix G (Continued) - Figure G39. Project locations in the Eureka Plain Recovery Unit – Instream Habitat projects



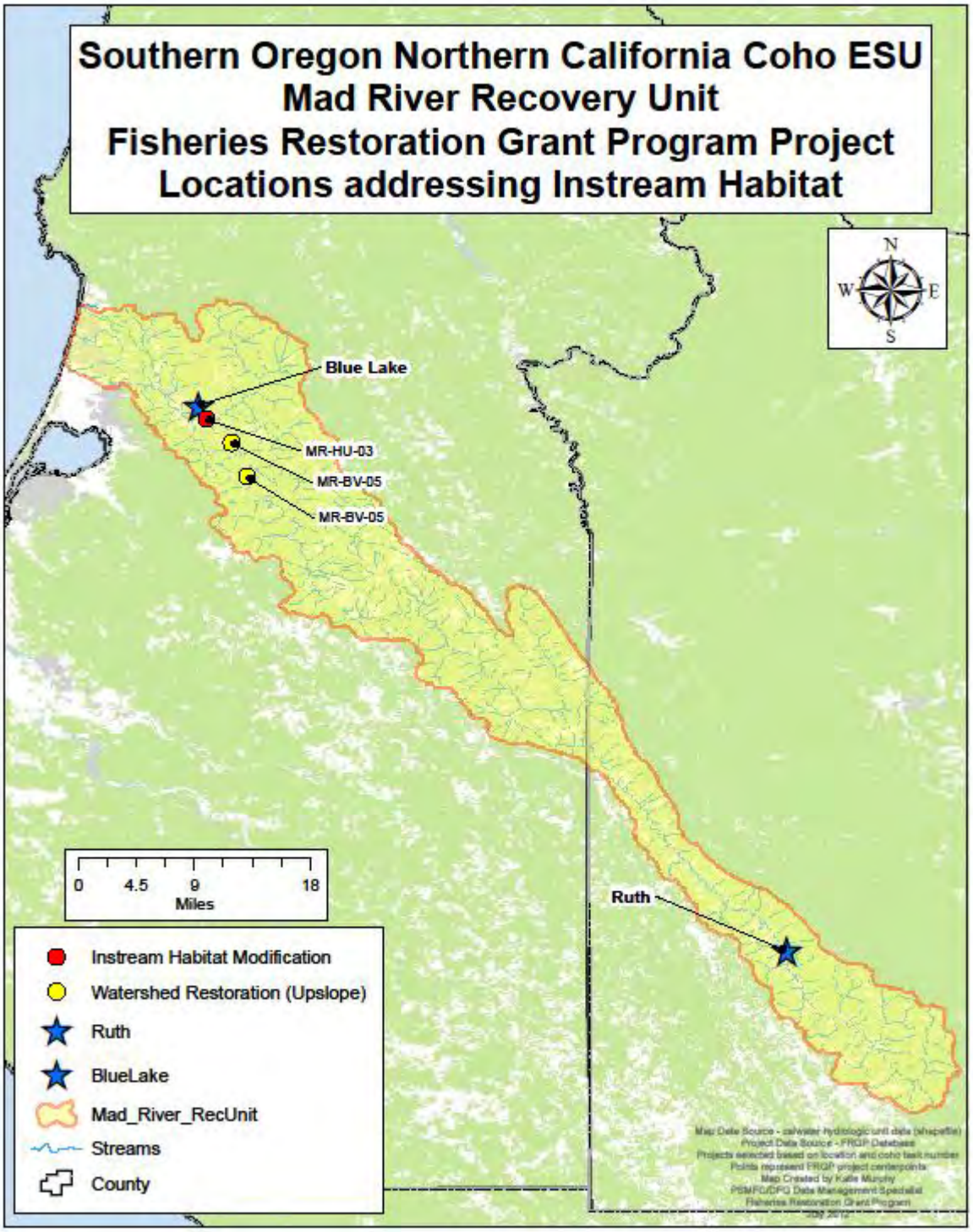
Appendix G (Continued) - Figure G 40. Project locations in the Eureka Plain Recovery Unit – Organizational Support projects



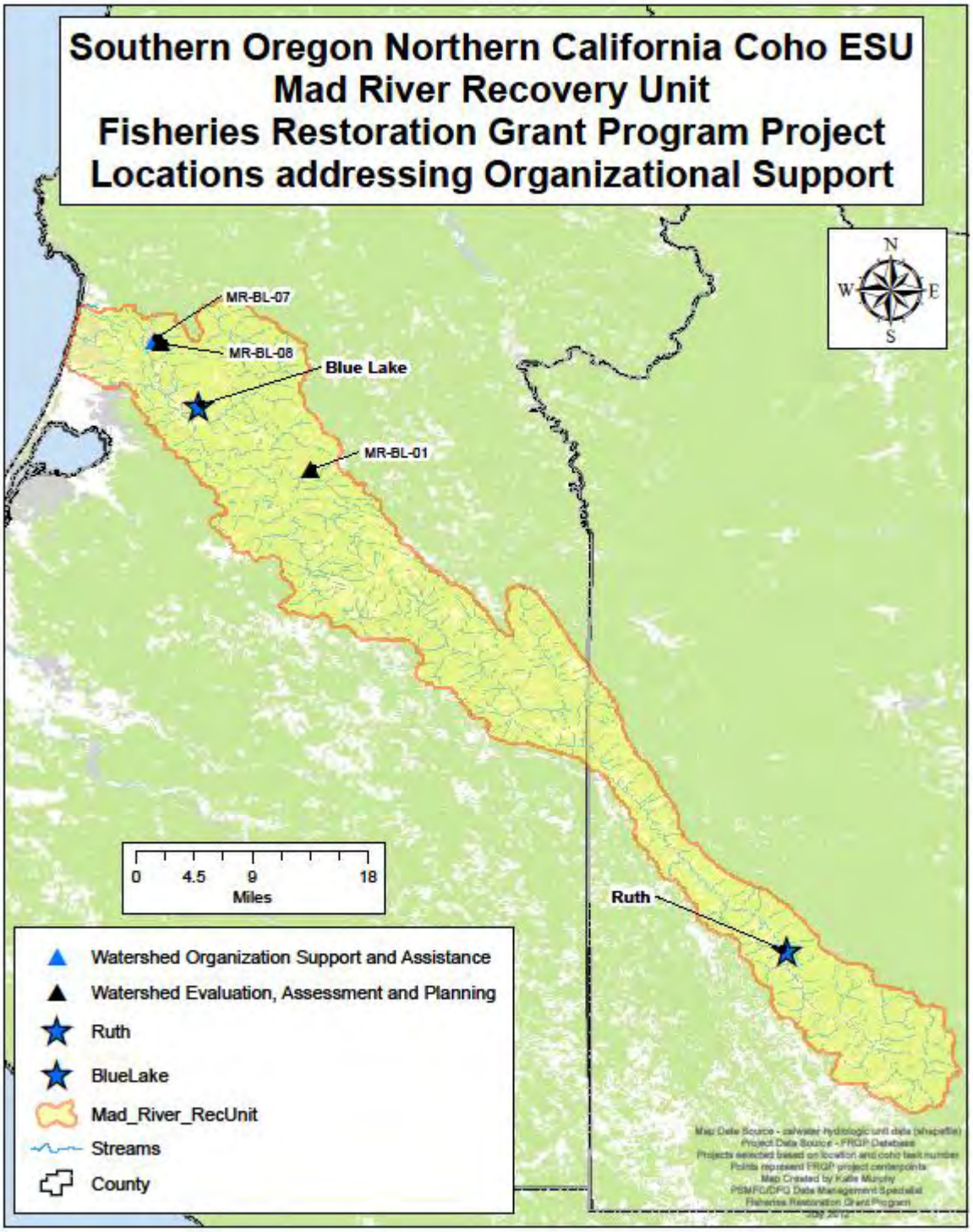
Appendix G (Continued) - Figure G41. Project locations in the Eureka Plain Recovery Unit – Monitoring projects



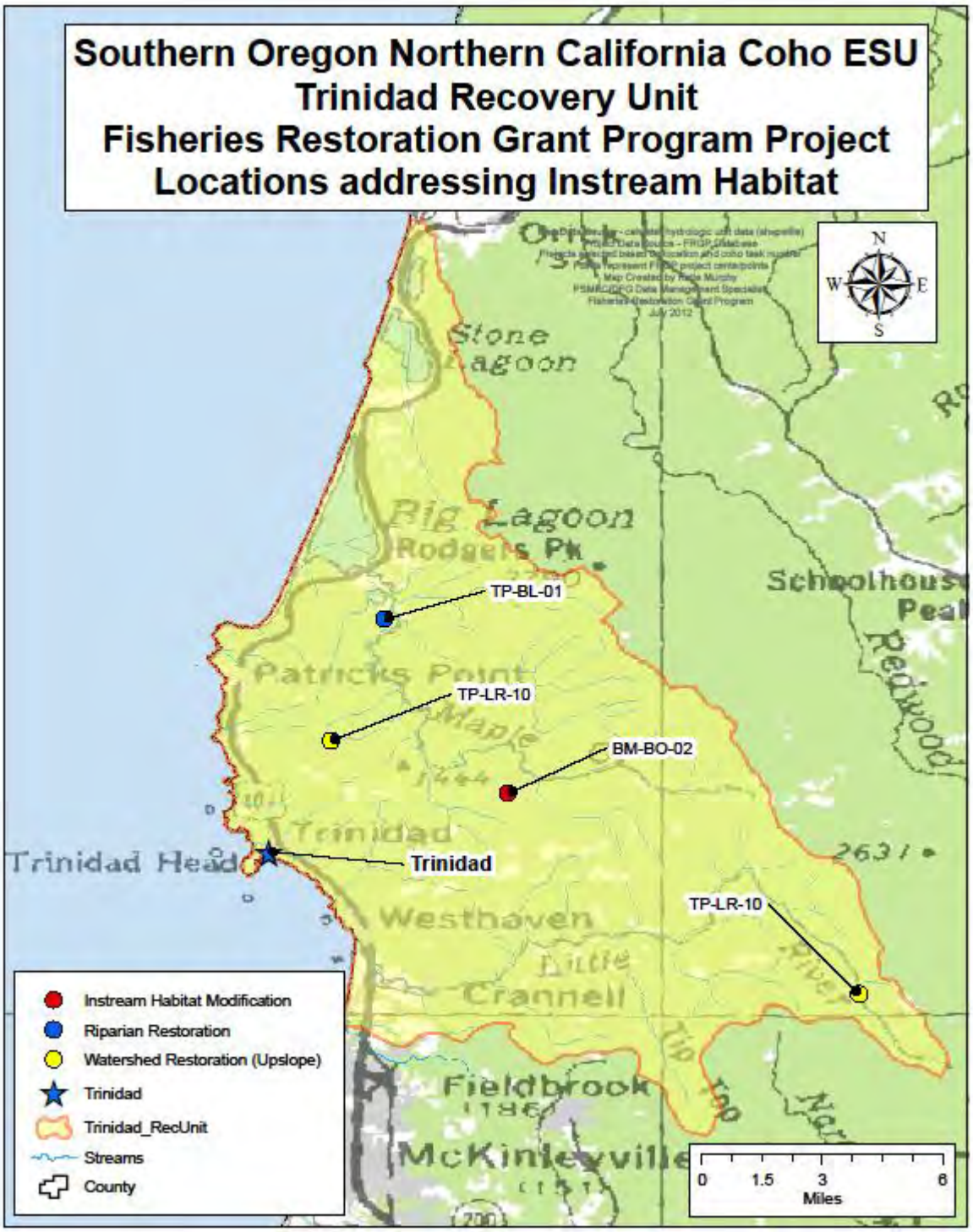
Appendix G (Continued) - Figure G42. Project locations in the Mad River Recovery Unit – Fish Passage projects



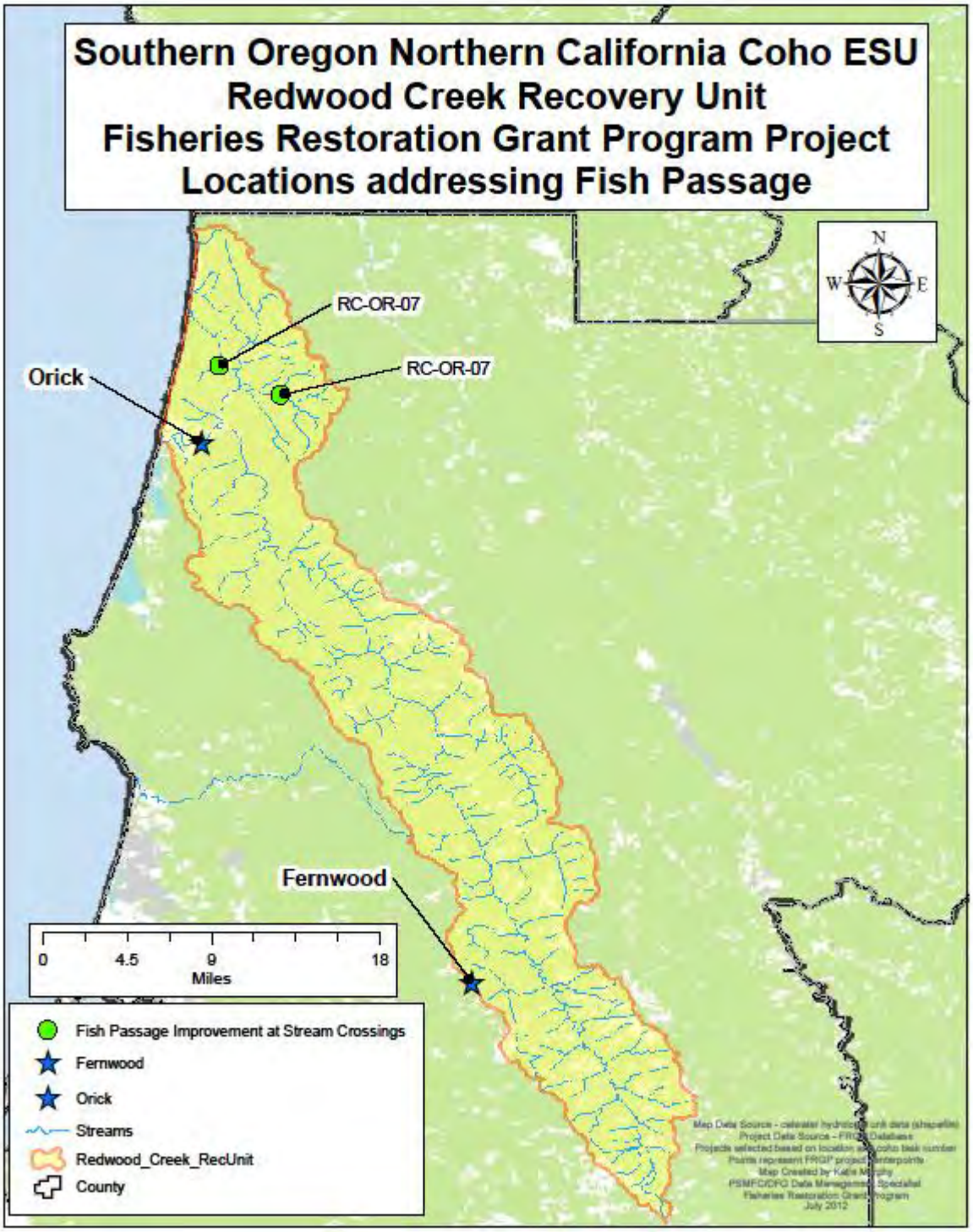
Appendix G (Continued) - Figure G43. Project locations in the Mad River Recovery Unit– Instream Habitat projects



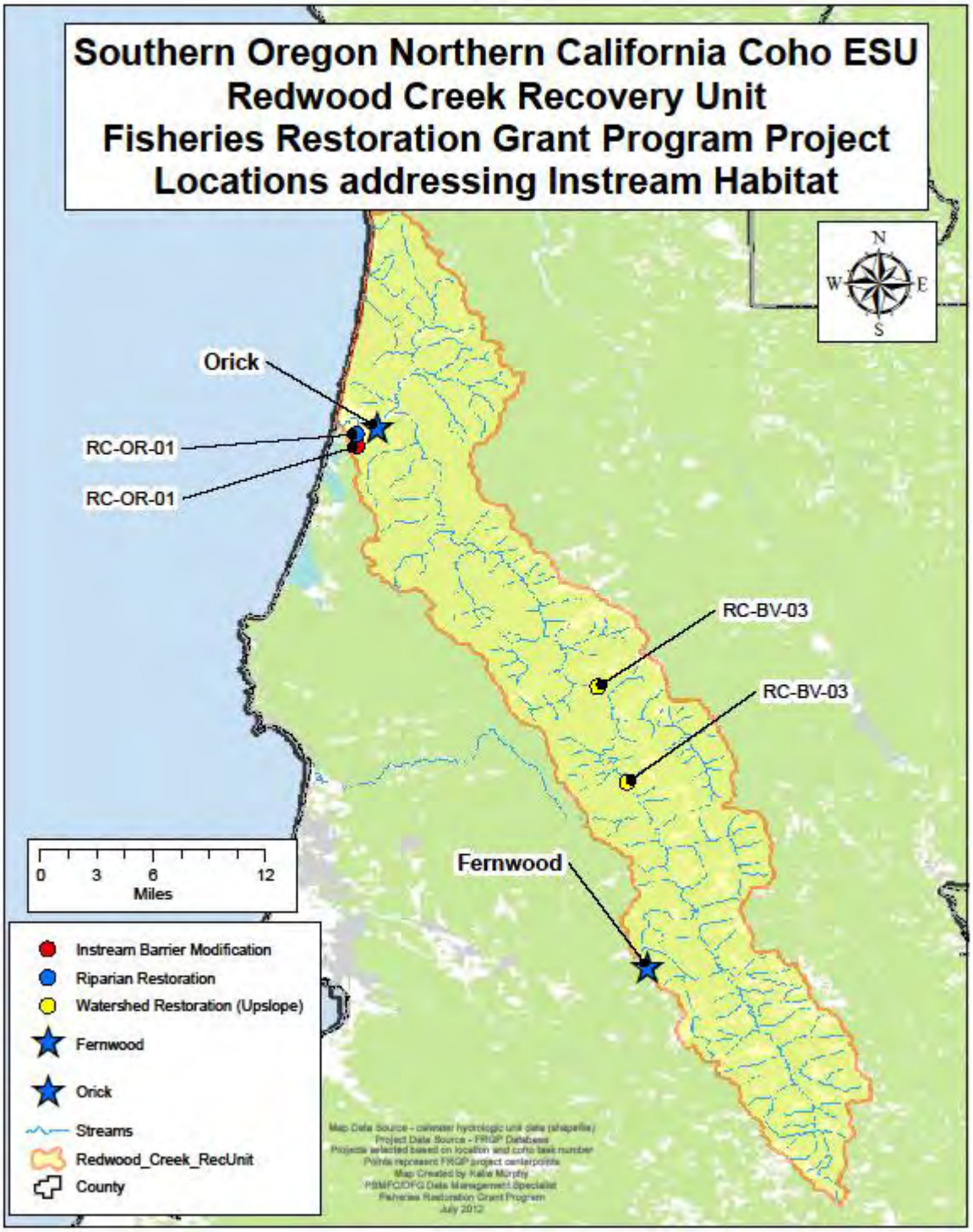
Appendix G (Continued) - Figure G44. Project locations in the Mad River Recovery Unit – Organizational Support projects



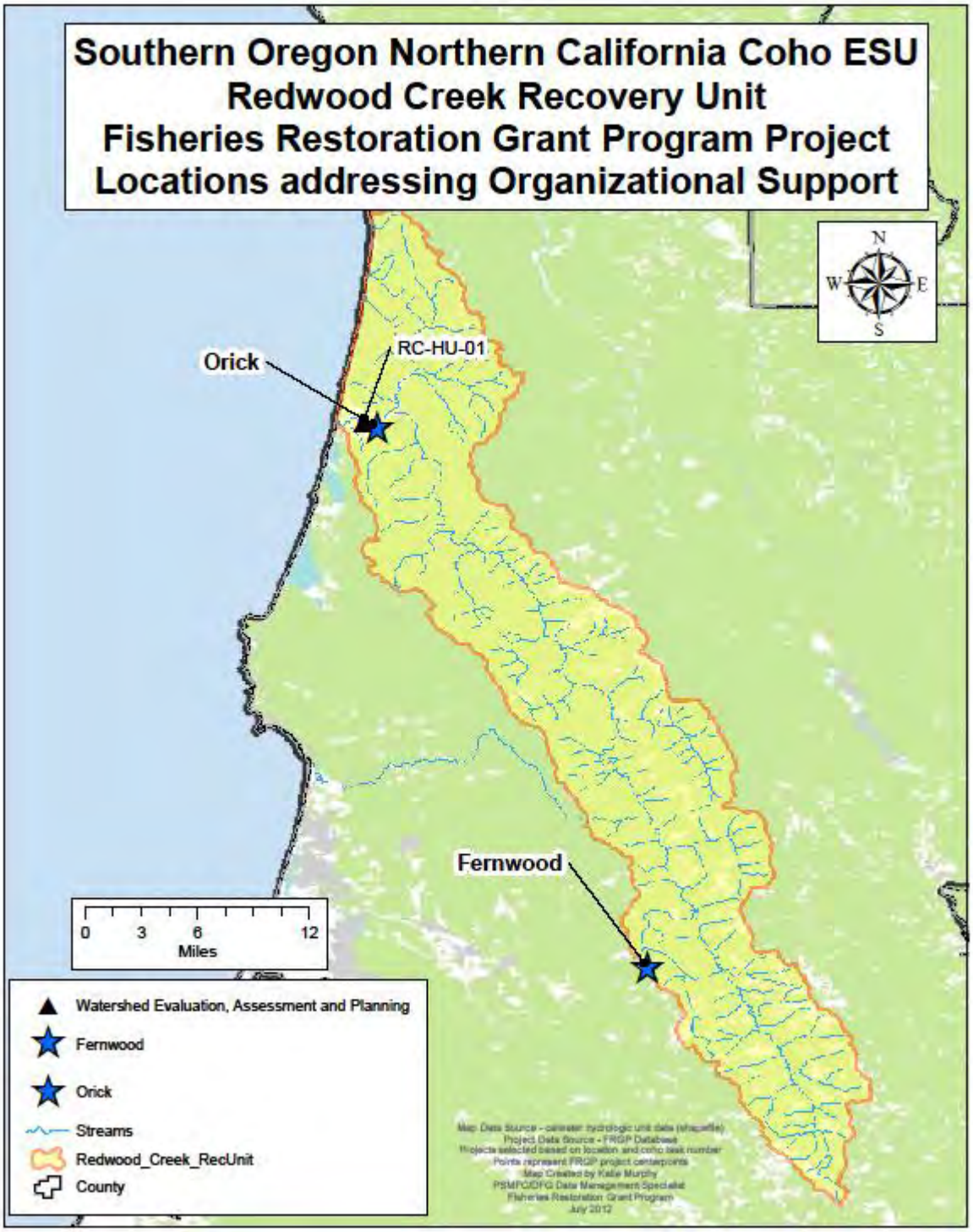
Appendix G (Continued) - Figure G45. Project locations in the Trinidad River Recovery Unit– Instream Habitat projects



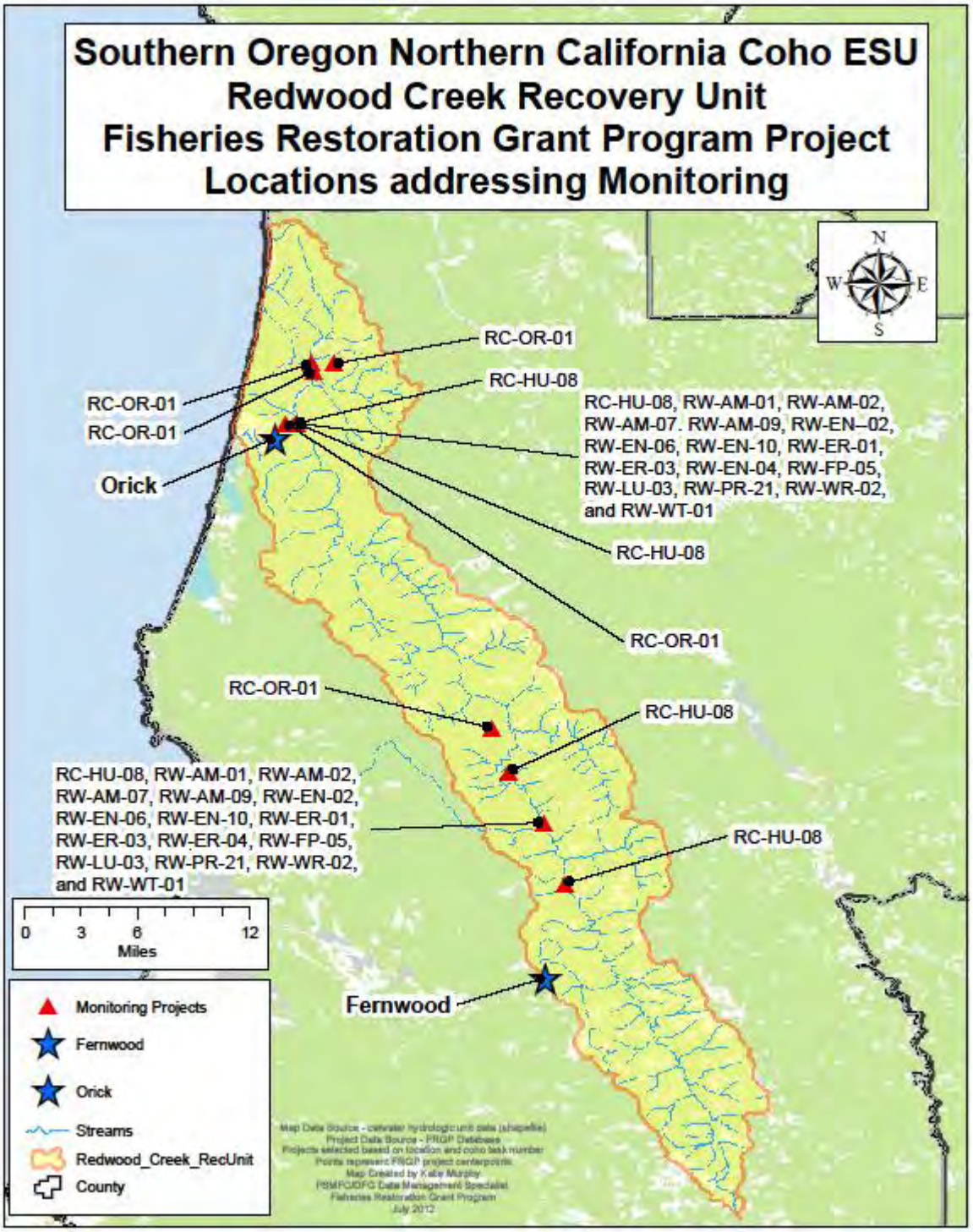
Appendix G (Continued) - Figure G46. Project locations in the Redwood Creek Recovery Unit – Fish Passage projects



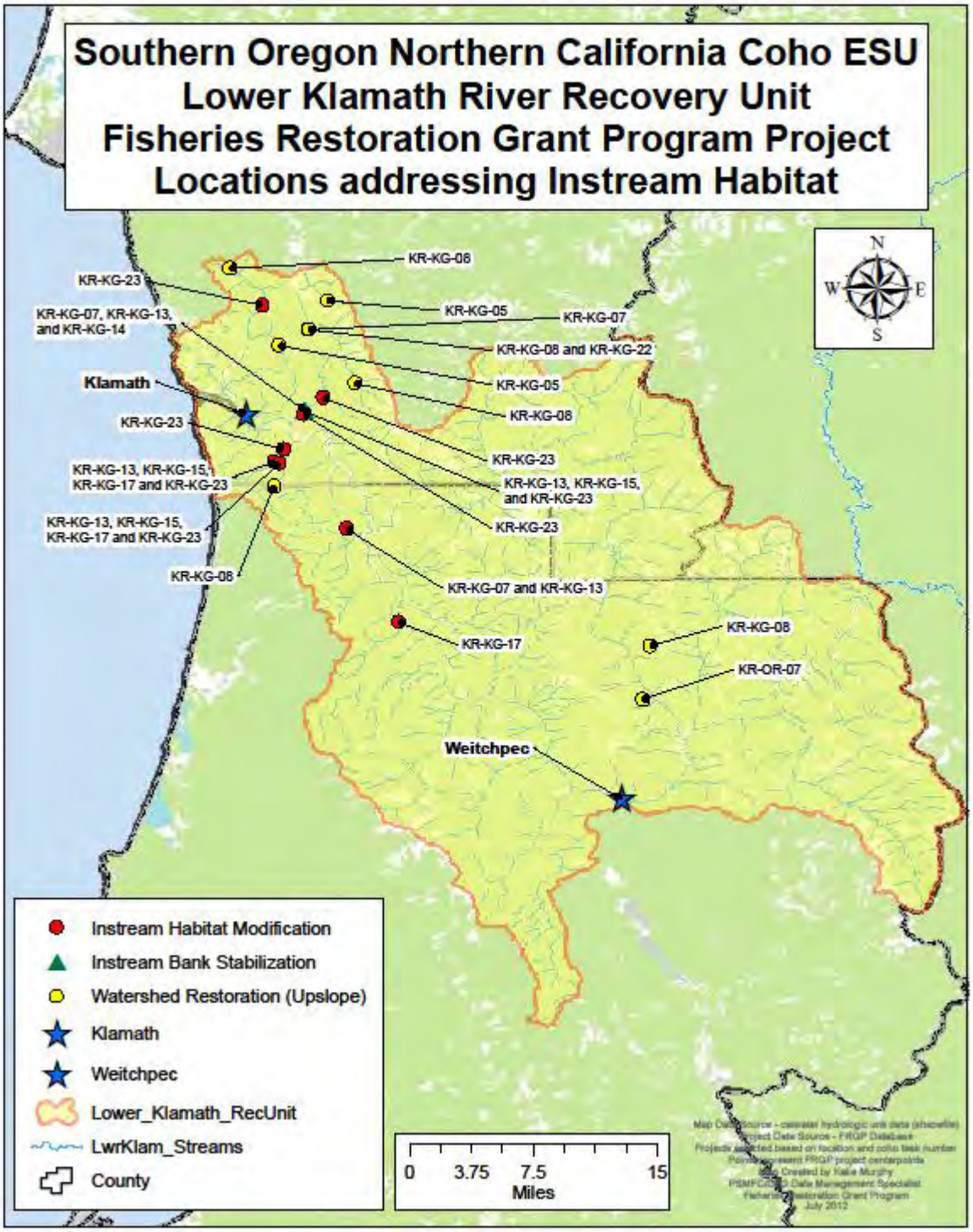
Appendix G (Continued) - Figure G47. Project locations in the Redwood Creek Recovery Unit – Instream Habitat projects



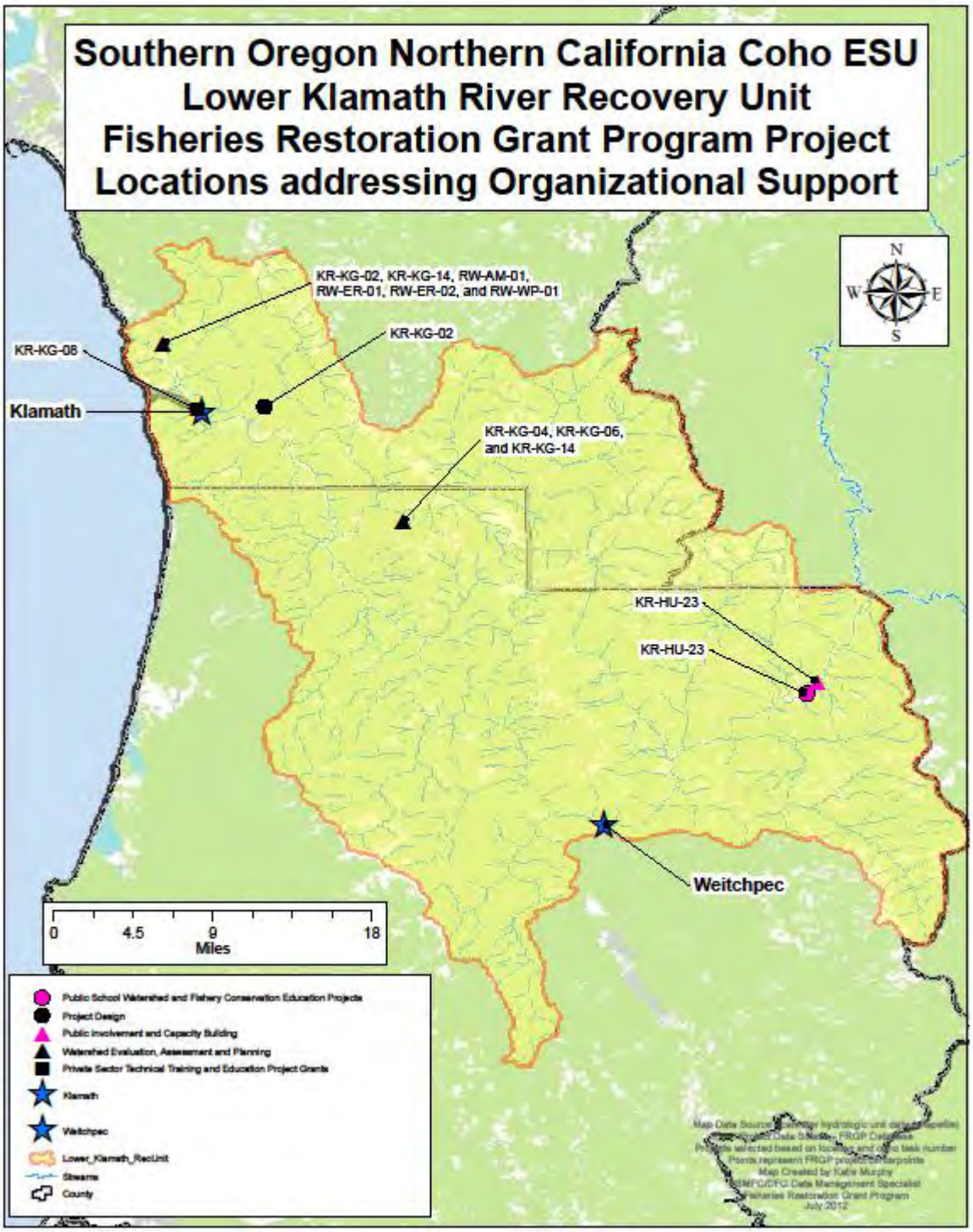
Appendix G (Continued) - Figure G48. Project locations in the Redwood Creek Recovery Unit – Organizational Support projects



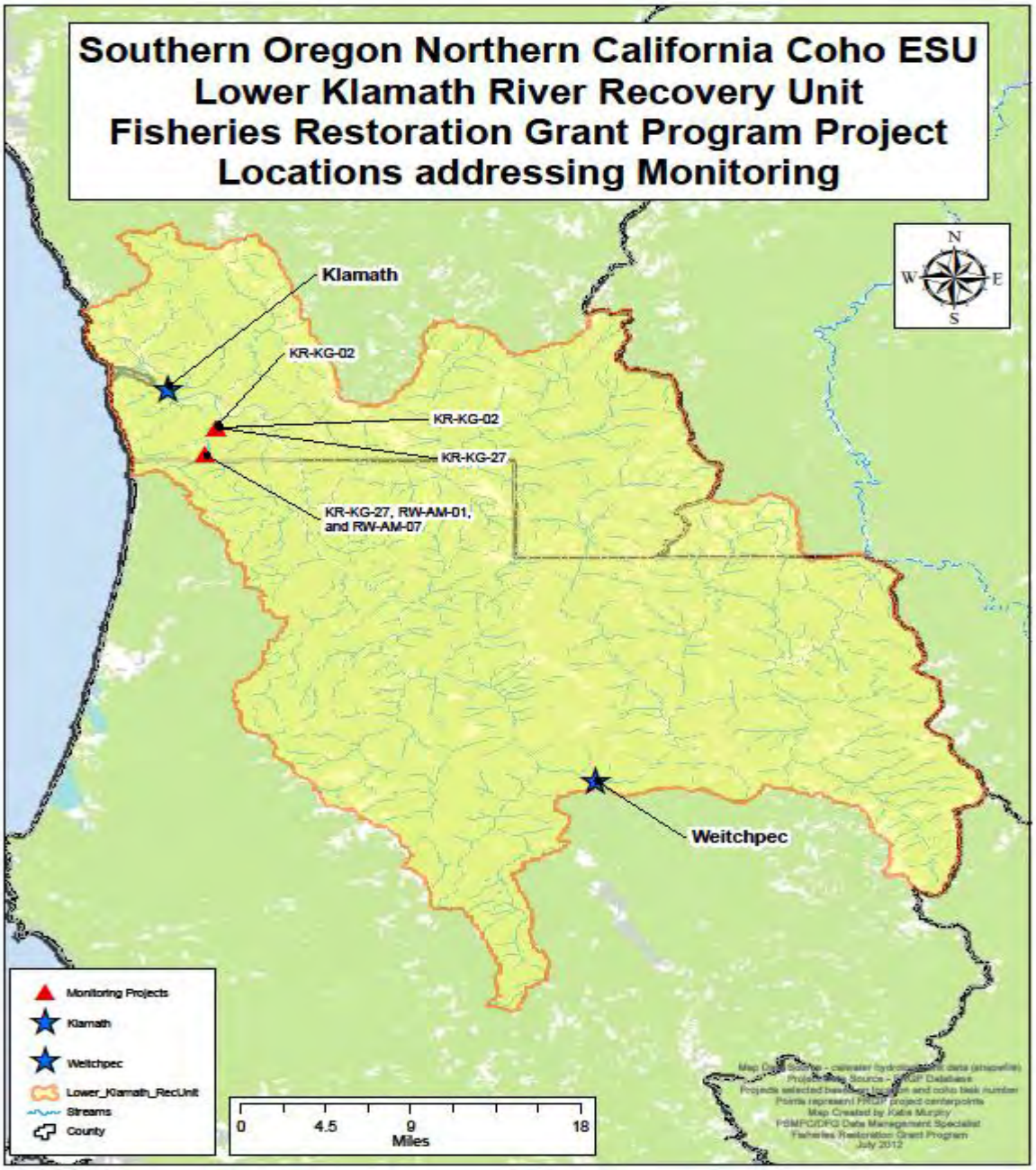
Appendix G (Continued) - Figure G49. Project locations in the Redwood Creek Recovery Unit – Monitoring projects



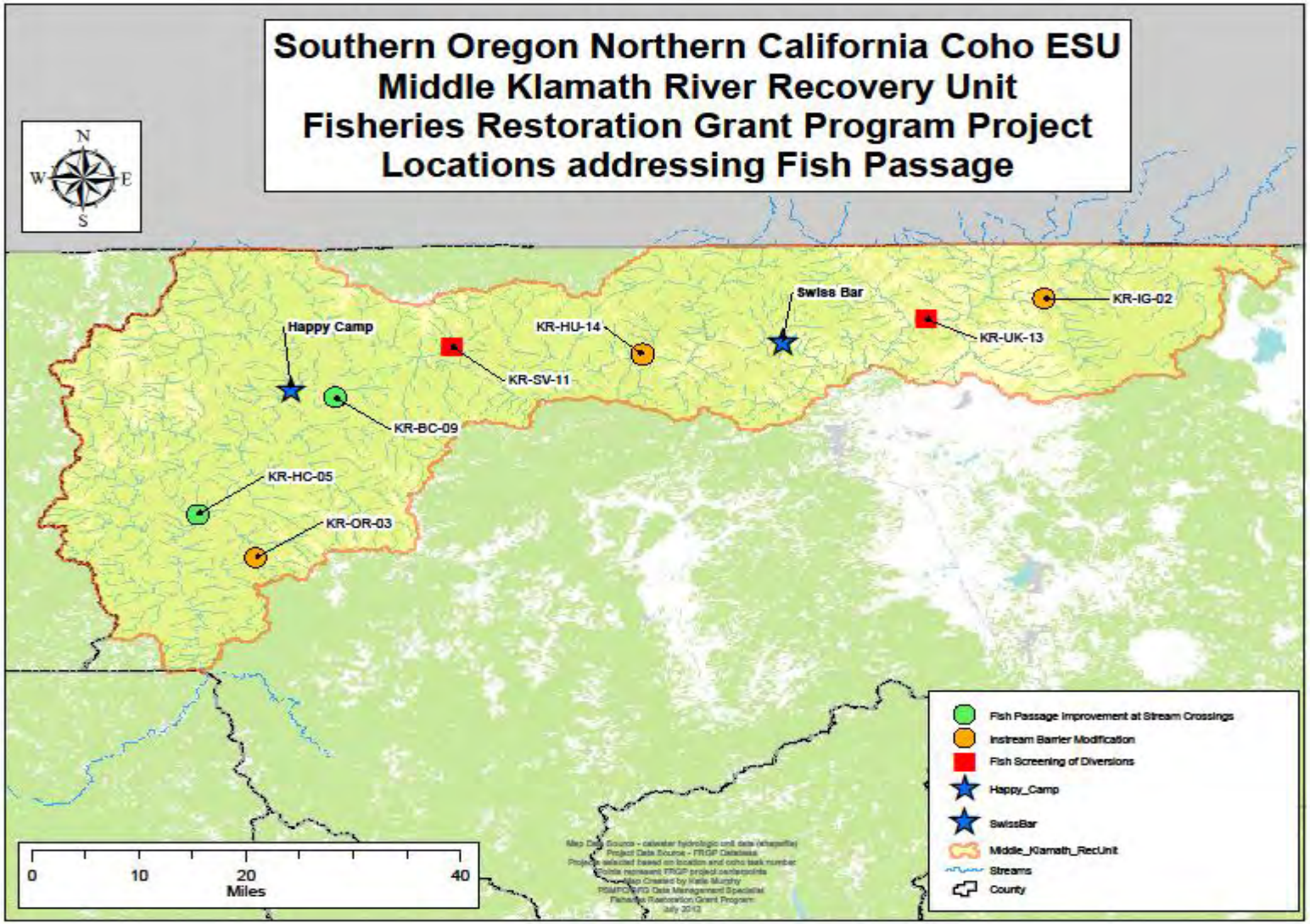
Appendix G (Continued) - Figure G50. Project locations in the Lower Klamath Recovery Unit – Instream Habitat projects



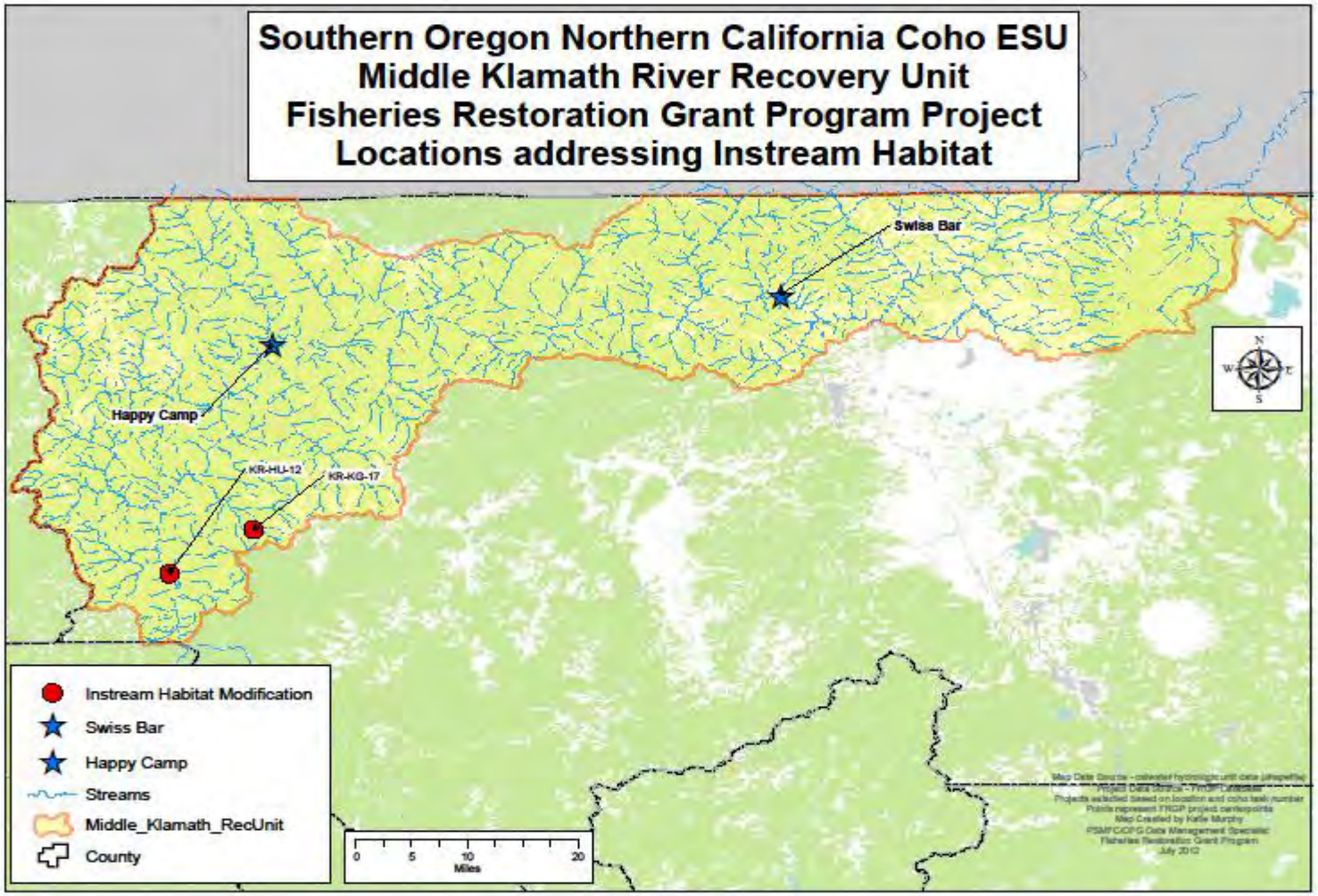
Appendix G (Continued) - Figure G51. Project locations in the Lower Klamath Recovery Unit – Organizational Support projects



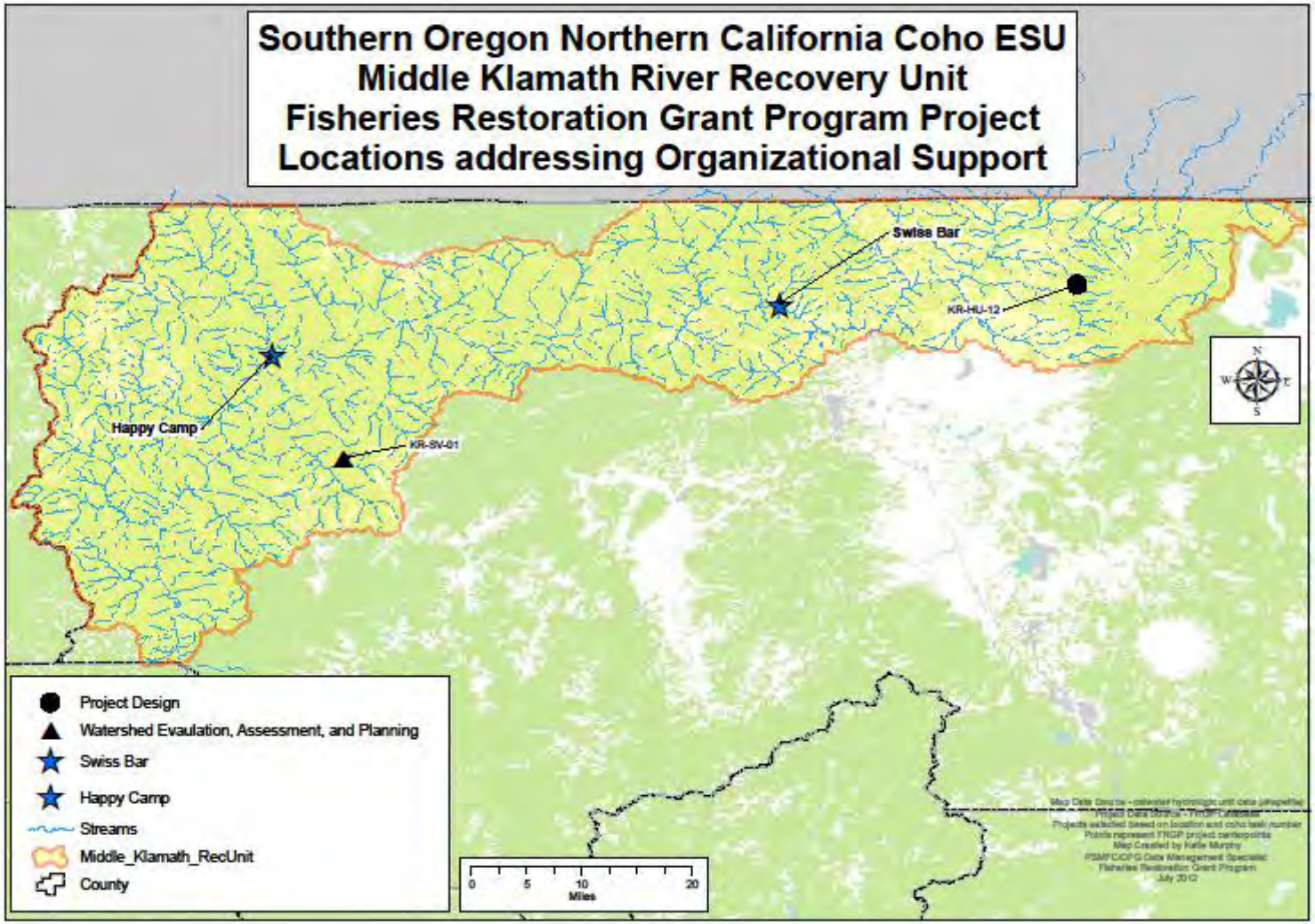
Appendix G (Continued) - Figure G52. Project locations in the Lower Klamath Recovery Unit – Monitoring projects



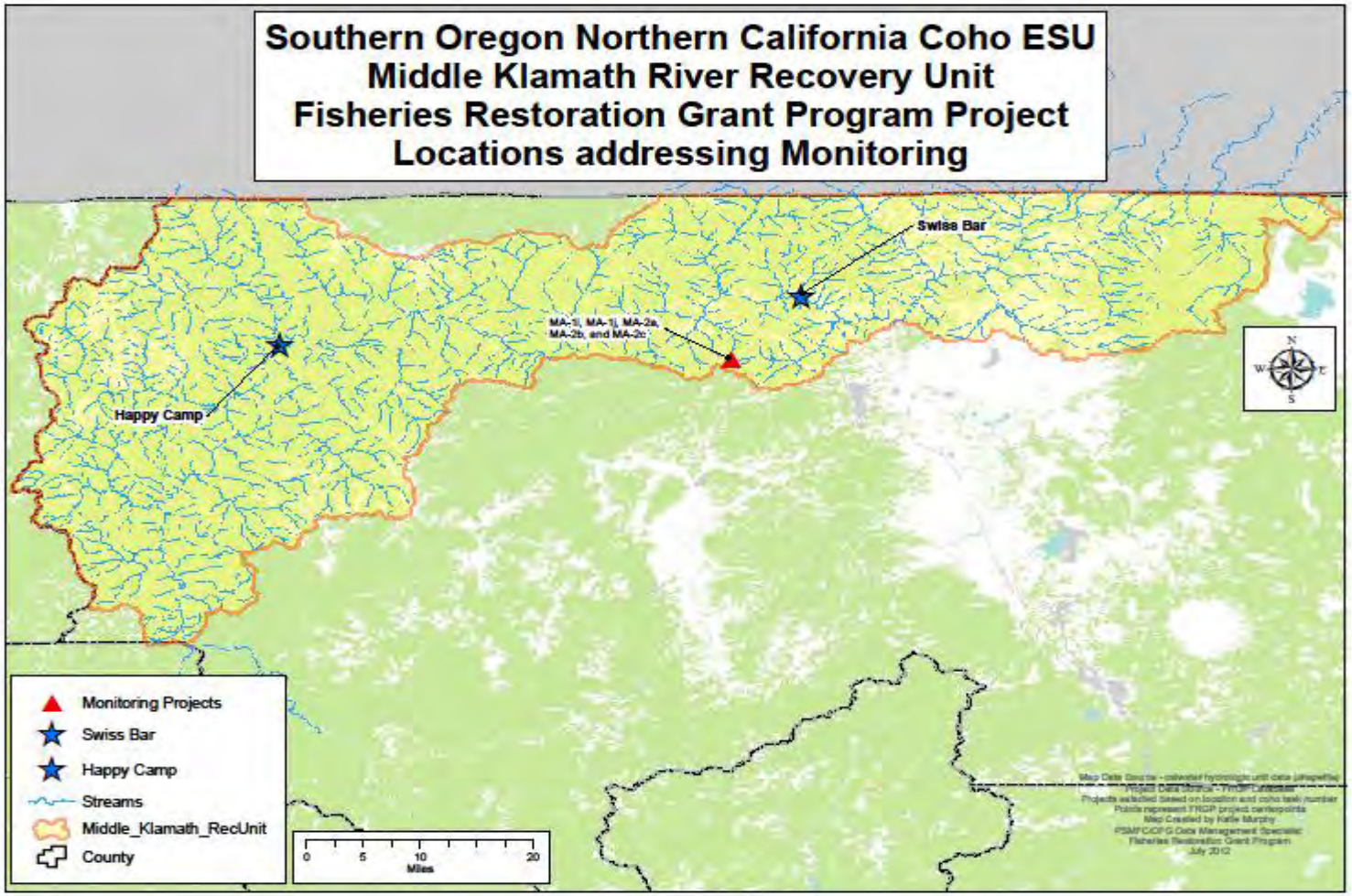
Appendix G (Continued) - Figure G53. Project locations in the Middle Klamath Recovery Unit – Fish Passage projects



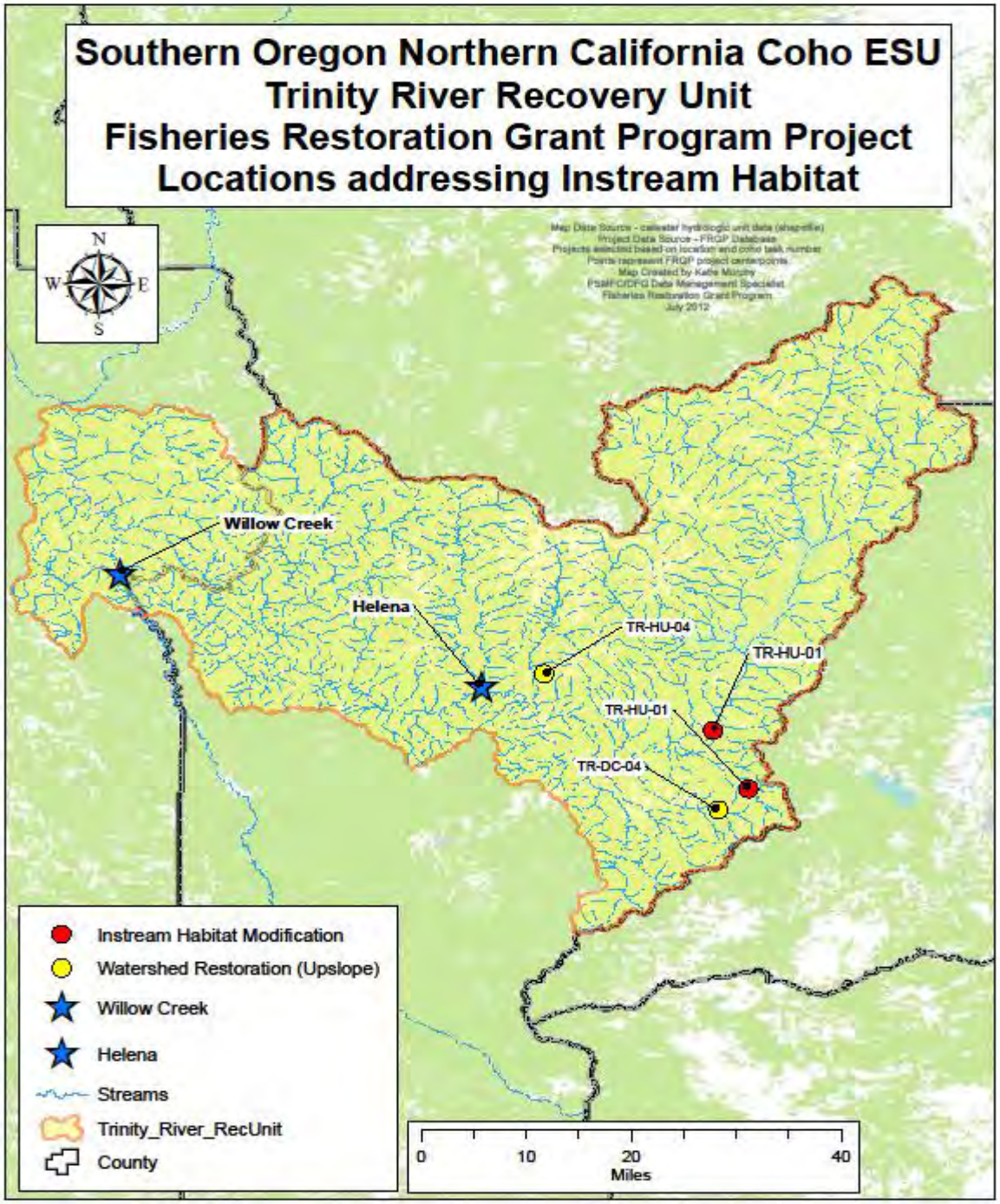
Appendix G (Continued) - Figure G54. Project locations in the Middle Klamath Recovery Unit – Instream Habitat projects



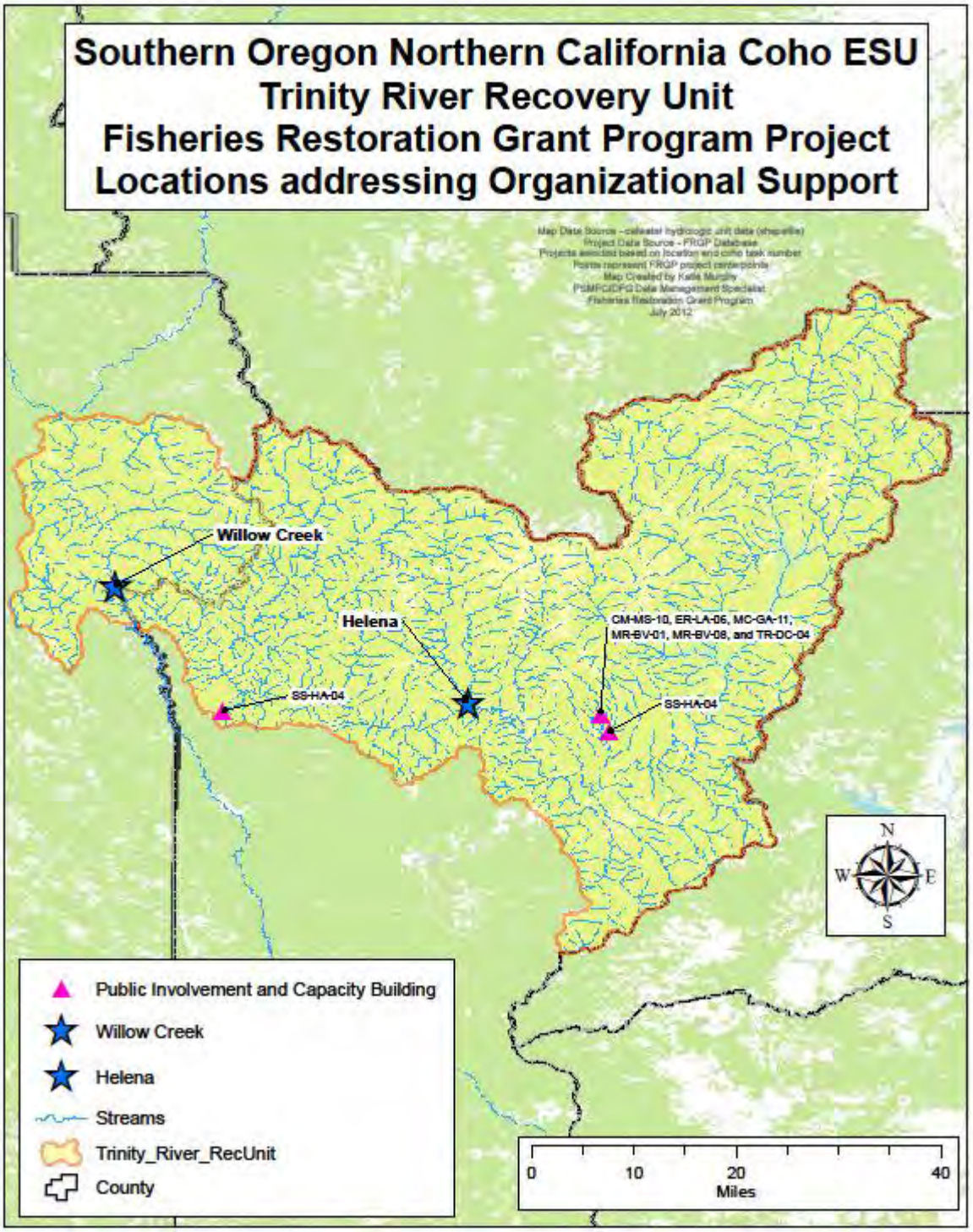
Appendix G (Continued) - Figure G55. Project locations in the Middle Klamath Recovery Unit – Organizational Support projects



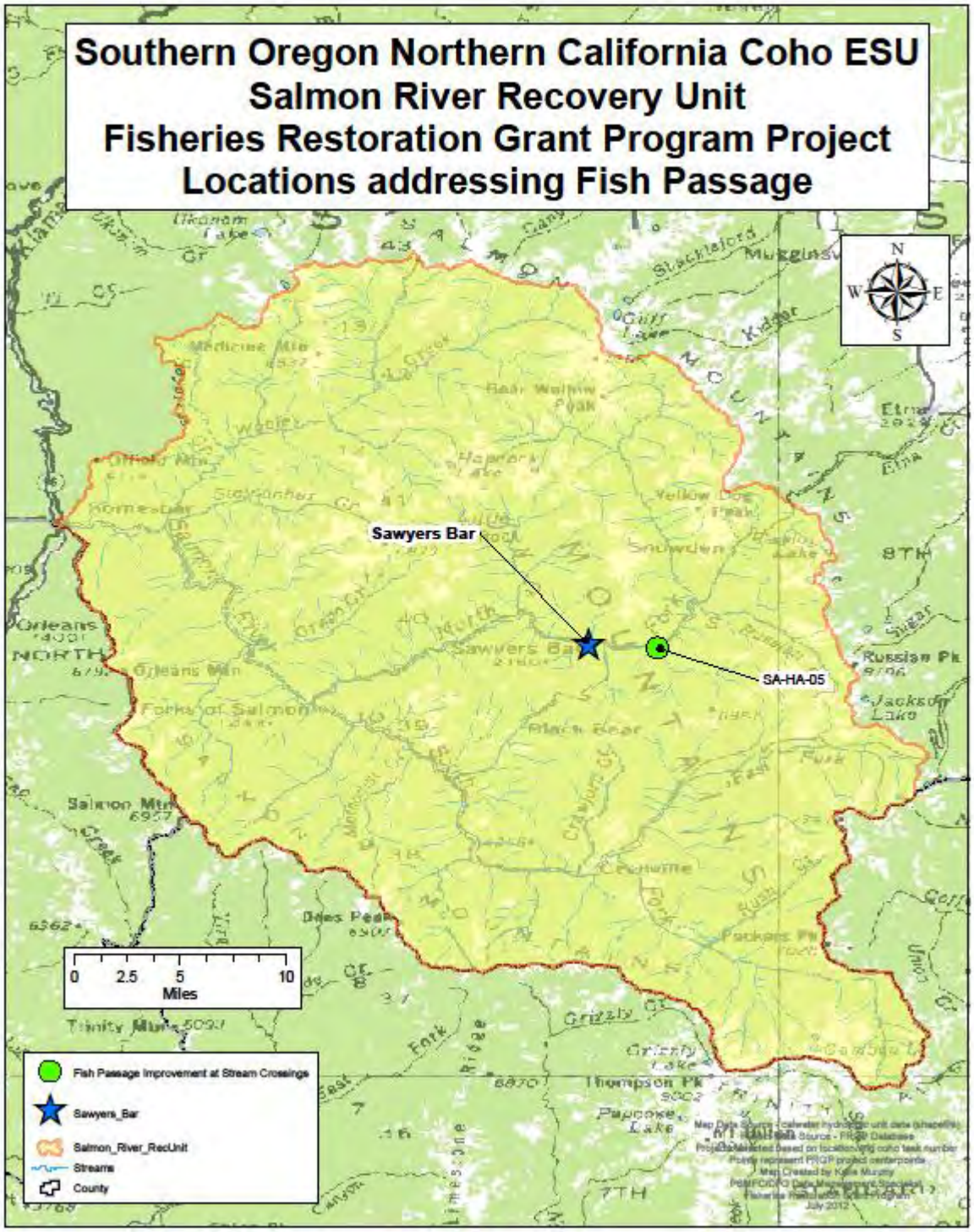
Appendix G (Continued) - Figure G56. Project locations in the Middle Klamath Recovery Unit – Monitoring projects



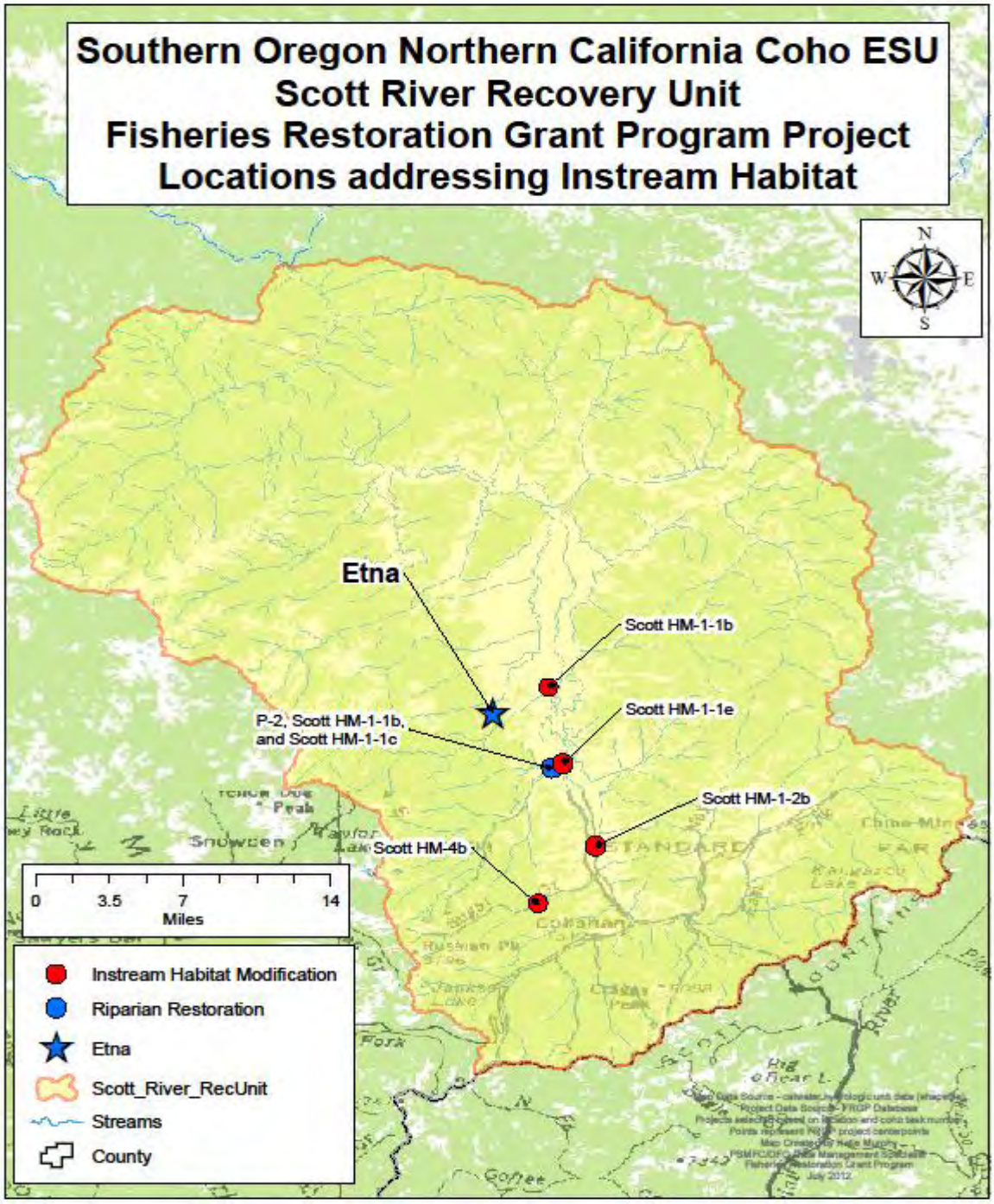
Appendix G (Continued) - Figure G57. Project locations in the Trinity River Recovery Unit – Instream Habitat projects



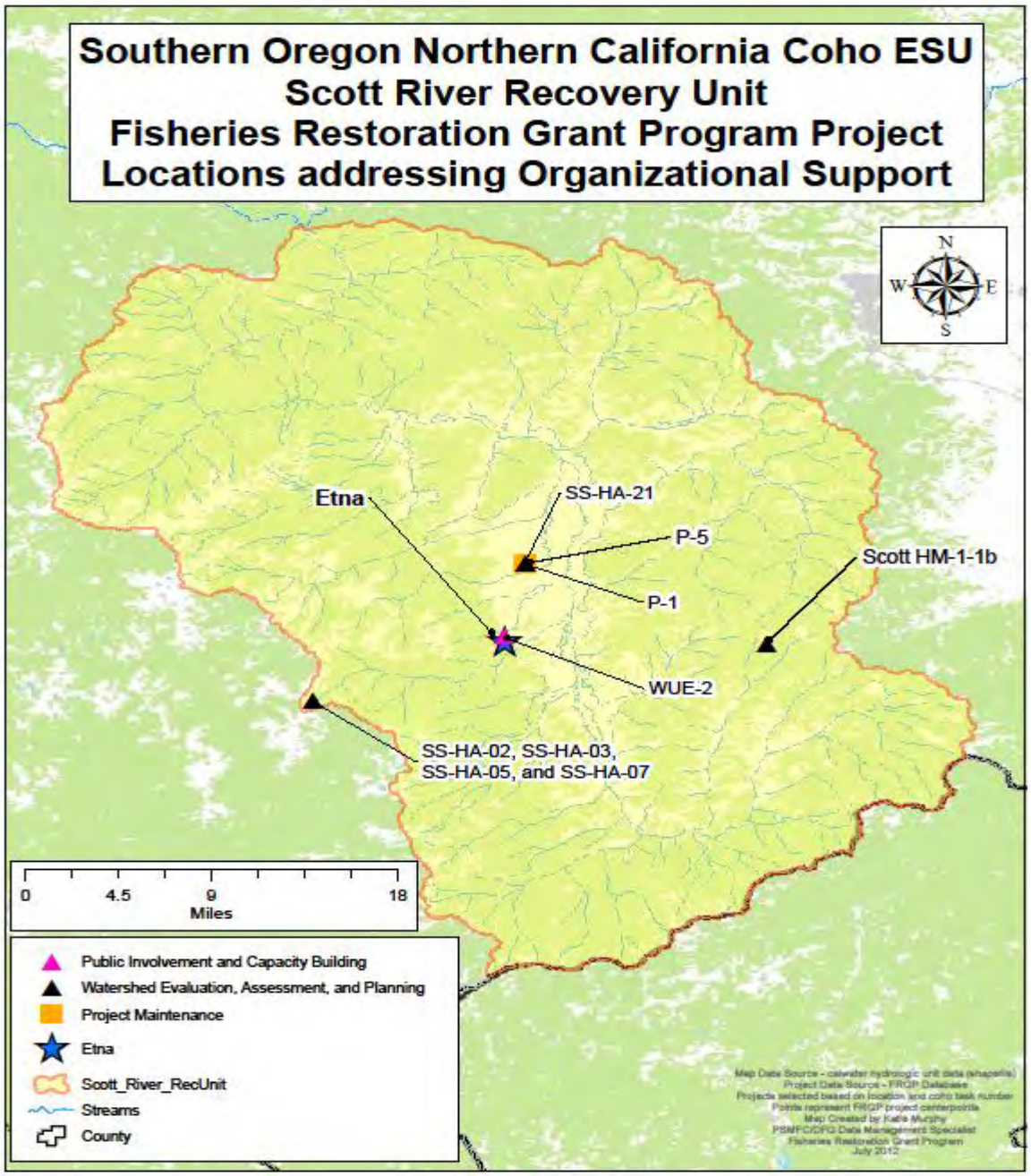
Appendix G (Continued) - Figure G58. Project locations in the Trinity River Recovery Unit – Organizational Support projects



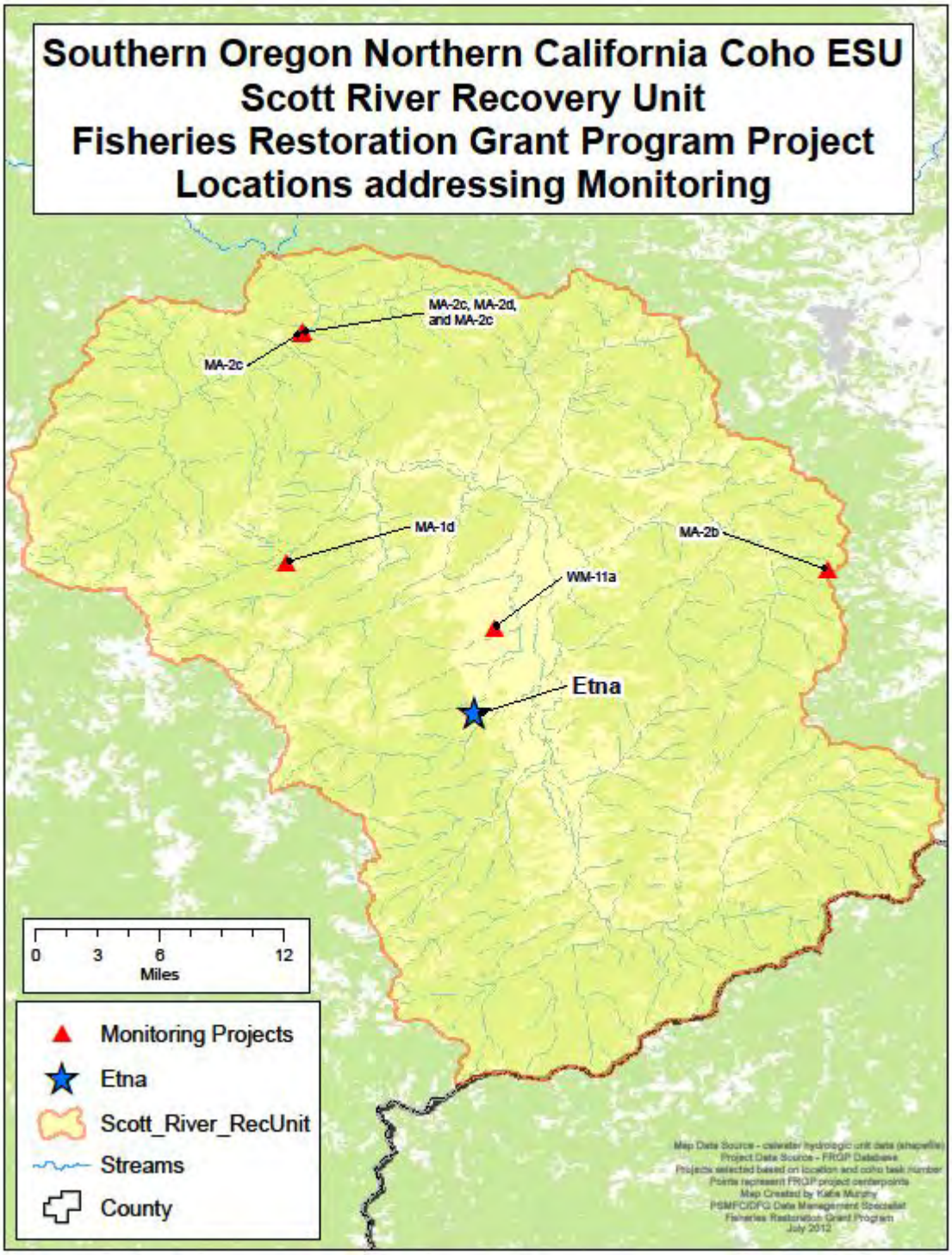
Appendix G (Continued) - Figure G59. Project locations in the Salmon River Recovery Unit – Fish Passage projects



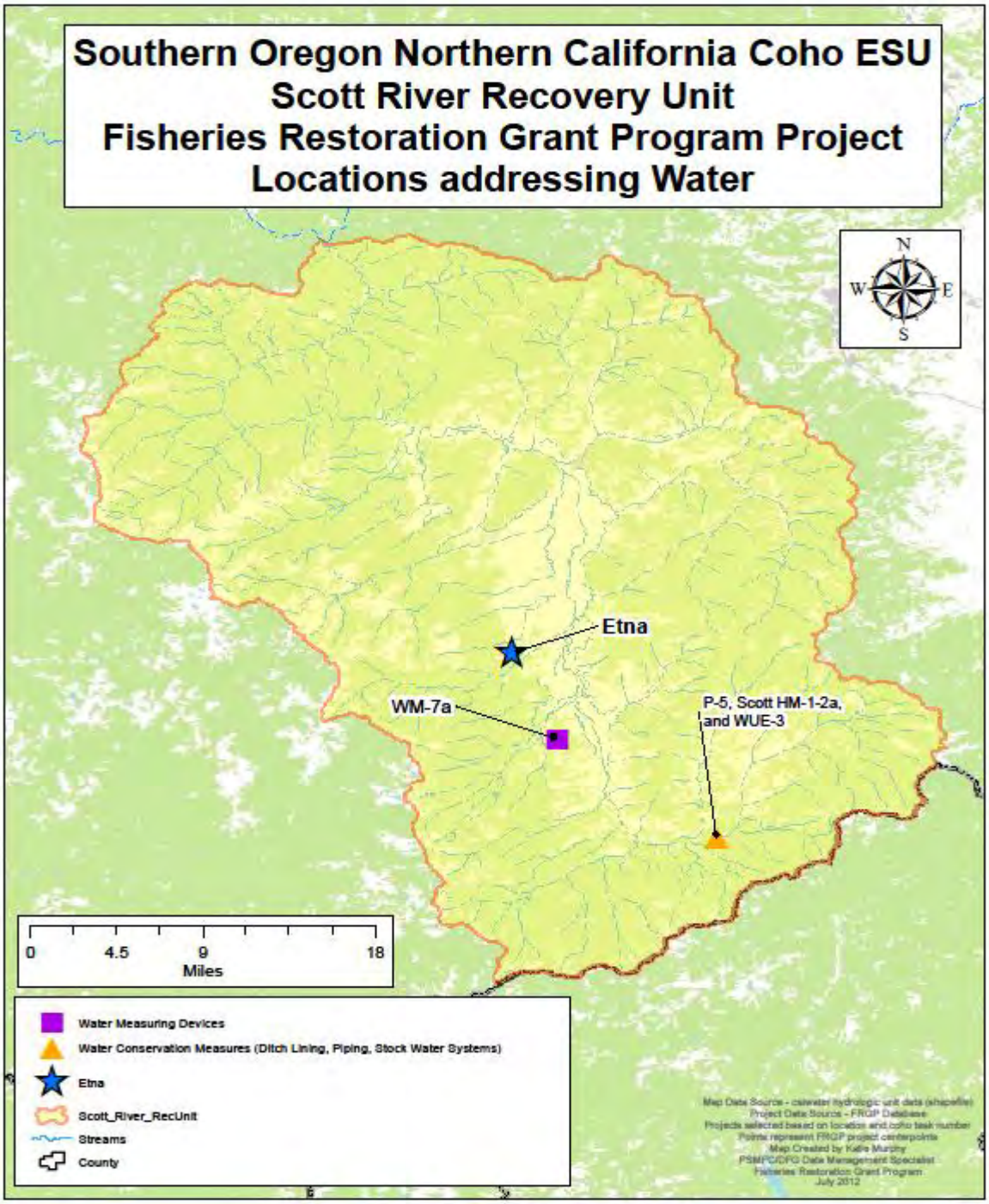
Appendix G (Continued) - Figure G60. Project locations in the Scott River Recovery Unit – Instream Habitat projects



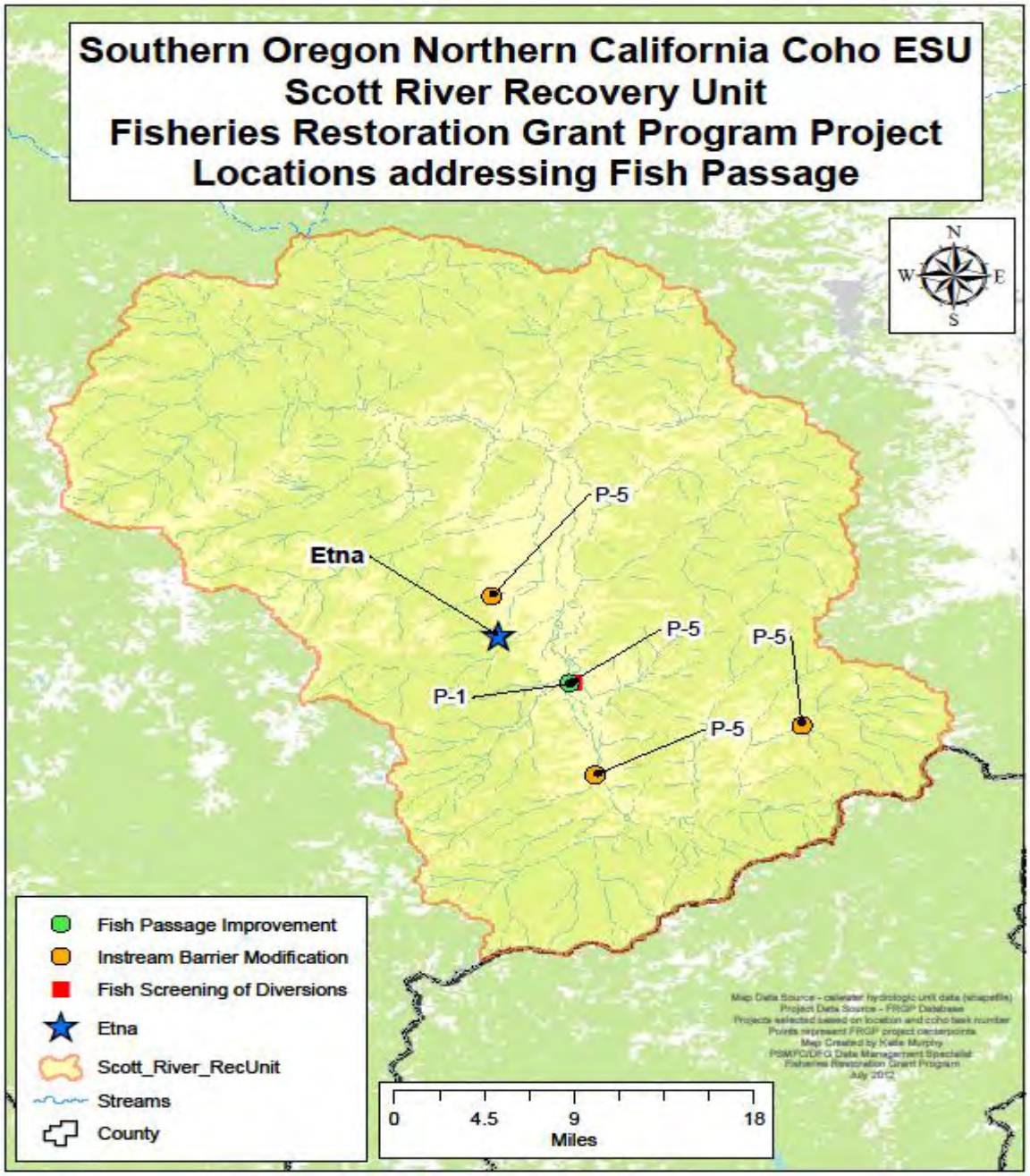
Appendix G (Continued) - Figure G61. Project locations in the Scott River Recovery Unit – Organizational Support projects



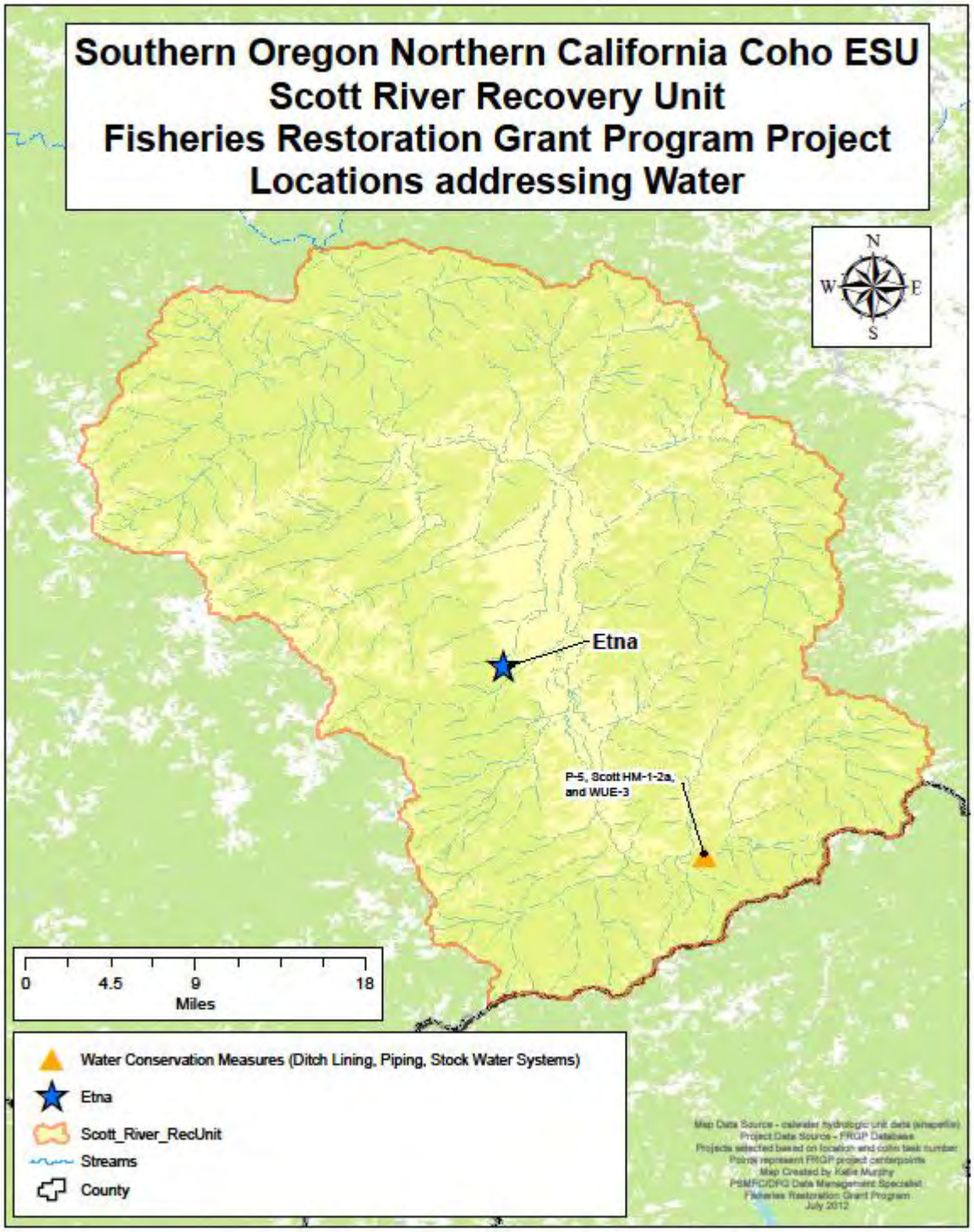
Appendix G (Continued) - Figure G62. Project locations in the Scott River Recovery Unit – Monitoring projects



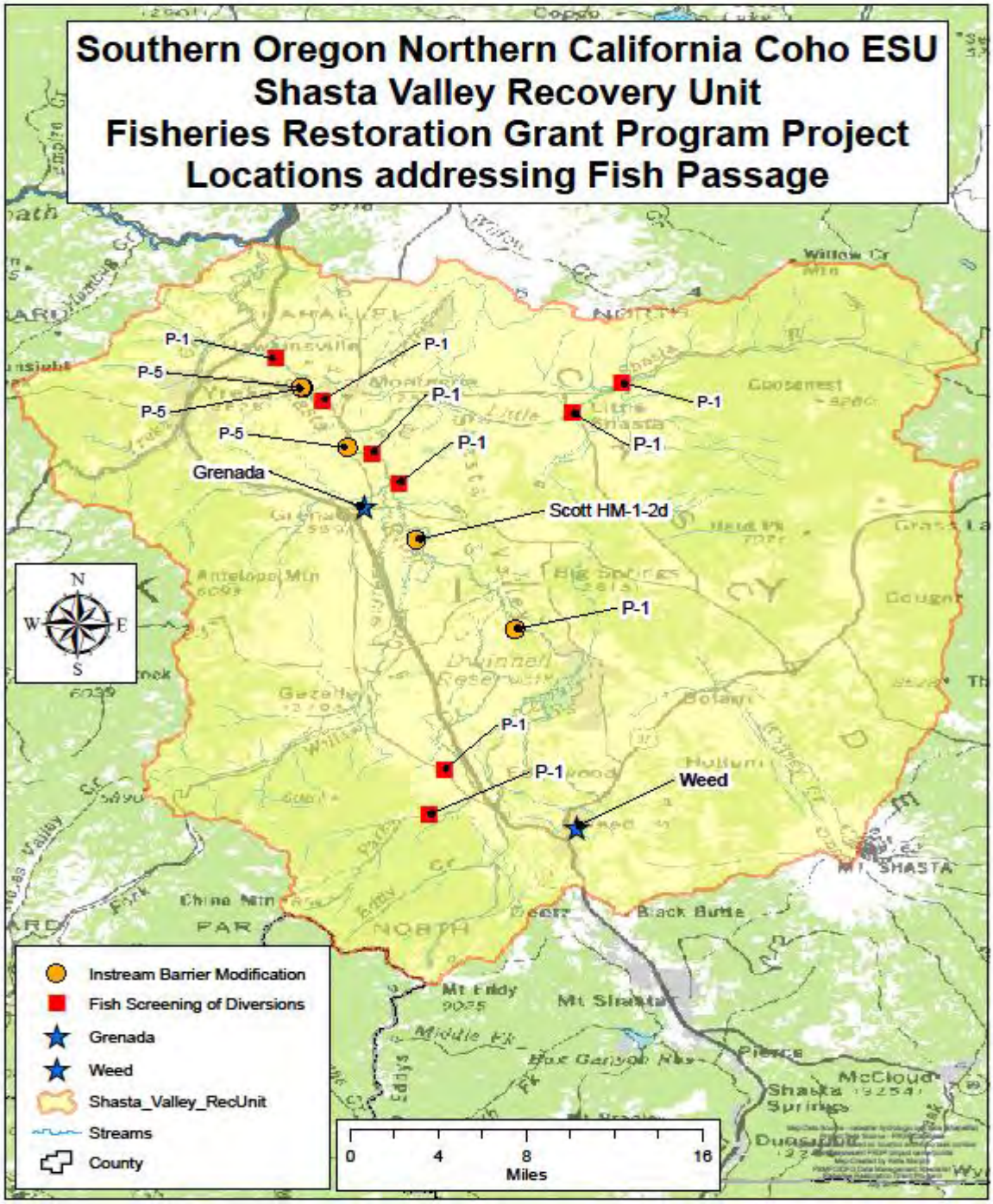
Appendix G (Continued) - Figure G63. Project locations in the Scott River Recovery Unit – Water projects



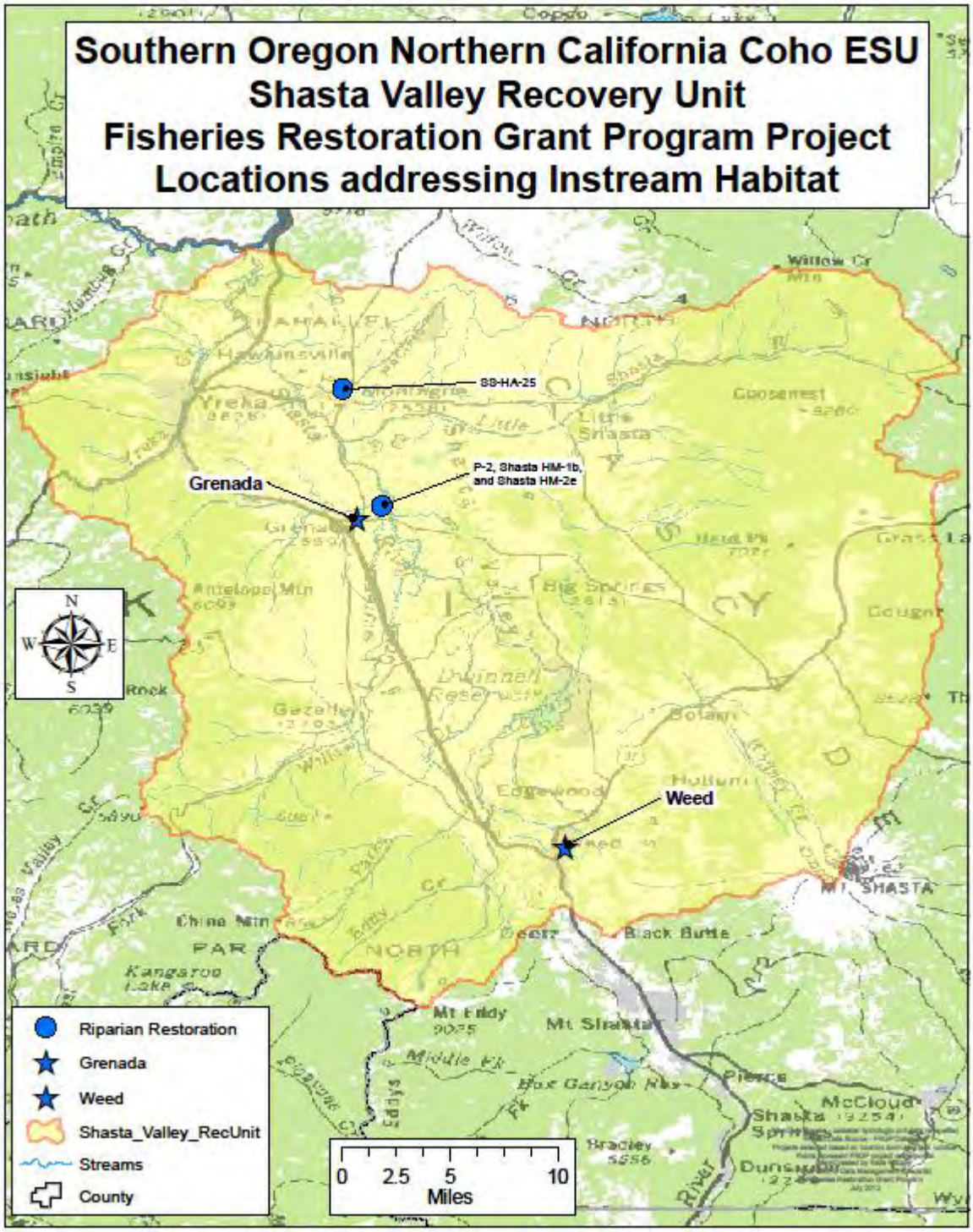
Appendix G (Continued) - Figure G64. Project locations in the Scott River Recovery Unit – Fish Passage projects



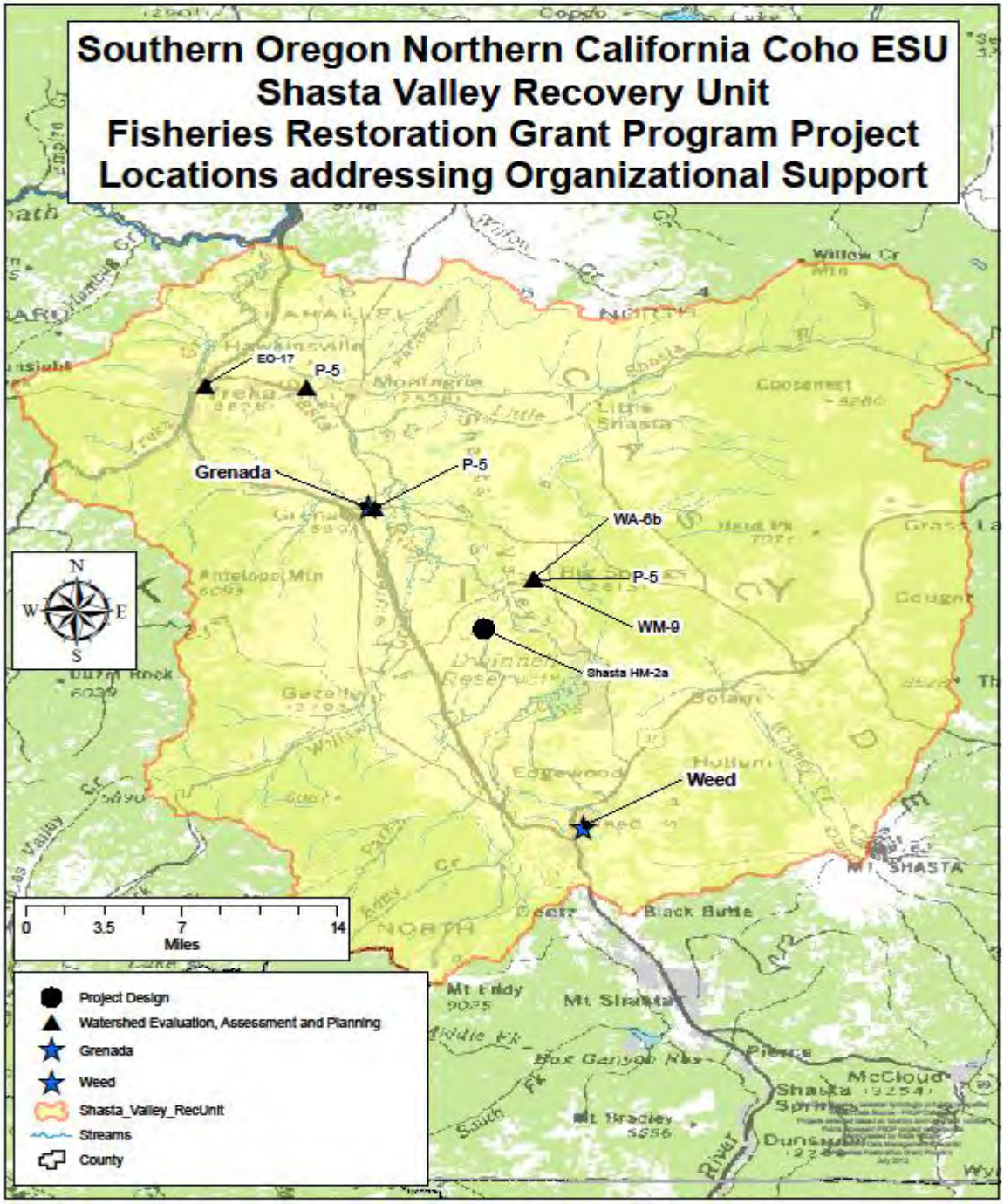
Appendix G (Continued) - Figure G65. Project locations in the Trinity River Recovery Unit – Water projects



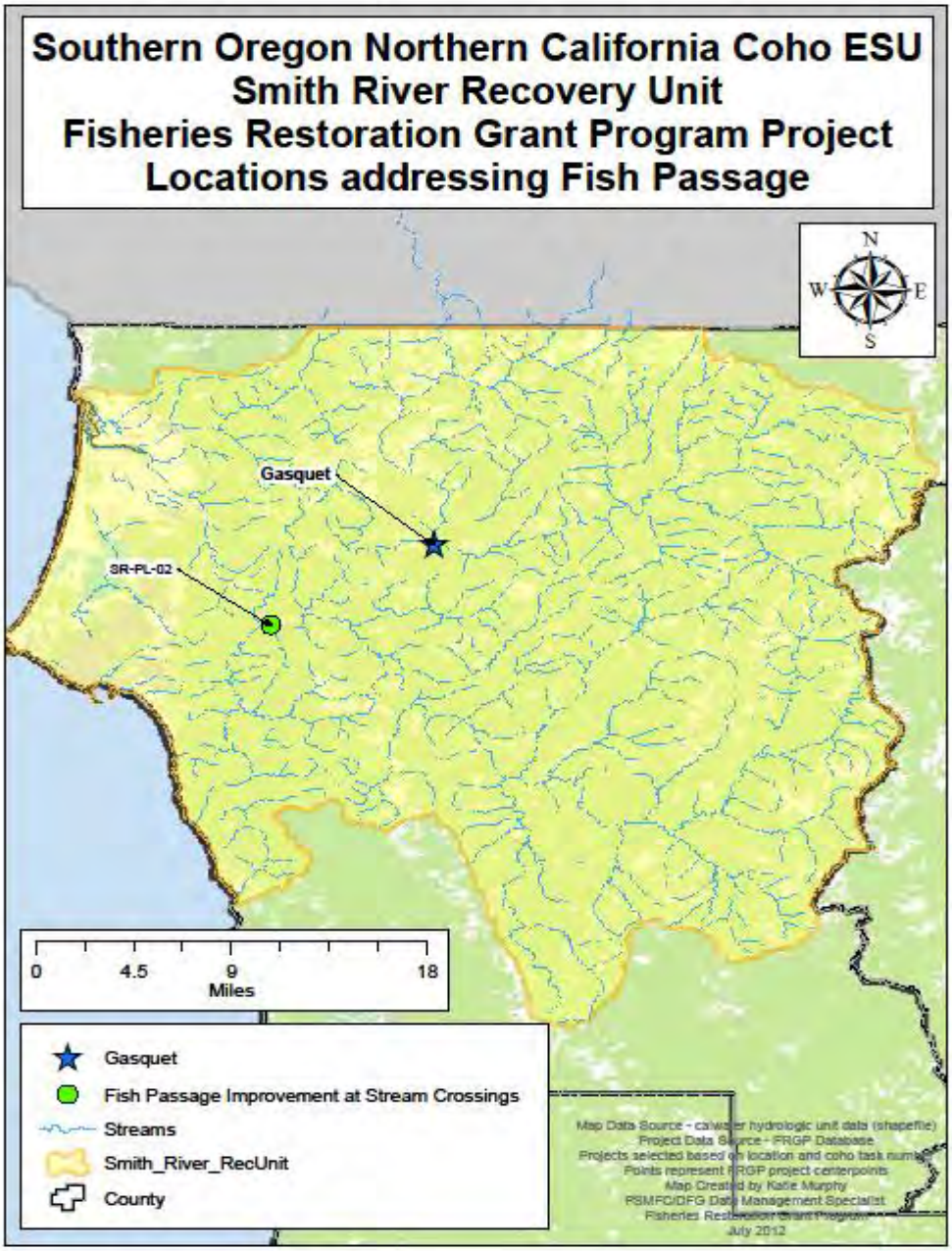
Appendix G (Continued) - Figure G66. Project locations in the Shasta Valley Recovery Unit – Fish Passage projects



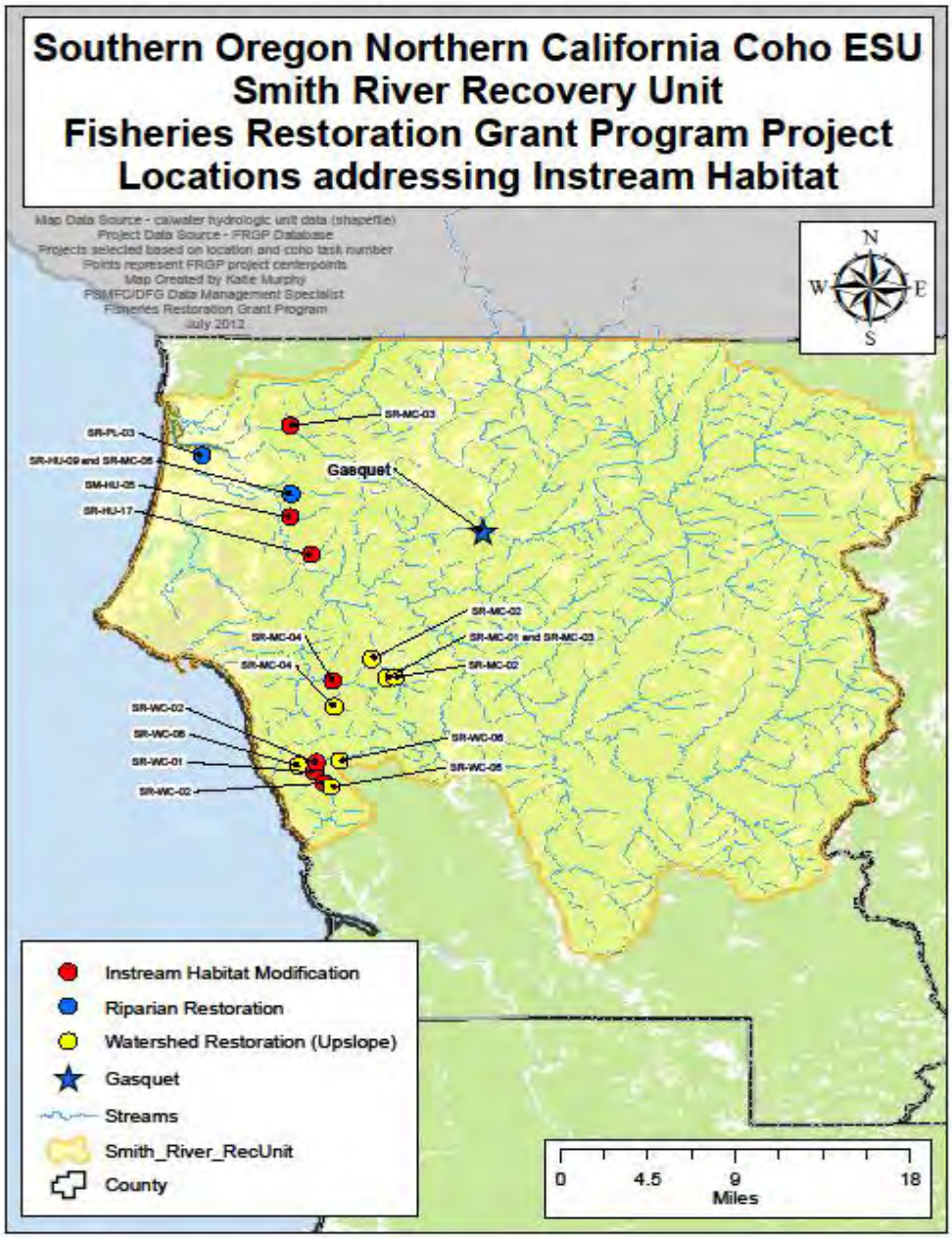
Appendix G (Continued) - Figure G67. Project locations in the Shasta Valley Recovery Unit – Instream Habitat projects



Appendix G (Continued) - Figure G68. Project locations in the Shasta Valley Recovery Unit – Organizational Support projects

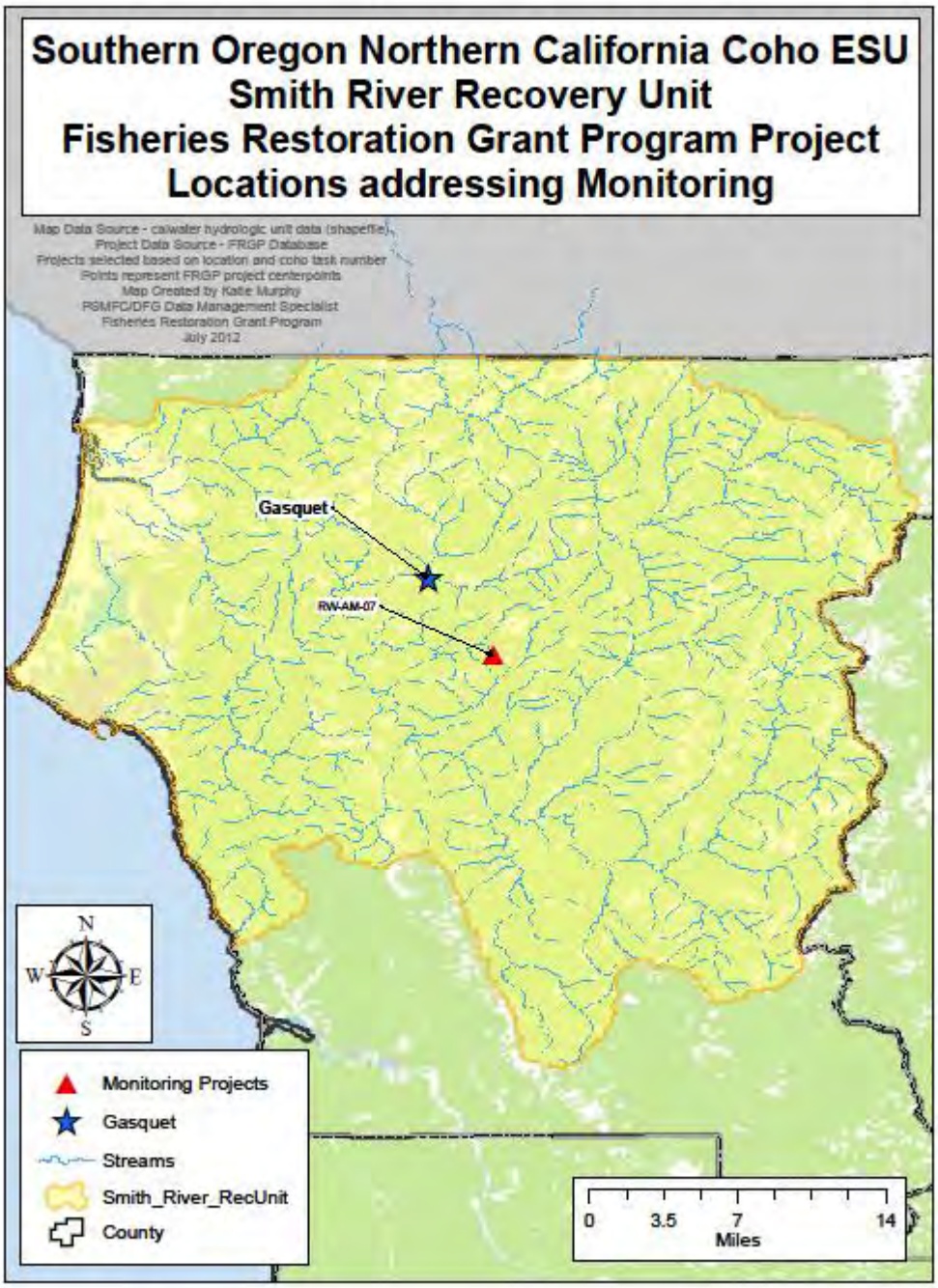


Appendix G (Continued) - Figure G69. Project locations in the Smith River Recovery Unit – Fish Passage projects

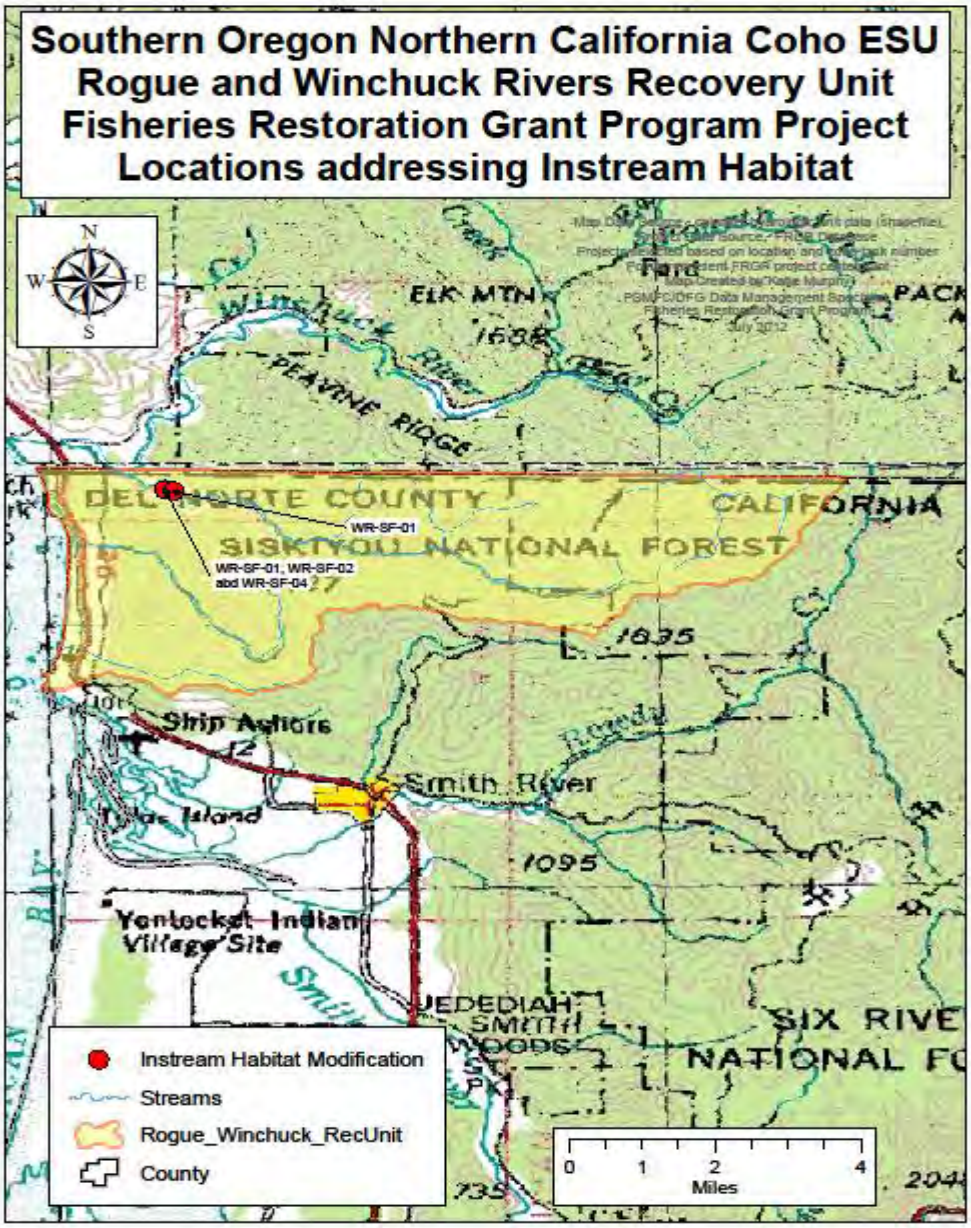


Appendix G (Continued) - Figure G70. Project locations in the Smith River Recovery Unit – Instream Habitat projects

Appendix G (Continued) - Figure G71. Project locations in the Smith River Recovery Unit – Organizational Support projects



Appendix G (Continued) - Figure G72. Project locations in the Smith River Recovery Unit – Monitoring projects



Appendix G (Continued) - Figure G73. Project locations in the Rogue and Winchuk Rivers Recovery Unit – Instream Habitat projects

Appendix G (Continued) - Table G1. List of Coho Salmon Recovery Tasks

Task I.D. Number	Task Description
BB-HU-01	Continue to operate MBSTP Kingfisher Flat Hatchery as a conservation hatchery, following the guidelines of the Department and NOAA Fisheries.
BM-BO-02	Continue restoration efforts on Bolinas and Big lagoons to benefit coho salmon during all life phases and seasons.
BM-BO-03	Work with landowners through outreach and education and appropriate agencies to manage summer flows for coho salmon, on a watershed basis. Provide support and incentives to protect both fisheries flows and agriculture by timing of withdrawals, construction of off-site storage facilities, water conservation practices, and riparian zone protections. Conduct outreach and education for landowners on these practices.
BM-BO-08	Treat coho salmon passage barriers in the Redwood Creek drainage.
BM-HU-01	Implement BMPs for road projects maintaining environmentally sound upgrades, modifications, and new construction of road projects, including culverts and stream crossings.
BM-HU-02	Support local agencies, Caltrans, and others in implementing and maintaining environmentally sound upgrades, modifications, and new construction of road projects, including culverts and stream crossings.
BM-HU-04	Avoid and/or minimize the adverse effects of water diversion on coho salmon by establishing: a more natural hydrograph, by-pass flows, season of diversion, and off-stream storage.
BM-HU-10	Investigate opportunities for restoring historic runs in identified watersheds.
BM-LA-01	Use recommendations of existing sediment source surveys to restore habitat of coho salmon.
BM-LA-02	Expand inventories as needed for a comprehensive watershed approach for coho salmon passage.
BM-LA-03	Coordinate with appropriate agencies to restore coho salmon passage at barriers identified by Ross Taylor, SPAWN, and others.
BM-LA-06	Continue ongoing efforts and support of stewardship in the basin to include riparian enhancement and protection, sediment source reduction, habitat typing and surveying, coho salmon surveys and counts, water conservation, outreach and education, effectiveness monitoring of projects, and planning and assessment of potential restoration projects to benefit coho salmon.
BM-LA-12	Work with private landowners to encourage biotechnical bank stabilization, riparian protections, woody debris retention, and timing of water withdrawals to help protect coho salmon.

Task I.D. Number	Task Description
BM-SA-06	Implement recommendations of watershed or restoration plans within the range of coho salmon and implement actions consistent with priority recommendations of the coho salmon recovery strategy.
BM-SA-07	Design vineyard operations to ensure adequate protection of coho salmon habitat attributes, including riparian corridors, instream flow, and water quality.
CM-HU-01	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Improvement of existing riparian zones through plantings, release of conifers, and manage of alders, blackberries, and other competitors; and c. Bank stabilization and fencing projects.
CM-HU-03	Treat sources of sediment, including roads.
CM-HU-05	Prioritize and upgrade all county culverts identified as passage barriers.
CM-ME-02	Continue to implement road and erosion assessments, especially in Middle, Westlund, Gilham, Sholes, Blue Slide, and Fire creeks.
CM-ME-03	Use tree planting and other vegetation management to improve canopy cover, especially in Dry and Blue Slide creeks.
CM-ME-04	Through cooperative efforts, reduce sediment yield at stream-bank erosion sites, especially in Middle, Westlund, Gilham, North Fork Fourmile, Sholes, Harrow, Little Grindstone, Grindstone, Eubank, and McKee creeks.
CM-MN-05	Treat sources of excess sediment.
CM-MN-08	Treat high priority battiers to coho salmon passage.
CM-MS-01	Promote outreach and education of water and conservation practices to improve stream surface flows and coho salmon habitat.
CM-MS-02	Protect the high quality habitat found in the Mattole River Headwaters and historic coho streams.
CM-MS-03	Protect high quality habitat found in the South Fork of Vanauken, Mill, Stanley, Thompson, Yew, and Lost Man creeks, recognizing current and continued land management practices by private landowners.
CM-MS-04	Promote a cooperative effort to establish monitoring stations at appropriate locations to monitor in-channel sediment (or turbidity) both in the lower basin and in the lower reaches of major tributaries.
CM-MS-06	Treat sources of excess sediment.
CM-MS-10	Work with University of California Cooperative Extension (UCCE) specialists to monitor summer water and air temperatures and flow in cooperation with landowners using Department-accepted protocols.
CM-MS-11	Continue and expand on-going temperature monitoring efforts.
CM-MS-15	Develop educational materials for landowners explaining how they can protect coho salmon.
CM-MS-16	Begin the process of declaring the southern subbasin to be fully appropriated in the spring and summer.

Task I.D. Number	Task Description
CM-MS-18	Pursue opportunities to acquire fee title, easement, and water rights from willing sellers.
CM-MS-19	Plant trees appropriate to the location in riparian areas where conditions are suitable.
CM-MS-22	Treat high priority barriers to coho salmon passage.
CM-MW-01	Assess current levels of LWD in the western subbasin, and determine amount necessary for improved flushing, pooling and habitat conditions for coho salmon.
CM-MW-02	Facilitate immediate placement of LWD in areas where lacking.
CM-MW-03	Develop and implement a plan for long-term recruitment of LWD.
CM-MW-04	Cooperate in establishing monitoring stations at appropriate locations (e.g., Squaw, Honeydew, and Bear creeks) to monitor in-channel sediment and track aggraded reaches in the lower basin and in the lower reaches of major tributaries.
CM-MW-05	Support the assessment, prioritization, and treatment of sources of excess sediment.
CM-MW-12	Work with the SWRCB to expedite the processing of projects, including 1600 agreements, that are intended to reduce summer diversions.
CM-MW-14	Develop incentives for landowners and communities to reduce summer water withdrawals and enhance habitat.
CM-MW-18	Treat high priority barriers to coho salmon passage.
EO-17	Establish contacts and organize events that bring resource-dependent people from throughout the Klamath Basin together, and that foster communication, friendship, and cooperation. Short-term: Organize an event/gathering that people throughout the Klamath Basin might want tottend (SSRT brainstorming needed). Long-term: Continue to organize basin wide gatherings regularly, and publicize these gatherings widely.
EP-HU-02	Work with agencies and landowners, to re-establish estuarine function.
EP-HU-04	Assess and prioritize sources of sediment and implement remediation projects.
EP-HU-05	Implement the prioritized remediation projects for the sources of sediment.
EP-HU-09	Improve quality and quantity of deep pools and spawning gravels.
EP-HU-10	In cooperation with willing landowners, restore and maintain historical tidal areas, backwater channels and salt marsh.
EP-HU-12	Restore channel conditions important for all life stages of coho salmon.
EP-HU-15	Identify impacted reaches where a functioning flood plain could be re-established: a. Prioritize areas that are not naturally functioning for restoration potential; and b. Develop site specific project objectives to protect and restore naturally functioning channel and flood plain conditions where feasible.
EP-HU-17	Establish access for both adult and juvenile coho salmon to suitable habitat where practicable.
EP-HU-18	Prioritize for repair all county culverts already identified as coho salmon passage barriers.

Task I.D. Number	Task Description
EP-HU-19	Assess and prioritize migration barriers other than county culverts (private roads, tide gates), including Rocky and Washington gulches.
EP-HU-22	Increase the amount of LWD in rearing reaches.
EP-HU-23	Establish adequate streamside buffer areas that are protected from vegetation removal ensuring retention of mature trees in the riparian corridor.
EP-HU-24	Increase canopy by planting appropriate conifer and hardwood species composition along the stream where the canopy is not at acceptable levels. In many cases, planting will need to be coordinated to follow bank stabilization or upslope erosion control projects.
EP-HU-28	Develop site specific riparian restoration plans to: a. Restore degraded riparian habitat; and b. Establish a monitoring program to evaluate success of restoration projects.
EP-HU-31	Reduce input of fine sediments into stream systems by: a. Conducting comprehensive road inventory; b. Carry out priority road related sediment reduction; c. Implement priorities for road-related sediment reduction projects identified in existing road inventories projects; d. Identify areas still needing road/erosion inventories; e. Identify on-going road maintenance needs; f. Identify landslide hazard areas such as steep unstable slopes, stream crossings,(other than those identified in the road inventory) and inner gorge area; g. Implement pre-project geological surveys and/or reducing management activities within these areas, especially road construction, grading, intensive timber harvests; and h. Identify and treat bank erosion sites.
EP-HU-37	Facilitate and sustain a well informed watershed community with regards to coho salmon habitat issues.
EP-HU-38	Ensure that there are adequate incentives for landowners who choose to protect and/or restore watershed processes.
ER-BE-03	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Improvement of existing riparian zones through plantings, release of conifers, and manage alders, blackberries, and other competitors; and c. Bank stabilization and fencing projects.
ER-BE-04	Assess and prioritize sediment sources, including roads.
ER-BE-05	Treat prioritized sediment sources, including roads.
ER-FE-05	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Improvement of existing riparian zones through plantings, release of conifers, and manage alders, blackberries, and other competitors; and c. Bank stabilization and fencing projects.
ER-FE-07	Treat prioritized sediment sources, including roads.

Task I.D. Number	Task Description
ER-HU-03	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Improvement of existing riparian zones through plantings, release of conifers, and manage alders, blackberries, and other competitors; and c. Bank stabilization and fencing projects.
ER-HU-04	Recommend that the SWRCB make a high priority the identification of unauthorized diversions and enforcement actions to stop them.
ER-HU-07	Implement the plan to restore an adequate migration corridor in the mainstem Eel River.
ER-HU-08	Assess and prioritize sediment sources, including roads.
ER-HU-09	Treat prioritized sediment sources, including roads.
ER-HU-12	Request that Caltrans assess, prioritize, and treat culverts that are barriers to passage on State highways. Identify barriers to passage and prioritize them for removal, through collaborative efforts with other agencies.
ER-HU-13	Explore opportunities to aquire conservation easements with conditions that benefit coho salmon.
ER-LA-01	Continue watershed restoration efforts, including measures to reduce temperatures in Ten-mile Creek.
ER-LA-06	Recommend that cities, counties, and Caltrans adopt maintenance manuals that protect coho salmon habitat (e.g., standards for side-casting of spoils and identification of spoils disposal sites).
ER-LA-08	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Improvement of existing riparian zones through plantings, release of conifers, and manage alders, blackberries, and other competitors; and c. Bank stabilization and fencing projects.
ER-LA-10	Treat prioritized sediment sources, including roads.
ER-OC-04	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Improvement of existing riparian zones through plantings, release of conifers, and manage alders, blackberries, and other competitors; and c. Bank stabilization and fencing projects.
ER-OC-06	Treat prioritized sediment sources, including roads.
ER-VD-06	Treat sediment sources including roads.
ER-WE-01	Complete storm proofing of the Bull Creek watershed.
ER-WE-02	Continue to implement the planting of trees and other habitat enhancement as necessary in the Bull and Salmon creek watersheds.
ER-WE-03	Assess and prioritize culverts that are barriers to coho salmon passage along Avenue of the Giants through collaborative efforts with other agencies.

Task I.D. Number	Task Description
ER-WE-05	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Improvement of existing riparian zones through plantings, release of conifers, and manage alders, blackberries, and other competitors; and c. Bank stabilization and fencing projects.
ER-WE-06	Assess and prioritize sediment sources, including roads.
ER-WE-07	Treat prioritized sediment sources, including roads.
ER-YA-03	Treat prioritized sediment sources, including roads.
KR-HU-12	Protect and enhance tributary reaches identified as providing refugia to juvenile coho salmon.
KR-HU-14	Implement the plan that addresses water quality and quantity in the Klamath River tributaries that exacerbate mainstem water quality problems.
KR-HU-23	Promote public interest in the Klamath River Basin's coho salmon, their beneficial use and habitat requirements.
KR-KG-02	Develop a plan to restore off-channel estuarine, wetland, and slough habitat in the Klamath River estuary and adjoining lower tributary reaches that includes: a. Determining if key properties, conservation easements, or development rights need to be purchased and the work with wiling landowners; and b. Determining the need and installation of livestock exclusion fencing to protect restored areas.
KR-KG-04	Develop a plan to maintain Blue Creek watershed tributaries as key thermal refugia for their cool water contributions to the mainstem Klamath River. The plan should emphasize that: a. Sediments from upslope activities do not impact the refugia; b. Upslope stabilization and restoration activities continue, including road assessment and treatment; c. In-channel and riparian restoration efforts (target riparian retention efforts) continue; and d. Feral cattle are removed.
KR-KG-05	Implement the plan to maintain Blue creek watershed tributaries as key thermal refugia for their cool water contributions to the mainstem Klamath River.
KR-KG-06	Develop a plan to protect and restore Klamath River mainstem tributaries, even those that do not support populations of coho salmon but that provide cool water and which improve mainstem Klamath water quality, particularly during warm summer months. Plan should emphasize the: a. Protection and/or restoration of riparian habitat; b. Stabilization of upslope areas to prevent sedimentation and aggradation of tributaries at their mouths; c. Improvement of Federal land management activities to reduce impacts to riparian corridors and decrease sediment loads; and d. Finalize and/or refine the Lower Klamath Sub-Basin Watershed Restoration Plan (Gale and Randolph 2000) that focuses on the tributaries to the Lower Klamath within the Klamath Glen HSA.
KR-KG-07	Finalize and Implement the Lower Klamath Sub-Basin Watershed Restoration Plan (Gale and Randolph 2000) to protect and restore Klamath River mainstem tributaries.

Task I.D. Number	Task Description
KR-KG-08	Reduce sediment input from upslope sources, including activities such as: a. Decommissioning skidtrails and unmaintained roads, where possible; b. Upgrading roads and maintenance practices; c. Stabilizing slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams, and d. Minimizing alteration of natural hillslope drainage patterns.
KR-KG-13	Treat sediment sources and improve riparian and instream habitat conditions to provide adequate and stable spawning and rearing areas for coho salmon.
KR-KG-14	Develop a plan to restore in-channel and riparian habitat in tributaries to address: a. Revegetating riparian zones with native species (e.g., conifers) to stabilize stream banks and promote a long-term supply of LWD; b. providing adequate protection from development, grazing, etc; and c. Relocating roads out of riparian areas when feasible.
KR-KG-15	Implement the plan to restore in-channel and riparian habitat in tributaries.
KR-KG-17	Implement the plan to provide suitable accumulations of woody cover in slow-velocity habitats for coho salmon winter rearing on a short-term basis by placing wood in needed areas until natural supplies become available.
KR-KG-22	Encourage cooperation between industrial timber land managers and tribes to restore coho salmon habitat Use the successful Tribal/Simpson Resource Company program as an example.
KR-KG-23	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Management to promote conifer recruitment; c. Improvement of existing riparian zones through planting and release of conifers, and control of alders, blackberries, and other competitors; and d. Provide technical support as an incentive for landowners.
KR-KG-27	Support continued implementation of the Coho Salmon Regional Abundance Inventory throughout the lower Klamath River subbasin.
KR-OR-07	Implement the plan to protect and enhance Bluff and Red Cap creek watersheds.
KR-SV-01	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months. The plan should: a. Improve land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources; b. Request that the SWRCB review existing water appropriations for compliance; c. Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and d. Provide measures that reduce hydrologic connectivity between streams and roads where feasible.

Task I.D. Number	Task Description
MA-1d	Assess water quality/quantity parameters including but not limited to dissolved oxygen, pH, suspended sediment, temperature, turbidity, flow, hyporheic flow, nutrients/pollutants (agricultural return flows, pesticides, herbicides, wastewater) and monitor changes through time. Identify and assess point and non-point pollution sources (e.g., irrigation returns, sediment). Coordinate with the TMDL process. Short-term: Design and implement comprehensive assessment and monitoring incorporating protocols developed in range-wide or regional monitoring programs. Long-term: Continue implementation.
MA-1i	Inventory, evaluate, and monitor changes in land use practices over time including conversion from agriculture to other uses for impacts on coho salmon and their habitat. Short-term: Collect baseline data. Long-term: Evaluate and incorporate information into the County land use policy.
MA-1j	Conduct adult and juvenile current and potential carrying capacity estimates and monitor changes over time. Short-term: Assess and estimate current and potential carrying capacity. Evaluate potential method for predicting carrying capacity. Long-term: Apply abundance data to determine realization of carrying capacity.
MA-2a	Conduct limiting factors analysis and monitor changes through time by life stage for coho salmon. Short-term: Identify additional data needs to complete both efforts. Assess disease as a limiting factor. Long-term: Develop management plans for remediation of limiting factors. Monitor effects to coho salmon populations and habitat.
MA-2b	Continue to identify the historic and current distributions of coho salmon adults and juveniles within the Scott Bar, Scott Valley, and Shasta Valley HSAs. Short-term: Identify, evaluate, and map coho salmon spawning and rearing habitat utilization areas and monitor changes through time. Long-term: Monitor and analyze spatial structure and changes in distribution through time. Continue to implement and use results to modify monitoring protocols, and modify restoration techniques.
MA-2c	Conduct adult and juvenile abundance estimates and monitor changes over time. Short-term: Begin abundance surveys. Develop and implement statistical methodology for adult and juvenile salmon. Improve methods for counting adult salmon in the Scott. Long-term: Continue and improve abundance surveys. Use data to develop annual adult and outmigrant abundance estimates for both valleys.
MA-2d	Conduct analysis of juvenile growth rates and production estimates and monitor changes through time. Short-term: Develop and implement a comprehensive study plan with appropriate agencies Long-term: Continue studies and apply results as appropriate.
MC-AR-01	Place instream structures to improve gravel retention and habitat complexity.

Task I.D. Number	Task Description
MC-AR-02	Provide technical assistance and incentives to landowners in developing and implementing sediment reduction plans to meet requirements of the CWA TMDL, making watersheds with an implementation schedule the highest priority.
MC-AR-07	Modify stream barriers to allow coho salmon passage while maintaining LWD.
MC-BR-03	Identify actions to improve coordination between the agencies and others to address season of diversion, off-stream reservoirs, bypass flows protective of coho salmon and their habitat including spawning gravel and natural hydrograph, and avoidance of adverse impacts caused by water diversion.
MC-GA-06	If appropriate, restore estuary function to benefit coho salmon.
MC-GA-08	Maintain Hathaway Creek, North Fork Garcia, Rolling Brook, Mill Creek (lower Garcia River), South Fork Garcia, Signal, Mill Creek (upper Garcia River) to continue to provide coldwater input to the mainstem Garcia.
MC-GA-11	Where necessary and with willing landowners, protect riparian vegetation buffer zones through conservation planning, acquisition, and easements.
MC-GA-17	Complete the remaining 25% of erosion control sites, identified in the South Fork Garcia River by the Trout Unlimited North Coast Coho Salmon Project.
MC-GA-18	Where appropriate and with willing landowners, place LWD in Inman Creek, South Fork Garcia River, Signal Creek, and North Fork Garcia River.
MC-HU-07	Include coho salmon in CEQA checklist.
MC-HU-09	Install LWD, boulders, and other features to increase stream complexity and improve pool frequency and depth.
MC-HU-11	Assess and prioritize sediment sources at an HSA level to decrease streambed fine sediments and pool filling. Includes upslope roads upgrade/ decommission.
MC-HU-18	Introduce instream wood to improve shelter value, pool frequence, and pool depth. Focus on key streams for coho salmon (Appendix D, recovery strategy).
MC-HU-19	Avoid or minimize land fragmentation or conversion to more intensive uses to maintain pool frequency and depth.
MC-HU-35	Streamline permitting of coho salmon habitat restoration projects (RWQCB 401, USACE 404, NOAA Fisheries, and FWS permitting).
MC-HU-36	Encourage funding authorities to allocate adequate resources to prioritize and upgrade culverts to provide coho salmon passage within the range of coho salmon to pass 100-year flows and the expected debris loads.
MC-HU-37	Adequately fund prioritization and upgrading of culverts to provide coho salmon passage within the range of coho salmon to pass 100-year flows and the expected debris loads.
MC-HU-38	Identify areas of increased risk of mass wasting and fine sediment loads to decrease sediment from transportation projects and land management activities.

Task I.D. Number	Task Description
MC-HU-40	Abandon riparian road systems and/or upgrade roads and skid trails that deliver sediment to adjacent watercourses to decrease fine sediment loads.
MC-HU-46	Treat sediment sources, based on prioritization and current list of key streams for coho salmon (Appendix D, recovery strategy)
MC-HU-48	Upgrade culverts to provide coho salmon passage and pass 100-year flows and expected depris loads.
MC-HU-49	Conduct comprehnsive sub-basin erosion control 'storm-proofing,' combined with installation of LWD into streams. Apply to all HSA's.
MC-HU-50	Modify stream barrriers to allow coho salmon passage while maintaining in-stream LWD. Apply to all HSA's.
MC-NA-02	Pay particular attention to Implementing actions regarding LWD and shade that are suggested at the HU level.
MC-NA-05	Implement comprehensive, subbasin-wide erosion control and LWD installation for Flynn, Dutch Henry, John Smith, Minnie, Horse Camp and German creeks such as is being implemented on Little North Fork.
MC-NO-01	Investigate the role of the Pudding Creek Dam impoundment in coho migration and freshwater survival rate.
MC-NO-03	Implement actions of a sediment reduction plan to improve water quality.
MC-NO-04	Fund activities to address sedimen sources and tbarriers to coho salmon passage on the California Western Railway right-of-way.
MR-BL-01	Develop a watershed restoration plan in conjunction with landowners, municipalities, and Tribal interests.
MR-BL-06	Assess barriers to coho salmon passage, prioritize barriers for removal, and treat the barriers, with Warren, Lindsay, and Essex creeks given a high priority for treament.
MR-BL-07	Continue stream management activivties with landowners in Lindsay Creek
MR-BL-08	Continue road and/or watershed assessments to identify and prioritize sources and risks of road related sediment delivery to watercourses.
MR-BL-10	Treat high priority barries to coho salmon passage.
MR-BV-01	Establish adequate streamside buffer areas to promote appropriate water temperatures for coho salmon.
MR-BV-05	Address priority sources of fine and coarse sediments into streams.
MR-BV-08	Treat prioritized culverts to allow access to suitable habitat for juvenile or adult coho salmon.
MR-HU-03	Work with landowners and other entities to: a. Protect existing LWD recruitment potential through the retention of mature coniferous trees in the riparian zone; b. Establish adequate streamside buffer areas; c. Increase the amount of in-channel LWD; d Continue to review THPs; and e. Continue riparian management projects.
MR-HU-07	Assess barriers to coho salmon passage, prioritize barriers for removal, and develop a plan to treat the barriers.

Task I.D. Number	Task Description
MR-HU-08	Develop a plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage. This is a known problem at Cañon Creek, Dry Creek, North Fork Mad River, and other streams. The plan should: a. Evaluate management techniques; b. Implement the identified strategy; and c. Address permitting complexity for identified implementation measures.
MR-HU-13	Encourage Federal, State, and county agencies and private landowners to reduce impacts to coho salmon habitat from public and private road systems.
MR-NF-04	Treat high priority barries to coho salmon passage.
P-1	Screen all diversions in the known and potential range of coho salmon. Short-term: Identify funding and complete ongoing screening program within known and potential range of coho salmon. Assess habitat that will be made accessible to coho salmon after completion of scheduled projects. Coordinate between involved Federal and State Agencies, local and private entities to develop a prioritized list of any remaining unscreened diversions and action plans including designs. Long-term: Deal with screen maintenance problems. Identify funding and complete ongoing screening program within the known and potential range of coho salmon. Develop protocols for coho salmon trapping and relocation. Establish verification procedures to assure that screens are properly installed and maintained by person(s) benefiting from use of the screened diversion. Support evaluation of, and transition to, less labor intensive designs to minimize future maintenance.
P-2	Promote and encourage protection of riparian zones that are important for coho salmon through fencing or other measures. Use grazing management, where appropriate, in association with vegetation utilization monitoring and stream-bank protection. Short-term: Identify and continue to develop incentive based programs (e.g., NRCS's CRP) for riparian protection zones. Develop GIS layer for accomplished and needed protection areas. Limit funding to planting of trees from local native stock only. Provide funding for greatly expanded tree re-planting program. Provide protection for remaining large trees along Shasta from beavers. Provide public with visual aids and recognition of achievement of desired future condition. Fund studies to solve regeneration problems as found in Shasta due to altered hydrological cycle and Scott due to drop in groundwater level. All riparian areas within range of coho salmon will be identified and protected within 5 years. Long-term: Develop long range riparian protection goals statement and recommendations based on stream meander width (e.g., Rosgen et al. year?). Continue to emphasize need to establish/protect/maintain desired conditions. If consequences of altered hydrograph in Shasta cannot be overcome with native trees, investigate and develop biologically appropriate recommendations.

Task I.D. Number	Task Description
P-3	Expand routine/ daily fish screen maintenance program (volunteer and paid) whether installed with grant funds or by the CDFG. Short-term: Local groups to work with CDFG and NOAA to develop comprehensive maintenance program by 2005. Work with screen users to develop inspection verification procedure for use after transition period. Use time afforded by grant funds to transition away from non-owner screen maintenance and, where appropriate, transfer screen maintenance to the diverter. Prepare maintenance manual, provide part names, numbers and sources, encourage local hardware or farm supply store to stock parts subject to wear, or make arrangements for CDFG to stock and sell. Use existing grant-funded personnel to assess existing screens (public and private) to identify all normally replaceable parts used, to modify screens where possible to standardize all parts possible, and prepare hardware lists of replacement parts and number of screens needing each. Long-term: Long-term procedure should implement inspection/verification, integrated with verification of water use described in WM-2. Provide periodic on-site training on proper screen maintenance and repair.
P-5	Develop construction and removal procedures or alternate means of diverting water for irrigation dams (gravel or flashboard) that minimize impacts to coho salmon. Short-term: Identify locations of existing structures, assess impacts to coho salmon, and recommend improvements to procedures and individual structure design. Work with diverters to implement these improvements. Determine timing of coho salmon emergence. In Shasta, proceed to implementation phase, complete assessments. Eliminate passage problems wherever possible, install or replace ladders where necessary as short term fix. Provide qualified CDFG engineer for design assistance in retrofitting barriers with ladders or correcting problems with locally produced and installed ladders as short term, temporary fix. Develop BMPs for removal/ replacement/ operation, and include these in 1600 process and monitor for effectiveness for both agriculture and fish. Long-term: Work with other agencies to assure that additional barriers are not created in future. Eliminate or reduce passage problems where ladders were used as short-term solutions or mitigation. Fund experimental designs to test approaches under local field conditions.
RC-BV-03	Implement the recommendations contained in the assessments for sediment paying particular attention to road assessment and improvement projects; also incorporate measures to preclude sediment delivery to stream systems in near-stream land use planning (especially on slopes greater than 35%).

Task I.D. Number	Task Description
RC-HU-01	Work with Redwood National and State Parks (RNSP), private landowners, and interested parties to improve habitat conditions of the estuary while protecting Highway 101 and the Town of Orick. These plans should aim toward restoring the historic form and function of the estuary/lagoon and slough channels, riparian forests, and adjacent wetlands. This includes providing for: a. Unconfined channels by modifying levees; b. Restoration of riparian vegetation, tree cover, wetlands, and off-channel and rearing habitat; c. Increased sediment transport, pool depth, and LWD; d. Restoring natural drainage patterns from adjacent wetlands; and e. Improving the conditions of sloughs and tributaries to the estuary (Strawberry, Dorrance, and Sand Cache creeks).
RC-HU-08	Coordinate a long-term, concerted effort between land owners, interested parties, and responsible agencies to determine the current population size and trends of coho salmon of Redwood Creek.
RC-OR-01	Work with Redwood National and State Parks (RNSP), private landowners, and interested parties to improve habitat conditions of the estuary while protecting Highway 101 and the Town of Orick. These plans should aim toward restoring the historic form and function of the estuary/lagoon and slough channels, riparian forests, and adjacent wetlands. This includes providing for: a. Unconfined channels by modifying levees; b. Restoration of riparian vegetation, tree cover, wetlands, and off-channel and rearing habitat; c. Increased sediment transport, pool depth, and LWD; d. Restoring natural drainage patterns from adjacent wetlands; and e. Improving the conditions of sloughs and tributaries to the estuary (Strawberry, Dorrance, and Sand Cache creeks).
RC-OR-04	Complete the assessments of sediment sources and road upgrades.
RC-OR-06	Assess and prioritize barries to coho salmon passage.
RC-OR-07	Treat high priority barriers to coho salmon passage
RR-AC-03	Assess and prioritize sources of excess sediment.
RR-AC-04	Treat high-priority sources of excess sediment.
RR-AC-05	Identify and stock high-priority barren streams, including Ward Creek, with the coho salmon broodstock program.
RR-AC-06	Increase habitat structure and complexity to enhance habitat diversity for coho salmon.
RR-FO-01	Restore riparian vegetation to improve migration and summer/overwintering habitat for coho salmon.
RR-GE-01	Pursue land-use planning and conservation easements, from willing landowners, to maintain and improve riparian vegetation condition and water temperature.
RR-GU-02	Implement recommendations of completed non-point source sediment assessments.
RR-GU-03	Assess and prioritize sources of excess sediment.

Task I.D. Number	Task Description
RR-GU-04	Treat priority sources of excess sediment according to the DFG Russian River Fisheries Restoration Plan and other assessments.
RR-GU-09	Monitor, identify problems, and prioritize needs for changes to water diversion on current or potential coho streams that go dry in some years, in particular Green Valley and Dutchbill creeks.
RR-GU-14	Increase habitat structure and complexiity to enhance habitat diversty, including depositional/retention areas for spawning gravels for doho salmon.
RR-HU-01	Upgrade the Russian River Basin Plan to benefit coho salmon.
RR-HU-04	Assess, prioritize, and develop plans to treat barriers to coho salmon passage in all HSAs.
RR-HU-05	Treat barriers to coho salmon passage.
RR-HU-06	Assess riparian canopy and impacts of exotic vegetation (e.g., Arundo donax), prioritize, and develop riparian habitat reclamation and enhancement programs.
RR-HU-39	Upgrade or decommission problem roads which contribute sediment to streams inhabited by coho salmon. Reduce risk of road failure by upgrading stream crossings to recommended sizes.
RR-MS-03	If appropriate, operate the estuary as a natural system to benefit coho salmon rearing and migration.
RR-MS-10	In upper mainstem, prioritize and plan coho salmon habitat restoration programs and projects.
RR-MW-04	Assess, prioritize, and develop plans to treat sources of excess sediment.
RR-WS-01	Develop plans to improve riparian vegetation in Dry Creek and its tributaries.
RR-WS-09	Assess, prioritize, and develop plans to treat sources of excess sediment.
RR-WS-11	Increase habitat structure and complexity in Dry Creek (and it's tributaries) to enhance habitat diversity, including depositional areas for spawning gravels for coho salmon (e.g., place LWD or large boulders).
RW-AM-01	Support research necessary to understand crucial aspects and uncertainties regarding coho salmon ecology. Three important issues are: a. Genetic relatedness and health; b. Potential of local adaptive differences to environmental factors, specifically water temperature; c. Biological refugia, including non-natal rearing areas.
RW-AM-02	Evaluate and prioritize coho salmon issues and questions in need of research.
RW-AM-03	Develop and maintain data/information system for compiling, analyzing, and distributing information on the status and trend of coho salmon and the status of coho salmon recovery.
RW-AM-05	Use field-tested implementation, effectiveness, and validation monitoring protocols for coho salmon restoration activities.

Task I.D. Number	Task Description
RW-AM-06	Conduct key assessments to understand essential aspects of coho salmon populations and life-history, including: a. Relative abundance; b. Spawning sites/success; c. Estuary use; d. Barriers to juveniles; e. Over-wintering growth and survival; and f. Ocean condition effects on coho salmon populations.
RW-AM-07	Develop and implement a strategic, long-term population assessment and monitoring program for coho salmon.
RW-AM-08	Recommend to agencies and organizations that they assess and prioritize actions within a watershed prior to implementation of comprehensive restoration plans.
RW-AM-09	Fund research, monitoring, and evaluation of the effectiveness of restoration.
RW-EN-02	Fully enforce existing laws, codes, regulations, and ordinances that address the protection of coho salmon and their habitat. Habitat includes but is not limited to water (quality and quantity), pools, riffles, instream LWD, riparian vegetation, and estuaries.
RW-EN-06	Conduct field studies to evaluate impacts of water use on coho salmon.
RW-EN-10	Make a high priority of efforts to prevent unauthorized diversion and use of water and water permit processing.
RW-ER-01	Identify and characterize coho salmon refugia.
RW-ER-02	Provide information to land managers, agencies, and landowners of the location and characteristics of coho salmon refugia.
RW-ER-03	Identify key coho salmon populations.
RW-ER-04	Inform land managers, agencies, and landowners of locations of key coho salmon populations.
RW-ER-06	Allocate substantial improvement efforts towards identified biological refugia, spawning coho salmon populations, suitable habitat accessible to coho salmon.
RW-FP-01	Continue and complete assessments and prioritizations for correction of fish passage barriers.
RW-FP-03	Encourage funding authorities to provide adequate resources to construct new crossings and upgrade existing crossings (bridges, culverts and fills, other crossings) within the range of coho salmon to accommodate100-year flows flood and associated bedload and debris. Priority for upgrading should be based upon the potential impact to coho salmon habitat.
RW-FP-05	Evaluate NOAA Fisheries standards for passage at summer dams, and if necessary, develop additional policies and guidelines for passage at summer dams. Implement any recommendations resulting from this process.
RW-FP-07	Encourage funding authorities to allocate adequate budgets to Federal, State, and local agencies for identifying, designing, and implementing fish passage projects. This includes, but is not limited to, funding for road maintenance programs and capital project activities.
RW-HF-02	Within prioritized watersheds, reduce habitat fragmentation by restoring fish passage to high quality habitat.
RW-HO-01	Maintain the local genetic diversity of coho salmon populations.

Task I.D. Number	Task Description
RW-IM-02	Support continued and increased funding for the California Conservation Corps to implement coho salmon restoration projects throughout the coho salmon range in California.
RW-IN-15	Continue to implement FishNet 4C and Five County salmon restoration goals, including adopting and implementing Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet 4C 2004), training staff on guidelines, addressing fish passage and road sedimentation issues, developing riparian protections, promoting alternatives to conventional bank stabilization, and developing land-use policies beneficial to coho salmon.
RW-IN-16	Incorporate the Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet 4C 2004) within incidental take authorizations.
RW-LU-03	Establish incentives and standards to protect riparian and wetland areas on private lands.
RW-LW-01	Identify near stream vegetation communities that provide good opportunities for conifer LWD recruitment to coho salmon habitat. Address and identify possible solutions to potential conflicts between flood management activities and maintenance of riparian vegetation and LWD.
RW-LW-02	Provide education and information on the importance of these near stream communities to appropriate agencies, restoration funding groups, and landowners, and work to maintain them in a healthy condition.
RW-LW-03	Prioritize near stream vegetation communities for the purposes of restoring conifer LWD recruitment.
RW-LW-05	Encourage funding authorities to provide funding and technical support for riparian restoration.
RW-LW-08	Encourage Federal, State, and county agencies and private landowners to protect instream LWD to the greatest extent practicable without endangering public safety, life or property.
RW-PO-06	Educate and train restoration specialists and watershed restoration groups on the coho salmon recovery strategy.
RW-PR-21	Implement actions to address season of diversion, off-stream reservoirs, bypass flows protective of coho salmon and their habitat including spawning gravel and natural hydrograph, and avoidance of adverse impacts caused by water diversion.
RW-SD-01	Identify and prioritize specific sediment source locations for treatment that may deliver sediment to coho salmon streams.
RW-SD-02	Use protocols, such as the California Stream Habitat Restoration Manual Guidelines for upgrading areas of sediment delivery.
RW-SD-05	Continue to fund and provide technical support to local government and private landowner actions to reduce identified sediment input from upslope sources. Basin-wide assessments should prioritize remediation activities, which would include slope stabilization and minimizing sediment production.

Task I.D. Number	Task Description
RW-WP-01	Provide adequate funding to the agencies to coordinate and support preparation of comprehensive watershed assessments and restoration plans: a. Include a professional fisheries scientist; b. Assess streamflow, water diversions, water quality, sediment sources, fish barriers, riparian corridors, instream habitat, estuarine habitat, and land use, as necessary; and, c. Identify and prioritize site-specific restoration to benefit coho salmon.
RW-WP-02	Review existing, approved watershed management or restoration plans within the range of coho.
RW-WR-02	Identify unauthorized diversions.
RW-WT-01	Identify actions to maintain and restore water temperatures to meet habitat requirements for coho salmon in specific streams.
SA-HA-05	Provide coho salmon passage to all life history stages where roads affect streams inhabited by coho salmon implement the recommendations for the completed assessment of barriers.
Scott HM-1-1b	Identify methods for increasing habitat complexity and appropriate locations for instream habitat structures to create pools, increase habitat complexity, and improve bank stabilization. All bank stabilization projects should be done in a fish-friendly manner. Short-term: Research and quantify locations and develop restoration plans for them. Define what constitutes fish-friendly bank stabilization. Evaluate existing alternative bank stabilization methods. Continue to seek funding and carry out specific projects. Long-term: Assess and monitor activities to determine whether or not instream structures are working properly and doing no harm. There should be a decreasing need to install instream structures as natural river channel processes (channel meander, riparian vegetation recruitment, reduced sedimentations, etc.) are improved.
Scott HM-1-1c	Encourage riparian restoration projects using locally native vegetation. Project implementation should consider if: 1) the site previously supported riparian vegetation and still has the soil and hydrologic characteristics to support it; 2) the native plants selected are likely to flourish; 3) the width of the planted riparian zone is appropriate for the hydrologic regime at the site; and 4) the plan includes effectiveness monitoring using approved protocols. Establish procedures for recommending appropriate plant materials where natural conditions are significantly compromised. Short-term: Support ongoing riparian restoration efforts and continue to seek funding and carry out projects with an emphasis on the tributaries, especially those identified as potentially major coho salmon streams. Evaluate outcomes of replanting and research causes of riparian planting outcomes, appropriate width of planted areas, and new strategies for restoration. Monitor past projects to secure updated information on most effective techniques. Long-term: Assure implementation monitoring with emphasis on protecting the coho salmon refugia.

Task I.D. Number	Task Description
Scott HM-1-1e	Evaluate the use of beaver ponds and other efforts that contain similar benefits to increase habitat complexity. Short-term: Review literature (studies done in Washington and Oregon). Hold workshops and publish newsletters as appropriate. Investigate projects in prioritized areas to support beaver activity if appropriate. Coordinate with related projects to improve stream complexity and habitat. If projects are planned, ensure that riparian growth is adequate or provide materials for beaver needs, so that appropriate riparian cover is maintained. Long-term: Include implementation monitoring. If beaver reintroduction fails or is found to be inappropriate, consider analogous habitat attribute efforts.
Scott HM-1-2a	Identify location, timing, frequency and duration of thermal barriers to migration for adult and juvenile coho salmon. Develop habitat improvement measures that address temperature. Short-term: Identify and map locations and timing of thermal barriers. Coordinate information and projects to address appropriate solutions in prioritized areas with the most benefit to coho salmon. Long-term: Implement projects or measures in coordination with over-all habitat recovery process and monitor for improvements in an adaptive fashion.
Scott HM-1-2b	Investigate the contribution to stream cooling of the flow of cool water through gravel. Investigate the interference of fine sediment in that process. Short-term: Seek funding and carry out study using agreed-upon scientists identified by the Technical Committee of the SRWC. Long-term: Use results to plan projects and drive adaptive management.
Scott HM-1-2d	Model the relationship of temperature and flow and use the results to plan the timing and locations of water additions to the river. Short-term: Fund and implement temperature studies. Coordinate with the NCRWQCB TMDL process in data collection. Long-term: Monitor projects to determine optimum benefits are achieved with implementation of habitat improvement actions.
Shasta HM-1b	Implement habitat protection, restoration, and improvement projects that enhance rearing habitat in high priority areas. Short-term: Focus on areas currently accessible to coho salmon or potentially accessible (e.g. below Greenhorn and Dwinnell Dams). Conduct habitat suitability studies (see also Shasta HM-1a) on other streams to guide future actions. Coordinate with long-range planning effort for addressing barriers (Shasta HM-2). Possible projects to include are livestock control or exclusion fencing, tree and emergent planting, bioengineered bank stabilization, and irrigation tailwater reduction. Long-term: Continue projects. Monitor for effectiveness over the long term, utilizing adaptive management to fine-tune projects for best benefit to coho salmon.

Task I.D. Number	Task Description
Shasta HM-2a	Identify barriers to fish passage throughout the watershed for adults and juveniles, and work to implement solutions to these barriers. Short-term: At each site assess impacts on water quality and assess importance for coho salmon passage at each site. Assign each dam/impoundment a priority for reduction or removal. Work with users to select workable management measures. Implement short term solutions and work towards removal or remediation of passage problems at flashboard dams as soon as possible where feasible; otherwise develop temporary modifications to minimize passage and water quality problems. Long-term: Implement removal or remediation of passage problems at flashboard dams where feasible, otherwise modify to minimize passage and water quality problems. Continue to work with affected landowners and implement workable solution. Refine and Implement long-term solutions.
Shasta HM-2e	Eliminate barriers caused by high water temperatures throughout the river. Short-term: Work with Shasta Temperature model and through TMDL process to establish appropriate targets based on system capability. Provide for passage to safe areas in the short term.
SM-AN-01	Implement the projects recommended as high priority for coho salmon in the Gazos Creek watershed restoration plan.
SM-HU-05	Develop written standards for routine operations and maintenance.
SM-SG-04	Use the assessment results to develop a plan for restoration of coho salmon passage, instream habitat, and upslope erosion control, for implementation by cooperating landowners/managers.
SR-HU-01	Develop a program to control exotic vegetation which impedes access to and use of tributaries by coho salmon.
SR-HU-02	Implement a program to control exotic vegetation which impedes access to and use of tributaries by coho salmon.
SR-HU-03	Assess and prioritize barriers and impediments to passage (including water diversions), especially those on smaller tributaries, including Cedar, Clarks, Morrison, Peacock, Sultan, and Little Mill creeks.
SR-HU-04	Treat barriers and impediments to passage (including water diversions), especially those on smaller tributaries, including Yontocket, Tillas, and Tyron sloughs.
SR-HU-05	Develop a plan to restore the effectiveness and use of off-channel areas, sloughs, and wetlands.
SR-HU-08	Where feasible, restore channelized reaches back to more natural fluvial processes (e.g. meander belts that recruit stored spawning gravel, re-establish scour pools, recruit woody debris from banks).
SR-HU-09	Protect existing LWD recruitment potential through the retention of mature coniferous trees in the riparian zone.
SR-HU-17	Support and work with the watershed coordinator to aid in implementing recommendations.
SR-MC-01	Assess and prioritize sediment sources.

Task I.D. Number	Task Description
SR-MC-02	Treat sediment sources.
SR-MC-03	Develop a short-term plan to add LWD and a long-term plan to promote recruitment of LWD.
SR-MC-04	Implement the short-term plan to add LWD and a long-term plan to promote recruitment of LWD.
SR-MC-06	Implement the revegetation plan for the riparian zone.
SR-PL-01	Assess and prioritize barriers to coho salmon passage.
SR-PL-02	Treat the barriers to coho salmon passage.
SR-PL-03	Implement the plan developed at the HU-level that speaks to restoring the effectiveness and use of off-channel areas, sloughs, and wetlands; and specifically give immediate attention to Yontocket (partially Stateowned), Tillas and Tryon sloughs, and Elk Creek (Cresent City).
SR-WC-01	Develop a short-term plan to add LWD and a long-term plan to promote recruitment of LWD.
SR-WC-02	Implement a short-term plan to add LWD and a long-term plan to promote recruitment of LWD.
SR-WC-06	Treat the sources of sediment.
SS-HA-02	Reduce human-caused sediment input from upslope sources identified through public and private inventories.
SS-HA-03	Prioritize and implement remediation activities for human-caused sediment, which would include slope stabilization, minimizing sediment production, and eliminating coho salmon passage barriers.
SS-HA-04	Encourage Federal, State, and county agencies and private landowners to reduce impacts to coho salmon habitat from public and private road systems.
SS-HA-05	Continue road and/or watershed assessments to identify and prioritize sources and risks of road-related sediment delivery to watercourses.
SS-HA-07	Decrease potential for stream flow to become diverted at road crossings during high flow events, resulting in flow along the road that returns to the channel at undesirable locations.
SS-HA-12	Identify barriers to passage and prioritize them for removal, through collaborative efforts with other agencies.
SS-HA-21	Complete the comprehensive, peer-reviewed watershed restoration plans for the Shasta and Scott rivers that include identification and prioritization of all restorative needs in each basin. When restoration funds are limited, implementation should occur on the highest priority issues most likely to effectively address coho salmon needs within each basin.
SS-HA-25	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; and b. Management to promote conifer recruitment.
TP-BL-01	Continue to work with private landowners to develop riparian buffers with an adequate conifer component and canopy closure to reduce temperatures, increase LWD, and provide sediment filtration.
TP-LR-10	Treat high priority sediment sources.

Task I.D. Number	Task Description
TR-DC-04	Implement sediment reduction plans consistent with County plans and policies.
TR-HU-01	Implement the Trinity River Record of Decision (ROD), which would provide: a. Variable annual instream flows for the Trinity River from the Trinity River Dam (TRD) based on forecasted hydrology for the Trinity River basin as of April 1st of each year, ranging from 369,000 acre-feet in critically dry years to 815,000 af in extremely wet years; b. Physical channel rehabilitation, including the removal of riparian berms and the establishment of side-channel habitat; c. Sediment management, including the supplementation of spawning gravels below the TRD and reduction in fine sediments which degrade coho salmon habitats; d.Watershed restoration efforts, addressing negative impacts which have resulted from land use practices in the Basin; and e. Infrastructure improvements or modifications, including rebuilding or fortifying bridges and addressing other structures affected by the peak instream flows provided by the ROD.
TR-HU-04	Establish TMDL implementation plans for the mainstem and South Fork using the upslope indicators and targets established in the Main Stem Load Allocation.
WM-11a	Support completion of the Scott River Water Balance Study to learn how water behaves in the river; in particular establish the fate of water added to the Scott River to increase instream flow. The study should identify the best locations to augment flow and predict the impact of the additional water at downstream locations. Apply the results of the completed Water Balance Study to water management, water augmentation, and habitat enhancement recommendations. Short-term: Obtain funds to complete Water Balance Study. Use results to guide projects that will support improvement to coho salmon habitat. Long-term: Continue implementation.
WM-1a	Ask Scott River Watershed Council (SRWC) to develop a Dry Year Water Plan for the Scott. Components would include predetermined funding and prioritized actions for implementation, with identification of who, what, where, when, and how. Short-term: Seek funding and proceed with plan development. Long-term: Use plan to coordinate actions during low-water periods. Plan will define "low-water."
WR-SF-01	Develop a short-term plan to increase LWD until natural recruitment can be restored.
WR-SF-02	Implement the short-term plan to increase LWD.
WR-SF-04	Implement the long-term plan to restore a mature coniferous riparian zone to South Fork Winchuck River.
WUE-2	Promote and provide landowner workshops. Work with landowners to develop a method to prioritize efficiency improvements that will yield either increased instream flows or improved water quality. Use to avoid funding projects that would not benefit coho salmon. (See also EO-2.) Short-term: Evaluate and provide education as appropriate.

Task I.D. Number	Task Description
WUE-3	Identify water savings from lining and/or piping surface ditch systems. Identify and prioritize ditch systems that have potential water-saving benefits to coho salmon. Develop locally specific policies and provide guidance to entities that fund and review these projects. Evaluate potential negative impacts to groundwater, wildlife, and other resources that could result from lining or piping ditch systems. If appropriate, concurrently implement companion planned winter recharge program to maintain system balance. Short-term: Map all existing ditches, show season of use, quantity, and determine ditch loss. Prioritize potential ditch lining projects. Collect field data if needed. Consider opportunity for assured, measurable increase in quantity and duration instream flows in spring and fall relative to coho salmon needs for passage, other criteria as developed. Utilize outreach funds to develop appropriate lining projects, especially on shared ditches. Implement where costs, benefits and overall basin priorities coincide. Long-term: Continue implementation of high priority projects.

Appendix H. Materials provided by State Water Resources Control Board - Coho Recovery Activities

North Coast Instream Flow Policy

Background: Water diversions result in a significant loss of fish habitat in California. Water withdrawals change the natural hydrologic patters of streams and can directly result in loss or reduction of the physical habitat that fish occupy. Flow reduction can also exacerbate many of the problems associated with land use practices by reducing the capacity of streams to assimilate pollutants. Construction and operation of dams and diversions create barriers to fish migration, thereby blocking fish from access to historical habitat. Dams also disrupt the flow of food (i.e., aquatic insects), woody debris, and gravel needed to maintain downstream fish habitat.

Water Code section 1259.4, which was added by Assembly Bill 2121 (Stats. 2003, ch. 943, § 3), requires the State Water Resources Control Board (State Water Board) to adopt principles and guidelines for maintaining instream flows in northern California coastal streams as part of state policy for water quality control, for the purposes of water right administration.

State Water Board Action: The State Water Board adopted the Policy for Maintaining Instream Flows in Northern California Coastal Streams (policy) (adopted May 4, 2010, effective September 28, 2010). The policy applies to water right applications to appropriate water, small domestic use and livestock stockpond registrations, and water right petitions. The primary objective of the policy is to ensure that the administration of water rights occurs in a manner that maintains instream flows needed for the protection of fishery resources.

Contains:

- Principles and guidelines for maintaining instream flows for the protection of fishery resources while minimizing the water supply impacts on other beneficial uses including irrigation, municipal use, and domestic use
- Protective measures regarding the season of diversion, minimum bypass flow, and maximum cumulative diversion
- Limits on the construction of onstream dams with measures to ensure that approvals of new onstream dams do not adversely affect instream flows needed for fishery resources
- Guidelines for evaluating the effects of cumulative diversions on instream flow needed for fishery resources

Next Steps: Policy will be implemented in the processing of pending and new water right applications, petitions, and registrations in the policy area.

Coho Recovery Tasks:

Task Number	Task Description	Policy Section
RW-SF-08	Encourage NMFS and DFG to work with SWRCB to validate and modify the guidelines to be appropriate to the SONCC Coho ESU as needed	

RW-SF-10	Restrict the season of diversion to December through March	Section 2.2.1.1
RW-SF-01 and 02	Design / use passive diversion devices for water diversions	Section 5.0
RW-WR-09	Develop incentives for water right holders to dedicate instream flows	
RW-WR-11	Follow DFG-NMFS criteria for diversion screens	Section 6.0

Russian River Instream Flow Requirements

Background: State Water Board adopted Water Right Decision 1610 (D1610) in 1986 amending the Sonoma County Water Agency (SCWA) permits and setting the current minimum instream flow requirements for the Russian River. Decision 1610: 1) set instream flows to benefit both fishery and recreation uses while serving the needs of water diverters and 2) identified that additional fishery studies should be done in the Russian River and Dry Creek tributary.

The 2008 National Marine Fisheries Service (NMFS) Biological Opinion concluded that the current minimum instream flow requirements have an adverse effect on Central California Coast Steelhead and Central California Coast Coho Salmon because the artificially high flows limit the quality and quantity of rearing habitat. Reducing summertime flows in the Russian River and Dry Creek would provide better fishery habitat by reducing velocities, minimizing the need to artificially breach the sandbar at the river mouth and allow for the formation of a freshwater lagoon in the estuary. Based on the findings in the Biological Opinion SCWA has filed annual temporary urgency change petitions and a long term change petition to request modifications to the minimum instream flow requirements below Lake Mendocino and Lake Sonoma.

State Water Board Actions:
2010 Temporary Urgency Change Petition (TUC Petition) - The Division of Water Rights (Division) issued an order on May 24, 2010 approving the petition as follows:

- Reduction in Upper Russian River flow requirements (East Fork to Dry Creek) between May 25 – Oct 15 (from 185 cfs to 125 cfs)
- Reduction in Lower Russian River flow requirements (downstream of Dry Creek) between May 25 – Oct 15 (from 125 cfs to 70 cfs)
- Addition of special terms requiring fishery monitoring activities, water quality monitoring plan, water conservation and conjunctive use

2011 TUC Petition - The Division issued an order on June 1, 2011 approving the petition, similar to the 2010 TUC Petition, with the following additional condition:

- Allowing the minimum instream flow requirement that applies to the Upper Russian River to be implemented on a 5-day running average of average daily stream flow measurements, with the stipulation that instantaneous stream flows will be no less than 110 cfs.

2012 TUC Petition - The Division issued an order on May 2, 2012 approving the petition, similar to the 2011 TUC Petition.
Long Term Change Petition - SCWA submitted a petition in September of 2009 to modify the minimum instream flow requirements of their water right permits. The Division issued a public notice of the petition in January 2010. Approximately 396 protests were received. SCWA is the Lead agency as defined in the California Environmental Quality Act (CEQA) for this petition and is in the

process of preparing the CEQA document analyzing the requested change. The State Water Board will be a Responsible Agency as defined by CEQA.

Next Steps: The State Water Board will consider SCWA's request along with the information provided in the CEQA document and determine whether the water right permits will be amended and, if so, whether additional conditions should be included in the amended permits to protect the environment and downstream water users.

Coho Recovery Tasks:

Task Number	Task Description
RR-MS-01	Manage summer flows in the mainstem Russian River to benefit rearing coho salmon and the estuary, while ensuring that all existing legal water uses and rights are accounted for
RR-MS-02	Evaluate operating the estuary as a natural system to benefit coho salmon rearing and migration

Statements of Diversion and Use

Background: The Statement of Water Diversion and Use (Statements) Program was established in 1965 as a means for surface water diverters with riparian claims and water appropriated prior to December 1914 (Pre-1914 claim) to make an official record of their water usage with the State Water Board. Under the previous requirements, many water diverters were exempt from reporting on a Statement. In 2009, the legislature revised the regulations for the requirements to report surface water diversions under the Statements Program. The program was expanded to include all surface water diverters who were not permitted or licensed with an appropriative right from the State Water Board. The changes also give the State Water Board the authority to administer civil liabilities to diverters who are found in violation of the law.

Beginning January 1, 2012, water diverters who filed Statements are also required to measure the monthly amount of water diverted using best available technology and best professional practices, and report those monthly amounts when they submit their reports the following year (2013). The information collected from the Statements helps the Division to protect the rights of existing and known diverters and to evaluate whether there is a reasonable likelihood that water is available for appropriation for new applications. Water use reported on Statements and on reports required under appropriative rights will help the Division to assure the proper allocation of the state's water resources.

2009 Changes in Water Code

- Eliminate some of the exemptions previously allowed under the law
- Includes new penalties for failure to file a statement ($1,000 initial and $500 per/day after notification)

State Water Board Action: In April 6, 2010, the Division notified diverters with pending applications that statements must be filed for 2009 by July 1, 2010. Enforcement actions have been taken for failure to file reports.

Next Steps:

- Enter Statements into eWRIMs (electronic water right information management system)
- Implement mandatory online filing beginning 2011

Coho Recovery Tasks:

Task Number	Task Description
RW-WR-04	Inventory water use and water availability in streams with coho salmon habitat
RW-WR-07	Continue to require riparian and pre-1914 water users to file annual statements of diversion and use

Russian River Frost Protection Regulation

Background: Much of the floodplain area along the Russian River is cultivated for wine grape production. When "bud-break" occurs on the grape vines, the crops become susceptible to damage by frost. It is the general practice of growers to protect their vines with water during frost events in order to minimize crop loss, however, some growers rely on alternative protection methods including heaters, wind machines, and helicopters. During a frost event, the high instantaneous demand for water for frost protection can cause rapid decreases in flow. The resulting receding water levels can strand juvenile salmonids along margins and in riffle habitat.
NMFS documented two episodes of fish stranding mortality that occurred in April 2008, the first on Felta Creek in Sonoma County, and the second on the mainstem of the Russian River, near Hopland in Mendocino County. NMFS requested the State Water Board take immediate actions to address concerns that water diversions for purposes of frost protection may cause significant salmonid mortality.

State Water Board Action: On September 20, 2011, the State Water Board adopted a Frost Protection Regulation for the Russian River watershed. The regulation provides that, with the exception of diversions upstream of Warm Springs Dam in Sonoma County or Coyote Dam in Mendocino County, any diversion of water from the Russian River stream system, including the pumping of hydraulically connected groundwater, for purposes of frost protection from March 15 through May 15, shall be diverted in accordance with a board-approved Water Demand Management Program (WDMP). The diversion of water in violation of this regulation would be an unreasonable method of diversion and use and a violation of Water Code section 100. The regulation requires any WDMP to manage the instantaneous demand on the Russian River stream system during frost events to prevent stranding mortality.

The WDMP's are to be administered by an individual or governing body capable of ensuring that the goals of the program will be met. In addition, the WDMP is required to include the following: (1) an inventory of the frost diversion systems within the area subject to the program, (2) a stream stage monitoring program, (3) an assessment of the potential risk of stranding mortality due to frost diversions, (4) development and implementation of a corrective action plan if necessary to prevent stranding mortality, and (5) annual reporting of program data, activities, and results.

After adoption of the Frost Protection Regulation, the State Water Board was sued by two different groups. One case was filed in the Mendocino County Superior Court and the other in the Sacramento County Superior Court. On February 2, 2012, the Mendocino County Superior Court issued an order temporarily staying enforcement of the Russian River Frost Protection Regulation (Regulation). Both cases were consolidated and a hearing was held in the Mendocino County Superior Court on June 28, 2012. A decision by the court is currently pending.

Next Steps: Await a decision by the court on the merits of the Regulation. State Water Board staff will continue to assist diverters in voluntarily implementing the "phased approach" to the Regulation outlined in State Water Board Resolution No. 2011-0047.

Coho Recovery Tasks:

Task Number	Task Description
RR-HU-03	Review, and modify if necessary, water use based on the needs of coho salmon and authorized diverters
RR-HU-41	Develop and implement programs to protect and increase instream flows

Water Right Instream Flow Dedications

Background: State law allows for water right holders in California to petition to dedicate some or all of their water rights for a purpose of use of fish and wildlife enhancement. This dedication may be made through a short or long-term transfer of the water, or may be made through a permanent change in purpose and place of use. Dedications of water to instream purposes can benefit instream and riparian resources and at the same time relieve a water right holder of the requirement to make beneficial use of the water in years when water is dedicated.

State Water Board Action: The State Water Board considers petitions for instream flow dedication to be the highest priority for processing, and endeavors to complete the processing in as short a time and with the least expense to the petitioner as possible. Since 2004, the State Water Board has issued amended water rights that include instream flow dedication for many watersheds, including the Scott Valley HSA, Lagunitas Creek HSA, and Bolinas HSA.

Next Steps: The State Water Board will continue to make instream flow dedications a priority, as an incentive to promote the use of this tool, and will complete processing of a new dedication in the Lagunitas Creek HSA as soon as possible.

Coho Recovery Tasks:

Task Number	Task Description
RW-WR-09	Develop incentives for water right holders to dedicate instream flows for the protection of coho salmon (Water Code 1707)

Enforcement

Background: Water Code section 1825 states: "It is the intent of the Legislature that the state should take vigorous action to enforce the terms and conditions of permits, licenses, certifications, and registrations to appropriate water, to enforce state board orders and decisions, and to prevent the unlawful diversion of water." The Strategic Plans for both Cal/EPA and the State Water Board identify improvement in enforcement programs as a priority. Additionally, the Legislature enacted Water Code section 1259.4, which required that by January 2008 the State Water Board adopt a policy for principles and guidelines to maintain instream flows in coastal streams within the counties of Marin, Sonoma, Napa, Mendocino and Humboldt. This policy included enforcement provisions. As a result of Senate Bill 8 (SBX7 8), which was passed by the Legislature in 2009, the State Water Board was authorized to increase its Water Right Enforcement resources by 25 PYs.

State Water Board Action: The Division filled most of these new positions and at the same time restructured its Enforcement Program. The Division will maintain a compliance and enforcement presence throughout the state, with current emphases on high resource value areas, including Northern California coastal streams. The Enforcement section will coordinate with the Department of Fish and Game (DFG) and NMFS, as appropriate, on specific enforcement actions relating to projects having alleged impacts to instream resources. Formal enforcement actions have been taken, when appropriate.

Next Steps: Continue to evaluate compliance and pursue enforcement actions where appropriate. Coordinate with the CDFW and NMFS to ensure that staff resources are utilized in the highest priority areas.

Coho Recovery Tasks:

Task Number	Task Description
RW-WR-02	Identify unauthorized diversions
RW-EN-09	Coordinate enforcement efforts with local, State and federal agencies with regulatory authority affecting coho salmon
RW-EN-10	Make a high priority of efforts to prevent unauthorized diversion and use of water and water permit processing
RW-EN-11	Adequately fund water diversion enforcement and permit programs

Electronic Water Rights Information Management System (eWRIMS)

Background: The electronic Water Rights Information Management System (eWRIMS) is a computer database developed by the State Water Board to track information on water rights in California. eWRIMS contains information on Statements of Water Diversion and Use that have been filed by water diverters, as well as registrations, certificates, and water right permits and licenses that have been issued by the State Water Board and its predecessors. eWRIMS also features an online reporting component. The Report Management System provides water right holders the ability to report monthly diversion and use electronically.

Users can search eWRIMS data by several criteria, including the water right owner's name, watershed, stream system, and county. After a water right search has been executed, users can plot the results. The Geographical Information System (GIS) will visually display the point(s) of diversion for each of the water rights that matched the search criteria. In the GIS, important information can be viewed about each water right that has been selected.

Next Steps: In addition to ongoing general improvements, the State Water Board will continue to upgrade eWRIMS, including, but not limited to tasks such as:

- Enhancement of the existing eWRIMS Stream Trace functionality
- Development of a service to calculate catchments, attributes and generate impact analysis reports
- Revision of the Place of Use GPS and scanning applications to operate in the ArcGIS 10.X environment

Coho Recovery Tasks:

Task Number	Task Description
RW-EN-04	Review diversions and use of water in priority coho salmon streams to determine which permits and/or licenses need modification for the protection of coho salmon
RW-EN-20	As staffing allows, review all applications for proposed projects that may impact coho salmon
RW-SF-16	Upgrade the existing water rights information system so that water allocations can be readily quantified by watershed
RW-WR-01	Review authorized diversions that have no provisions to protect coho salmon in areas with high priority coho salmon habitat
RW-WR-04	Inventory water use and water availability in streams with coho salmon habitat
RW-SF-16	Upgrade the existing water rights information system so that water allocations can be readily quantified by watershed

Appendix I. Materials provided by Trout Unlimited - Coho Recovery Projects

A. Cooperative Streamflow Improvement Projects

Coastal Streamflow Stewardship Project

In 2008, the California Coastal Conservancy awarded funding to Trout Unlimited (TU) and the Center for Ecosystem Management and Restoration (CEMAR) to implement the Coastal Streamflow Stewardship Project (CSSP). The objective of CSSP is to improve streamflow and water supply reliability by working cooperatively with landowners. Through CSSP, we partner with landowners and water users in coastal California watersheds to develop water management tools and identify projects to protect and reconnect streamflow for fisheries and improve water supply reliability for coastal communities.

Salmon and steelhead salmonid populations are in decline throughout coastal California. In many locations, the biggest problem is a lack of water. Even under natural conditions, many coastal streams experience very low streamflow during the late summer months. Water diversions for irrigation and other human needs can easily make these streams go dry. When we started CSSP, approximately 500 applications for new water rights were pending in California, including 300 located along the north central coast. The backlog was failing new applicants (because they were unable to get a water right), senior water right holders (because unauthorized diversions continued to operate without regard for the interests of prior appropriators), and public trust resources (because inadequate safeguards were in place to protect the instream flows necessary for fish and wildlife). In addition, water users with existing and valid water rights had little incentive to explore changes in water management and infrastructure that could benefit fisheries resources, especially if such changes meant entering difficult water rights and other permitting processes. Very few people or organizations have ever successfully completed projects to improve streamflows by working cooperatively with water users.

CSSP was created to test an approach to break through the stalemate and distrust that regularly characterize issues of water diversion, water rights, and streamflow in coastal systems. We do so by identifying and developing high priority and technically and socially feasible projects that do two things: (a) yield benefits for fisheries and human populations and (b) have demonstration value beyond the pilot watersheds. We hypothesized that, in many cases, shifting water demand from the dry season to the rainy season would benefit salmon and steelhead populations and meet human water needs. We believed that this could be done by developing tanks and agricultural ponds as an alternative to in-stream pumps or streamside wells, and could be accompanied by improvements in water use efficiency and rotations of diversions. We also hypothesized that investing in stream gauges and habitat-flow studies could allow us to make practical recommendations for water supply improvements, and we believed that investing even more heavily in discussions with the people who live along the streams could allow us to develop mutually beneficial projects. In sum, the overarching goal of CSSP is to devise a “comprehensive and coordinated approach to water management and instream flow protection” (California Coastal Conservancy 2008) that demonstrates that water rights system reform and fisheries conservation can be accomplished in tandem with water users.

Through CSSP, we selected four watersheds in which to pilot the approach—the Mattole River in Humboldt and Mendocino counties, Grape Creek (Russian River watershed) in Sonoma County, San Gregorio Creek in San Mateo County, and Little Arthur Creek (Pajaro River watershed) in Santa Clara County. In 2012, we added two others: Chorro Creek in San Luis Obispo County and Pescadero Creek in San Mateo County. In each of these watersheds, diminished streamflow is limiting salmonid recovery, but the restoration of streamflow appears promising and feasible and water users are eager to participate in conservation-oriented actions to benefit local fish populations. We selected watersheds characterized not by seemingly intractable conflict but rather by "medium-gnarly" water management challenges that would produce meaningful solutions. We also considered the diversity and breadth of the watersheds to be important: they are geographically diverse and present an array of land and water uses and opportunities so as to create flexible models with wide applicability.

Through CSSP, we drafted a streamflow improvement plan (SIP) for each watershed. The plans are intended to pave the way for high-priority capital projects to improve streamflow. SIPs are complete for two watersheds (the Mattole and Grape Creek), and are in the process of partner review for two others (Little Arthur and San Gregorio creeks). In the process of creating the SIPs, we identified and developed some of the highest priority projects for each watershed. Some of these have been implemented, and all are scheduled for completion within the next two years. They include:

- **Mattole River Headwaters**: (a) off-stream storage and dry season forbearance for Whitethorn School, (b) off-stream storage and dry season forbearance for Whitethorn Construction Company
- **Grape Creek:** (in tandem with the Russian River Coho Water Resources Partnership): (a) off-stream reservoir as alternative to pumping from well adjacent to the creek, (b) frost fan as alternative to diversion from on-stream flashboard dam, (c) off-stream storage and source switch as alternative to diversion from on-stream dam for frost and irrigation use
- **San Gregorio Creek**: (a) pump efficiency improvements and off-stream pond enlargement to reduce dry season diversion, (b) off-stream pond and dry season forbearance
- **Little Arthur Creek**: residential tank storage and dry season forbearance at four sites on the middle creek.

Project funders include: the California Coastal Conservancy, the Dean Witter Foundation, ESRI, National Fish and Wildlife Foundation, National Oceanic and Atmospheric Administration's Restoration Center, Natural Resources Conservation Service, the Richard and Rhoda Goldman Fund, Santa Clara Valley Water District, S.D. Bechtel Foundation, U.S. Fish and Wildlife Service, and the Wildlife Conservation Society (through the Wildlife Action Opportunities Fund supported by the Doris Duke Charitable Foundation), among others.

Water and Wine

Water and Wine is a partnership with grape growers in Northern California to enhance instream flows and salmonid habitat and fulfill agricultural water demands in Wine Country. Low stream flow in summer and fall adversely affects salmon and steelhead rearing habitat and leads to unreliable water supplies for growers. TU and the wine industry learned that we have a common interest in practices such as the use of stored, rainy-season water for irrigation as an alternative to summertime pumping from salmon streams. Water and Wine shares a nexus with the Coastal Streamflow Stewardship Project in Grape Creek.

Trout Unlimited and its Wine Industry partners launched the Water and Wine program in 2008. Water and Wine participants account for more than 30 generations and 725 years of experience of agricultural stewardship.

B. Regulatory Changes

TU also worked toward and provided input on important regulatory changes relevant to anadromous fisheries and water use. These include the Policy for Maintaining Instream Flows in Northern California Coastal Streams (North Coast Instream Flow Policy), the Russian River Frost Protection Reasonable Use Regulation, Small Irrigation Registrations, the streamlined policy for adding residential storage via Small Domestic Use Registrations, and other policy clarifications and incentives.

North Coast Instream Flow Policy. The SWRCB adopted the policy -- which was required by California Assembly Bill 2121 -- in May 2010 and it went into effect on September 28, 2010. The policy area extends from the Mattole River to San Francisco (including streams draining into northern San Pablo Bay). The policy applies to new water right applications (appropriative, small domestic use, small irrigation use and stockpond registrations) and water right petitions and it provides standard terms for bypass flows, rates of diversion, and seasons of diversion based on regional criteria protective of fisheries resources as well as guidance for site-specific habitat/flow instream flow studies. Notably, Section 3.3.2.5 of the policy provides incentives for water users wishing to switch the timing of their diversion from the dry to rainy season (*e.g.*, to off-stream storage) by providing for expedited permitting for projects with demonstrable fisheries benefits.

Frost Regulation. In response to the stranding and death of coho and steelhead in the Russian River watershed in 2008 and 2009, the SWRCB adopted a reasonable use regulation concerning diversions for frost protection in the Russian River watershed (23 Cal. CCR 3 § 862). The regulation was adopted on September 20, 2011 to reduce impacts on salmon and steelhead of water diversions for purposes of frost protection of crops in Mendocino and Sonoma counties. The regulation became effective on December 29, 2011 and the new regulations were scheduled to take effect on March 14, 2012, but litigation is pending. The regulation provides that any diversion of water from the Russian River stream system, including the pumping of hydraulically connected groundwater, for purposes of frost protection, from March 15 through May 15, shall be “unreasonable” and a violation of water code – unless the water is diverted in accordance with a Board-approved “Water Demand Management Program.”

Small Irrigation Registration. On October 10, 2011, Governor Brown signed water legislation (Assembly Bill 964) which will improve and expedite permitting for small off-stream storage ponds for frost protection. TU worked with the Wine Institute, legislators Huffman and Chesbro and staff to craft the language, and the law should create far-reaching benefits in our focal watersheds and elsewhere by expediting permitting for beneficial projects; the geographic scope of the bill is statewide.

We have also worked to create incentives for water users to engage in projects to improve instream flow: working with SWRCB to clarify that roof rainwater harvesting does not require a water right and working with SWRCB and other organizations to disseminate better information about Water Code Section 1707, which allows landowners to protect their water rights when they voluntarily forgo diversions.

Small Domestic Use Registrations. Following the Governor's declaration of drought emergency in January 2014, we approached DFW and SWRCB with a proposal to remove substantial permitting barriers encountered by existing riparian diverters who seek to add storage to their domestic water systems. Working with staff, we developed a set of standard terms that DFW can insert into qualifying registrations in lieu of a time-consuming and expensive site visit to develop site-specific terms. The standard terms incorporate a forbearance period calculated based on the registrant's daily water use and total storage capacity, and timed to coincide with the height of the dry season. Both agencies adopted our proposal with only minor changes, and will leave it in effect for the duration of the drought emergency.

C. North Coast Coho Project – Restoring Salmonid Habitat

The North Coast Coho Project (NCCP), initiated in 1998, is an innovative, entrepreneurial effort to restore entire coastal watersheds and return coho salmon to its historical habitat in Northern California. It is uniquely based on partnerships between TU, private enterprises, local, state and federal government agencies, and private contractors. The NCCP has been and continues to be successful in its ability to identify projects, secure funding, and implement restoration projects.

The mission of the NCCP is to restore wild coho salmon and steelhead trout populations to a viable, self-sustaining level in Northern California's coastal watersheds through coordinated efforts with landowners, local, state, and federal agencies and community watershed groups while utilizing the best available science and management practices and stimulating local and regional economies through watershed restoration projects.

The Project began in 1998 when the Mendocino Redwood Company, LLC (MRC-LLC) purchased Louisiana-Pacific's California holdings and became the largest private landholder in Mendocino County. Louisiana-Pacific had heavily logged the areas for decades with little concern for the salmon. TU approached MRC-LLC about launching a joint project to restore its new lands, and in an unprecedented agreement between a conservation organization and a forest products company, TU and MRC-LLC joined forces to restore beleaguered coho salmon and steelhead populations on California's north coast. Under the partnership, MRC-LLC is closing damaged roads, providing scientific information, and helping with instream restoration on eight coastal rivers: Garcia River, Navarro River, Albion River, Noyo River, Big River, Elk Creek, Cottaneva Creek, and Hollow Tree Creek (South Fork Eel River).

In 2001, the project expanded to another private timberland group –Hawthorne Timber Company, LLC (HTC), which purchased all of Georgia Pacific's landholdings in Mendocino County and is managed by Campbell Global, LLC (CG). HTC lands include several important coho and steelhead rivers including Ten Mile River, Pudding Creek, and Noyo River. In 2007, Redwood Forest Foundation, Inc (RFFI) purchased over 50,000 acres located in the Usal Creek and South Fork Eel River watersheds. The RFFI land, also managed by CG, is now part of the NCCP effort.

In 2008, the project expanded yet again when MRC-LLC's sister company, Humboldt Redwood Company, LLC (HRC) purchased all of Pacific Lumber Company's land in Humboldt County. On these lands, TU is working with HRC to restore habitat in Freshwater Creek, Elk Creek, and Van Duzen River.

In total, MRC-LLC, HRC, and CG manage over 600,000 acres in Mendocino and Humboldt counties and are the dominant land managers in at least a dozen key watersheds or subwatersheds.

Over the last decade, the NCCP has effectively managed over 20 watershed-level projects, reopened over 68 miles of stream to fish migration through the removal of 11 major migration barriers, installed over 1,110 instream features, evaluated over 800 miles of forest roads, and upgraded or decommissioned 514 miles of roads.

Project funders include: the Department's FRGP, National Oceanic and Atmospheric Administration's Restoration Center, CDFG Steelhead Report Card Fund, California Coastal Conservancy, the Dean Witter Foundation, National Fish and Wildlife Foundation, S.D. Bechtel Foundation, U.S. Fish and Wildlife Service, FishAmerica Foundation, Salmonid Restoration Association, among others.

Appendix J. Materials provided by Yurok Tribe - Coho salmon recovery activities

Juvenile coho salmon use of constructed off-channel habitats in two Lower Klamath River tributaries: McGarvey Creek & Terwer Creek

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Introduction

The Yurok Tribal Fisheries Program – Lower Klamath Division (YTFP) is dedicated to rehabilitating degraded stream and riparian habitats of the Lower Klamath River to levels that support robust, self-sustaining populations of native anadromous fish. Since 2007, YTFP has been working with Rocco Fiori of Fiori GeoSciences (FGS) to design and implement innovative stream and floodplain enhancement projects in priority Lower Klamath tributaries. Treatments have included installation of constructed wood jams and engineered log jams (CWJs & ELJs) to facilitate formation and maintenance of productive fish habitats (e.g. spawning beds, deep pools with cover, slow velocity areas), and enhancing off-channel habitats to increase salmonid rearing capacity (YTFP 2010; Hiner et al. 2011; Beesley and Fiori 2012a, 2012b, & 2013).

In 2009-2010, YTFP and FGS partnered with the U.S. Fish and Wildlife Service (USFWS - Tribal Landowner Incentive Program & Partners for Fish and Wildlife Program), the National Oceanic and Atmospheric Administration (Coastal and Marine Habitat Restoration Program - American Recovery and Reinvestment Act), and the U.S. Bureau of Reclamation (Native American Affairs Program). Primary objectives of these partnerships were to implement stream, riparian, and off-channel habitat restoration treatments in two priority Lower Klamath tributaries: Terwer Creek and McGarvey Creek (YTFP 2010; Fiori 2010; Fiori et al. 2009; Fiori et al. 2010; Fiori et al. 2011a & 2011b; Hiner et al. 2011; Beesley and Fiori 2012a).

In 2009, YTFP and FGS constructed two ELJs (ELJ 1 & Crib Wall Jam) and conducted extensive bioengineering in lower Terwer Creek as well as installed 13 CWJs in McGarvey Creek (Figures 1-6). In 2010, treatments included enhancement of two off-channel habitat features in Terwer Creek (Terwer Pond A & Terwer Pond B) and one in McGarvey Creek (McGarvey Alcove I) to increase juvenile salmonid rearing capacity (Figures 7-11). Physical habitat monitoring data collected in these treatment reaches indicates positive habitat response (e.g. reduced soil loss, increased pool formation & habitat complexity) to implemented treatments (Gale 2009; Hiner et al. 2011; Beesley and Fiori 2012b).

McGarvey Creek

Prior to off-channel enhancement in 2010 and 2012, the areas treated in lower McGarvey Creek were inundated only during very high tributary flow events or during backwater events created by high flows in the Klamath River. YTFP and FGS constructed the off-channel habitat features in a manner that has provided and will provide year-round habitat for native fish and amphibians.

Following construction of McGarvey Creek Alcove I, YTFP monitoring crews conducted fish surveys during winter, spring, and early summer 2011. In January 2011, crews captured a total of 54 juvenile coho salmon and several other native salmonids and amphibians. One of the coho captured during January was a PIT tagged fish that the Karuk Tribe marked in Slate Creek on 07/17/11. Slate Creek enters the Klamath River 51 river miles (RM) upstream of the Pacific Ocean (Figure 13). Trapping events in early March 2011 resulted in the capture of 21 juvenile coho. Five of the coho caught during spring had been previously captured (e.g. "recaptured" fish) in McGarvey Alcove I during the January 2011 survey. Surveys conducted in June 2011 resulted in the capture of 51 young of the year (YOY) coho, a YOY chinook, and other native fish and amphibians. Summer rearing habitat for juvenile salmonids is extremely limited in the Lower Klamath Sub-basin; therefore, these results are very encouraging and further support our plans to continue stream and floodplain restoration efforts in lower McGarvey Creek.

In March 2012, YTFP conducted a mark-recapture population estimate in McGarvey Creek Alcove I using the Chapman modification of the Petersen estimator (Ricker 1975). YTFP estimated a total of 213 juvenile coho residing in McGarvey Alcove I (Figure 14). Mark-recapture efforts conducted in McGarvey Alcove I during late July 2012 resulted in an estimate of 50 YOY coho (Figure 14). YTFP recently conducted mark-recapture surveys in both constructed off-channel habitats of McGarvey Creek. Late January – early February estimates for age 1+ coho were 121 for Alcove I and 154 for Alcove II (Figure 14). YTFP will continue monitoring salmonid abundance in these alcoves to further document seasonal and annual use of this constructed feature by natal and non-natal juvenile coho and other native fish. We are still processing the PIT tag data collected in these alcoves during fall 2012 - winter 2013.

Terwer Creek

YTFP conducted pre- and post-project fisheries investigations in the two off-channel habitat features in lower Terwer Creek. Pre-project trapping efforts conducted in Terwer Pond A during March 2009 resulted in the capture of 26 juvenile coho. One of these juvenile coho was initially PIT tagged by the Karuk Tribe in Independence Creek on 09/22/08 (Figure 13). In 2010, YTFP conducted pre-project mark-recapture population estimates in the Terwer Creek ponds using the Chapman modification of the Petersen estimator (Ricker 1975). In January 2010, YTFP estimated 39 juvenile coho in Terwer Pond A (Figure 14). Trapping events conducted in Terwer Pond B during March 2010 resulted in the capture of only two juvenile coho (Figure 14). The

moved into the pond. Mark-recapture events conducted in May 2011 resulted in population estimates of 75 YOY coho and 766 YOY chinook. In February 2012, YTFP estimated 65 juvenile coho residing in Terwer Pond A (Figure 14). Post-project studies conducted in Pond A during 2011 indicated fish use of the newly enhanced portion of the pond was minimal relative to fish use in the untreated area. February 2012 trapping events indicated fish use of the treated area of Pond A had dramatically increased relative to the previous year.

The number of juvenile coho estimated in Terwer Pond B was 121 in January 2011 and 212 during March 2011 (Figure 14). As was observed in Pond A during May 2011, a majority of the age 1+ coho had left Pond B while YOY coho and chinook moved into the pond. Mark-recapture events conducted in May 2011 resulted in population estimates of 172 YOY coho and 930 YOY chinook. In February 2012, YTFP estimated 18 juvenile coho in Terwer Pond B (Figure 14). Low numbers observed during this effort may have been related to low flow conditions that persisted throughout winter. YTFP recently conducted mark-recapture surveys in both constructed off-channel habitats of Terwer Creek. Late February estimates for age 1+ coho were very low in both ponds (Figure 14). Data collected by YTFP crews as part of the Coho Ecology Study indicate very low juvenile coho numbers within many of the Lower Klamath tributaries. Low numbers of fish within the Terwer ponds during winter 2013 may also be associated with a very low water year. Pit tag data collected in the Terwer ponds has revealed substantial use of these habitats by non-natal juvenile coho salmon (Figure 13).

References Cited

Beesley, S. and R.A. Fiori. 2012a. Lower Terwer Creek Off-Channel Wetland Enhancement. Yurok Tribal Fisheries Program, Klamath, California.

Beesley, S. and R.A. Fiori. 2012b. Lower Terwer Creek Riparian Revegetation Project. Yurok Tribal Fisheries Program, Klamath, California.

Fiori, R.A. 2010. Mega Wood Loading Projects for Coho Recovery: How Do We Get There? Examples from North Coastal California. Salmonid Restoration Federation and American Fisheries Society Cal/Neva Joint Conference. March 13th, 2010. Redding, California.

Fiori, R.A., J. Benegar, S. Beesley, T.B. Dunklin, C. Moore, D. Gale and S. Nova. 2009. Preliminary Evaluation of Experimental Wood Loading Performance Following a Five Year Flood Event. American Fisheries Society Cal/Neva Conference. April 2nd, 2009. Santa Rosa,

Fiori, R.A., M. Hiner, S. Beesley, S. Silloway, A. Antonetti, R. Grubbs, W. Harling, C. Wickman. 2011b. Why Up and Down Matters in the Design of Off-Channel Habitats. Salmonid Restoration Federation Conference. March 23-26, 2011. San Luis Obispo, California.

Gale, D.B. 2009. Lower Terwer Creek Riparian Restoration Project (Phase IV). Yurok Tribal Fisheries Program, Klamath, California.

Hiner, M., S. Silloway, A. Antonetti, and S. Beesley. 2011. Lower Klamath Tributaries Riparian Restoration Projects and Yurok Tribal Native Plant Nursery. Yurok Tribal Fisheries Program, Klamath, California.

Ricker, W. E. 1975. Computation and Interpretation of Biological Statistics of Fish Populations. Fisheries Research Board of Canada, Bulletin 191.

Yurok Tribal Fisheries Program. 2010. Lower Terwer Creek Streambank and Riparian Restoration - U.S. Fish and Wildlife Service – Tribal Landowner Incentive Program Project. Yurok Tribal Fisheries Program, Klamath, California.

Yurok Tribal Fisheries Program. 2012. Juvenile coho salmon use of constructed off-channel habitats in two Lower Klamath River tributaries: McGarvey Creek & Terwer Creek – Spring 2012. Yurok Tribal Fisheries Program, Klamath, California.

Figure 1. An engineered log jam (Terwer ELJ 1) in Terwer Creek following construction and during the first flows post-construction, Lower Klamath River (Fall 2009).

Figure 2. Looking downstream at Terwer ELJ 1 and willow baffles protecting a side channel and Holocene soils and creating low velocity habitat (01/01/10 - near bankfull event ~1,600 cfs).

Figure 3. Looking downstream at an engineered log jam (Terwer Crib Wall Jam) in Terwer Creek during construction (Fall 2009).

Figure 4. Looking upstream from Terwer Crib Wall Jam at Terwer ELJ1 and willow baffles protecting and creating complex slow velocity habitats for native salmonids (Winter 2010).

Figure 5. Looking upstream at Terwer Crib Wall Jam two years post-construction (Fall 2012).

Figure 6. A constructed wood jam site (2009 - Site 5) in McGarvey Creek prior to construction (Top), first winter post-construction (Bottom Left), two years post-construction (Bottom Right).

Figure 7. Oblique aerial photograph of lower Terwer Creek restoration sites (Summer 2011).

a)
b)
c)

Figure 10. Looking downstream at McGarvey Alcove I prior to construction (Top – Fall 2010) and two years following construction (Bottom – November 2012). McGarvey Creek.

Figure 11. Looking upstream at McGarvey Alcove I during winter flows (Winter 2011).

Note Orange Flagged Tree
Alcove II

Orange Flagged Tree
Alcove II

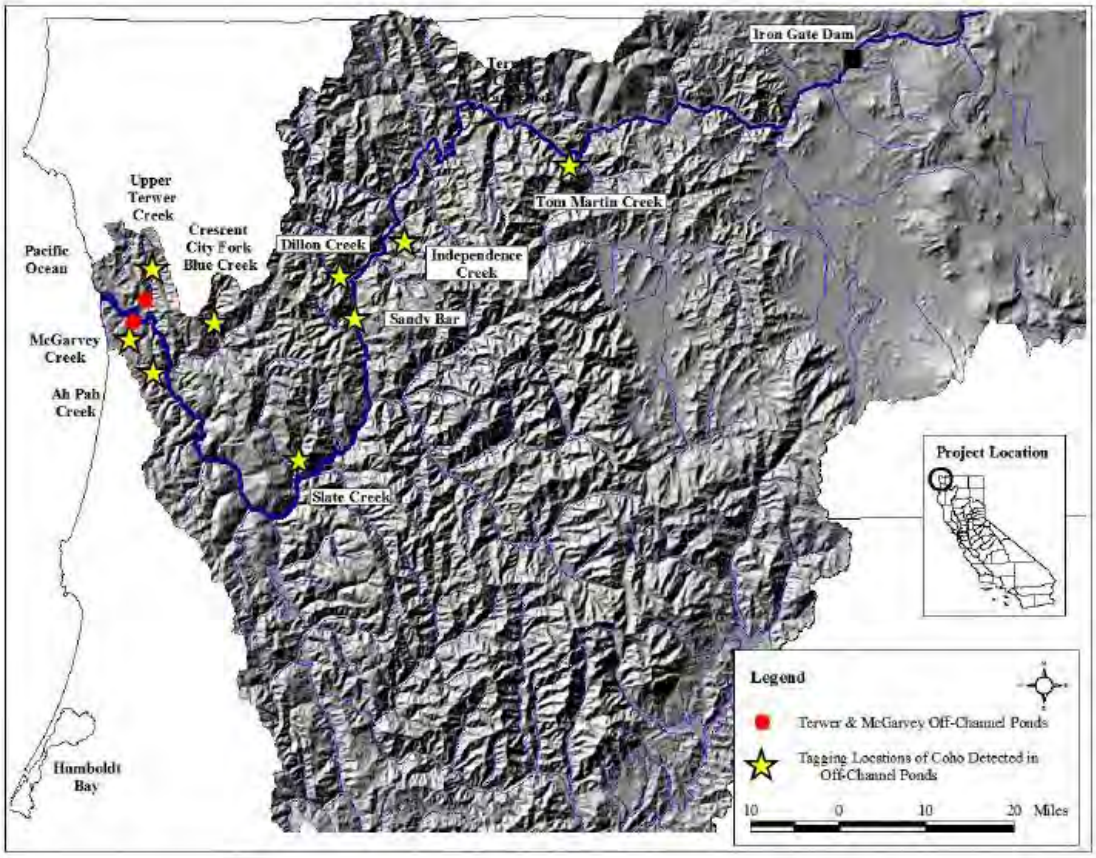

Figure 13. Map indicating tagging locations of non-natal juvenile coho recaptured in off-channel ponds constructed in two Lower Klamath tributaries between November 2010 and winter 2012.

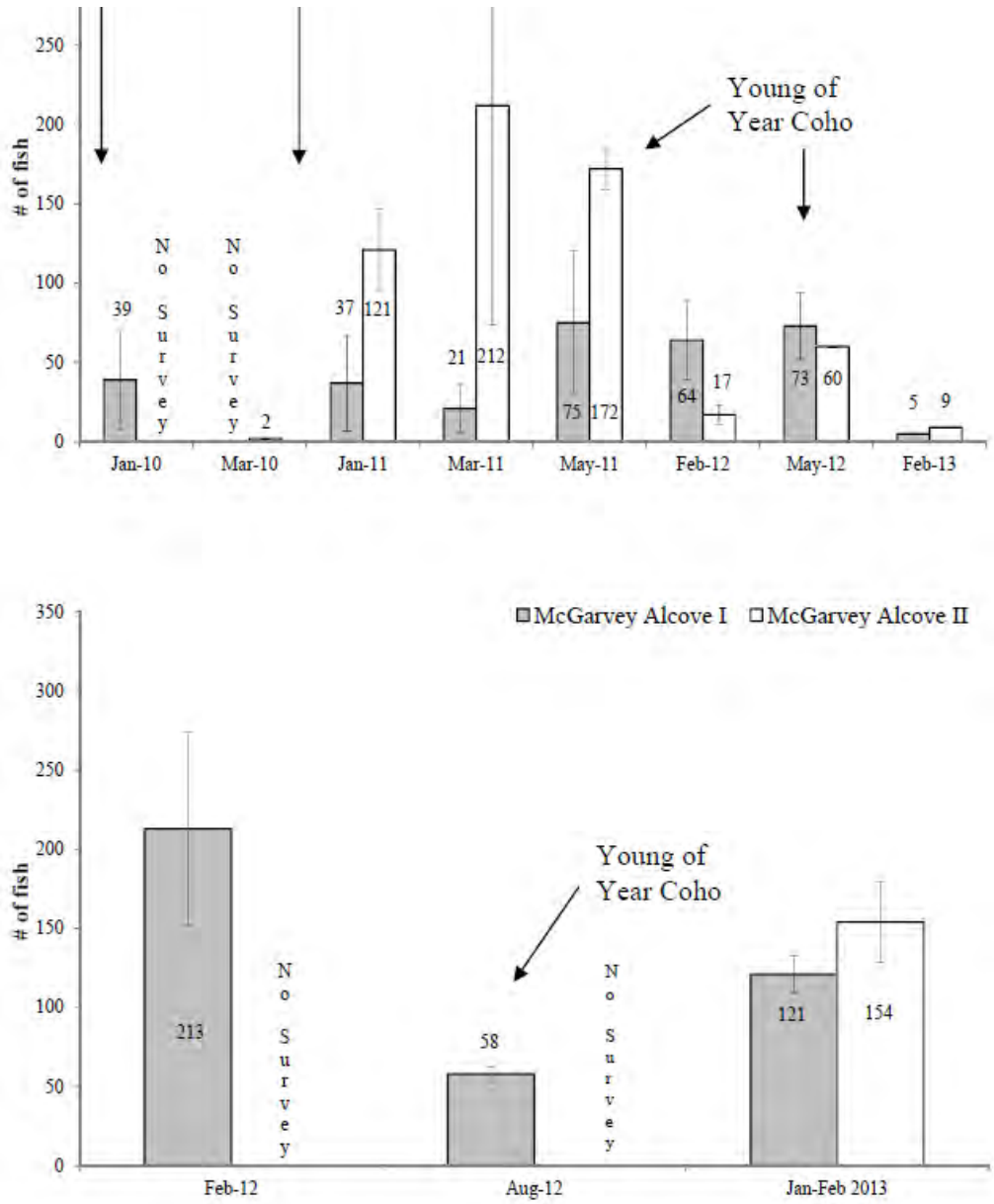

Figure 14. Mark-recapture population estimates for juvenile coho (1+ fish except where otherwise indicated as young of the year) in Terwer (Top) and McGarvey (Bottom) ponds.

Appendix K. Review Comments Received and CDFW Response

In addition to extensive internal review, California Department of Fish and Wildlife has also received review comments from the following agencies, which are appended below in Appendix K, together with CDFW response;

1. Statewide Coho Salmon Recovery Team Members
2. Fisheries & Oceans Canada
3. NOAA SW Science Center

1. Statewide Coho Recovery Team

Name	Stephen Swales
Phone	916 324 6903
Email	stephen.swales@wildlife.ca.gov

Comment Type (General, Chapter Title, Appendix Title, or Attachment Title)	Section Name	Page #	Reviewer	Comment	CDFW RESPONSE
Ex Summary	NA	5	PHC - CalFire	line 132: We suggest listing forestry as last in the list of human caused factors affecting coho salmon, since research related to current (contemporary) management practices shows that impacts associated with timber operations appears to be minimal in most cases (MacDonald and James 2012, Ice et al. 2010, Ice 2011, Ice 2012, Skaugset et al. 2012, Cafferata and Reid 2013). Additionally, considerable progress has been made in reducing the impacts of forest roads, a primary potential sediment generator, in the past 10 years (Cafferata et al. 2007), and with the passage of the Road Rules,2013 rule	Changes made

				package by the BOF.	
Chapter 1	1.6	15	PHC	line 486: ii should say "improvements in regulations to protect coho salmon populations on non-federal timberlands , such as the ASP rules , approved by the BOF in 2009 and implemented on the ground in January 2010.	Changes made
Chapter 3	3.3	25	PHC	lines 12-17: Should include comments about the winter of 2013-2014 and drought conditions--likely severely impacting this cohort of coho salmon. Lines 27 and 30: spell Caspar correctly.	No Changes made - report time-period is limited to 2012-2013
Chapter 4	4.1	27	PHC	Include language that states that implementation of the modern FPRs/BMPs (post-1975) have substantially reduced water quality impacts (both sediment and water temperature) [known from the Caspar Creek and Alsea study (OR) results]. There has been as much as 80 to 90% improvement in water quality performance (Ice 2011, 2012). Properly implemented BMPs can control the impacts of forest management on water quality at the site scale ("first line of defense for water quality").	Changes made
Chapter 4	4.1	27	PHC	Add: Additionally, the BOF approved the Road Rules, 2013 rule package in the fall of 2013, to reduce sediment impacts both in ASP watersheds and statewide. Key	Changes made

				statewide requirements include mandatory hydrologic disconnection and road erosion site inventories.	
Chapter 4	4.1	27	PHC	Add: Watershed-scale impacts from clearcut logging and road work in N. Sierra/Cascade watersheds with volcanic soils appear to be minimal (MacDonald and James 2012, BCTF 2011). Concern remains over cumulative watershed effects related to logging in erodible North Coast watersheds. Management practices have improved, but it will take more time for comprehensive monitoring work to document improvement to water quality and habitat.	Changes made
Chapter 4	4.1	27	PHC	Add: The ASP rules included provisions to allow site-specific riparian management to more rapidly improve conditions for listed anadromous salmonids, including coho salmon. A detailed guidance document was produced to illustrate where to implement these types of projects (VTAC 2012).	Changes made
Chapter 4	4.1	27	PHC	Add: line 107: The Department of Fish and Wildlife and CAL FIRE produced a detailed ASP Rule Question and Answer document to provide insight into the application of these rules (DFW and CAL FIRE 2010). Further refinements in the rules for Class II-Large watercourses were approved by the BOF in the fall of 2013.	Changes made

Chapter 4	4.3	28	PHC	line 144; add low flows to the list of hydrologic cycles that can be altered with land management activities. Additional summer base flows following logging for <10 years can benefit anadromous salmonids, including coho salmon, by increasing instream habitat capacity.	Changes made
Chapter 5	5.28	42	PHC	Should be "Campbell Timberland Management/Hawthorne Timber Company." Expand on the work of the timber companies. GDRCo began implementing an aquatic HCP in July 2007. HRC continued implementing the aquatic HCP initiated by PALCO in 1998. MCR is nearing approval of an aquatic HCP. All have monitoring components. For example, GDRCo has produced three aquatic HCP biennial reports submitted to NMFS and USFWS for 2009, 2011, and 2013 with abundant fisheries data.	Some changes made
Chapter 5	5.29	42	PHC	Add a section for the Mendocino County RCD. Discuss their Mendocino County Permit Coordination Program, which will reduce the permitting burdens faced by landowners for habitat improvement work, such as large wood placement projects (contact Patty Madigan for more information).	Beyond scope of report
Chapter 6	6.1.3	46	PHC	Cite Joel Benegar 2011 MS thesis from HSU for East Branch of Mill Creek, showing that complex wood jams were more effective at improving over summering and overwintered pool habitats for coho salmon and other anadromous salmonids than simple fish habitat structures following	Report does not include quantitative data on fish response to LWD

				standard California restoration protocols.	
Chapter 6	6.1.9	61	PHC	Include GDRCo fisheries monitoring results for Little River and Maple Creek watersheds (from 2009, 2011, and 2013 reports to NMFS and USFWS).	Monitoring data from timber companies is not available
Chapter 6	6.1.10	63	PHC	Correct citation for the Redwood Cr watershed assessment is Cannata et al. 2006. It was written by the Coastal Watershed Planning and Assessment Program and North Coast Watershed Assessment Program, not just DFW.	Changes made
Chapter 6	6.2.2	78	PHC	line 1214: reword to say: "State-of-the-art concrete fish ladders were installed at both the South Fork and North Fork weirs in the Caspar Creek watershed in 2008, replacing the original wooden structures built in the early 1960's as part of a cooperative watershed study between CAL FIRE and the PSW (Cafferata and Reid 2013).	Changes made
Chapter 6	6.2.6	95	PHC	Spell creek name as "San Vicente Creek."	Changes made
Chapter 8	8.2	100	PHC	Include as a recommendation: Work towards having a simplified, coordinated permitting process, outside of the California Department of Fish and Wildlife's Fisheries Restoration Grants Program (FRGP), that can facilitate large wood projects, and other habitat restoration work, to rapidly improve habitat for listed anadromous salmonids in California. This has been the goal of the Wood for Salmon Workgroup for over 3	Beyond the scope of the report

				years and continues to be its goal. The goal is to accelerate the pace and scale of in-stream restoration projects.	
Chapter 9	9	101	PHC	Sean Gallagher listed in his June 2013 PPT for the Caspar Creek 50 yr workshop that "marine survival drives coho salmon populations", followed by "density dependence in freshwater", "survival and high winter flows negatively correlated", and "winter habitat appears to be limiting." I believe these were his key summary points. Consider including them into the conclusions, or earlier in the document.	The importance of winter habitat is discussed in the 2004 Recovery Strategy
Appendix C	NA	112	PHC	Please include the CA Department of Forestry and Fire Protection in the list of organizations in CA involved in coho salmon recovery (see PPT delivered to the CRT at their last meeting by CAL FIRE staff). Efforts include: leadership for WFSW, VTAC work, State Forest habitat improvement projects (SDSF, JDSF), and contract with MCRCD for large wood projects and guidance document.	CalFire is already listed
general	NA	NA	CalFire	There is a lack of discussion regarding drought influences (the word drought did not appear in the document)	Changes made
general	NA	NA	BM - CalFire	There is a lack of discussion regarding the use of coho or other salmonids as “covered species” in several large landowner Habitat Conservation Plans	Beyond scope of report

general	NA	NA	BM	There is a need for improvements in treatment of recent BOF actions and Forest Practice Rule improvements	Suggestions needed
general	NA	NA	BM	The report was well done and very readable	
general	NA	NA	BM	Accelerating identified recovery actions beyond the current pace will require additional dollars and commitment/collaboration. There should be a thorough assessment of feasibility and likelihood of accomplishment beyond that mentioned as a Technical Working Group Function (p 98) to prevent extirpation of coho in coastal watersheds and other critical areas.	Comments noted
General	**Table of Contents**	**6**	S. Beesley, Yurok Tribe	Why isn't agriculture listed as a factor & threat to coho population viability?	This topic is discussed in the Recovery Strategy and no further updated information is available
General	**Native American Tribes**	**41-42**	S. Beesley	Need to correct - "restoration work in the Trinity River and tributaries of the Lower Klamath" and it is McGarvey Creek - no hyphen	Changes made
General	**Timber Companies**	**42**	S. Beesley	Timber companies do not undertake restoration - they allow other groups to conduct restoration on their property. Big difference.	Changes made
General	**Habitat Restoration**	**48**	S. Beesley	See word document for specific language request.	Changes made

General	**Population Monitoring**	**48**	S. Beesley	See word document for specific language request.	Changes made
Materials provided by Division of Water Rights - Coho Recovery Articles	**Appendix H**	**212-218**	Katy Lee, SWRCB	Appendix H is not in the same format as submitted by Division staff (numbering, tables, bullets are incorrect or missing). Please find attached two versions for resubmittal with the correct formatting (.pdf and .doc).	Changes made
Chapter 1, Section 1.4	Other Coho Salmon Recovery Plans	13	SM, Mattole Salmon Group	"The Mattole Salmon Group (MSG), a watershed restoration group focused on the Mattole River in Humboldt County, recently published the Mattole Coho Recovery Strategy (MSG 2011). The MSG has monitored coho salmon populations in the Mattole River system since the early 1980's. In recent years, populations have fallen to very low levels. There is a very real threat that coho salmon in the Mattole River may be extirpated in the near future, without extra-ordinary and continued restoration efforts". The following statement is a negative comment that is not supported by the evidence. If the following statement is to stay...This population decline has occurred despite the implementation of extensive habitat restoration projects for coho salmon and other anadromous salmonids in the Mattole River valley for over thirty years,...then this should be followed by..."It is not surprising that 30 years of restoration has not stopped the decline of populations, when in fact unregulated damaging land use practices continue to occur and when	Changes made

				the damages occurred over a period of more than 160 years". Additionally, positive effects from the 30 years of restoration have occurred. The headwaters mainstem Mattole clears more quickly after a storm thanks in part to extensive road restoration work done over the past few decades. Low flows in the upper mainstem have been positively affected by the "Storage and Forbearance: work of Sanctuary forest and landowners.	
Chapter 1, Section 1.6	Coho Salmon Recovery Actions	15	SM	(i) projects have been increasingly funded by other partners (SCC, CA WB, DWR, NOAA, NFWF, and others) as well as FRGP	Changes made
Chapter 3, Section 3.3	Summary of Current Status of California Coho Salmon	25; line 33	SM	"...and appear to be heading towards extirpation"… I would add…unless extra-ordinary measures are taken immediately to reverse this trend"	Changes made
Chapter 4, Section 4.2	Water Diversions and Fish Screens	28; line 140	SM	f) increasingly, water diversion for marijuana cultivation is a major issue in watersheds on the central and north coast. Inappropriate to name just a few watersheds such as the Mattole, Russian, and Eel rivers. All of the watershed have excessive withdrawals for marijuana, grapes, and many other uses.	Changes made

Chapter 4, Section 4.5	4.5 hatcheries	30; line 221	SM	No new coho artificial propagation programs have been initiated since the listing in 2004. Major efforts were made by many partners to initiate and approve a recovery rearing program for coho in the Mattole River. The MSG has 3 decades of experience and facilities dedicated to wild fish population enhancement efforts. The approach proposed had great merits and was supported by NOAA (NMFS) and many other partners, but DFW would not approve it due to flow requirements. The minimum flow requirements by DFW were not possible to be met in the Mattole. Efforts to look at other configurations and flow set ups were met with significant resistance by DFW, so MSG refocused its efforts on instream restoration of habitats. Please note that this statement is not made to stir up trouble or to make anyone look bad, but if we are to give the FGC an accurate report on current conditions it is important to know the facts.	No changes made - these were discussions only

Chapter 5, Section 5.3	Non-governmental environmental groups	40; line 19	SM	Change this section title to Nongovernmental Organizations; In Humboldt County, the Mattole Restoration Council (MRC), the Mattole Salmon Group (MSG), and Sanctuary Forest are community based non-profit organizations that are actively involved with habitat restoration, water storage and forbearance, salmon population monitoring and education and outreach in the Mattole River watershed. These three groups have formed a watershed partnership to cooperate rather than compete for the shrinking funding pie. The Mattole River and Range Partnership consists of three nonprofit organizations (the Mattole Restoration Council, Mattole Salmon Group, and Sanctuary Forest) who collaborate to conserve and restore the ecological integrity of the Mattole watershed. The Partnership coordinates our efforts to implement projects and monitor watershed health. .....This section is a little confusing as to why there is also a section titled Watershed Groups (5.2.6). Neither section is a complete list. Perhaps a reference to the large variety of NGO watershed groups that make up the California restoration landscape and why this variety has formed due to the lack of state direction and funding for watershed councils like in Oregon.	Changes made

General Comment				Would be good to talk about the wide variety of restoration program funding from multiple state agencies, federal agencies, and private foundations; also the challenge this presents in completing projects with multiple sources that have different requirements and costs shares.	Beyond the scope of the report
Chapter 6, Section 1.4	6.1.14	73-76	SM	Mattole Section good but need more detail include attempts at recovery rearing etc. .... Talk about cost effectiveness of doing instream off channel work rather than mega hatcheries thus no negatives from hatcheries etc. talk of the MSG Coho Strategy plans etc. and how road work and forbearance is starting to show results; need more LW and estuarine off channel etc...Add information about current adult coho monitoring and juvenile coho distribution surveys being done according to CMP and funded by the Department. Describe MSG's 3 decades of population enhancement activities pros and cons; these programs may very well be a big reason for their survival to this day. Add a 2012 Update like the Russian River section on new and improved monitoring according to CMP	Materials requested-some changes made
			SM	case study Baker Creek attached to this e-mail	Project is outside time-period of report
Conclusions		101	SM	line 259 grammar error…remove the word achieve	Changes made

Chapter 7		98 line185	SM	Mattole Pilot Priority Action Plans; critical!!!!	Changes made
Conclusions		101	SM	line 259 grammar error…remove the word achieve	Changes made
General Comment			SM	The CRT work with DFW and other state and federal agency reps work to develop a comprehensive Programmatic EIR for fisheries restoration state wide. The goal would be to develop a programmatic set of permits for restoration such that regardless of what state funds fund a restoration project, the project receives the programmatic permits, similar to how FRGP works now. All projects would need to follow DFW manual on BMP's. Might need to be limited regionally and focused on projects that are generally accepted as doable.	Beyond the scope of the report
General Comments			SM	Supplementation discussion should cover not just the existing efforts at Warm Springs etc., but recommendations for other appropriate scale supplementation. For the Mattole suggested language could be…Consider and implement appropriate scale supplementation in the Mattole. This might include something as simple as doing live capture of an adult male coho from the South Fork Eel (the closest genetically to the Mattole) and releasing in the Mattole Headwaters when know female coho are present. This can help the Mattole population diversify its genetics and move away from the current inbreeding situation. Another opportunity may include "Rescue	Beyond the scope of the report - not included

				Rearing" of Coho, where if rescue is needed due to drought and low flows, then these fish could be reared in small scale local facilities that can aid in recovery.	
GENERAL			PCFFA	(1.)Lack of Analysis of Instream Flow Regime Improvements and/or Deficits: Although the original Recovery Strategy document acknowledges that excessive water diversions and groundwater extraction are significant threats to coho salmon, and this is also acknowledge in this Draft Report at Section 4.2,1 there needs to be considerably more analysis of these impacts, preferably on a stream-by-stream basis, plus any changes in these impacts (positive or negative) since 2004, at least for key coho salmon productive rivers like the Scott and Shasta.	Related to comments on flow needs for fish and wildlife in the Shasta and Scott Rivers – updates of current efforts to develop study plans for instream flow studies in those watersheds are available at: http://www.normandeau.com/scottshasta/

GENERAL			PCFFA	"We are gratified to find a reference to the Department's Instream Flow Program established in April 2008 on pages 28-29. This is a good beginning for the important effort of establishing minimum instream flows for rivers throughout the state, starting with the Appendix C list of 22 priority rivers the Flow Program is assessing. Please also include the most current schedule for addressing these river segments as part of Appendix C."	There is no formal schedule for addressing flow needs in the 22 priority streams on a statewide basis (although there may be a draft schedule available for Sac/SJR Delta tributaries since that is the focus of most of the CDFW flow program due to Delta-specific funding). Unfortunately, there currently is a lack of resources available for flow study efforts on coastal streams.
chapter 4			PCFFA	(2) Reorganizing and Expanding Chapter 4 to Discuss all Factors and Threats Raised in the Recovery Strategy, in Addition to New Threats:	Beyond the scope of the report - not included
Page 4 – line 113:			PCFFA	Typo: "incudes"	Changes made
Page 32 – lines			PCFFA	Typo: spaces needed between number and	Changes made

308 and 314:				letters in percent's	
Beginning on Page 51, in Sec. 6.1.7.1 regarding the Shasta Valley			PCFFA	The text in this section should be updated to make some mention of the recent Dwinnell Dam lawsuit against the Montague Irrigation District and its successful settlement. This settlement is expected to benefit the salmon runs of the Shasta River in various ways. This is litigation filed May 17, 2012 by the Klamath Riverkeeper and the Karuk Tribe. The case citation is Klamath Riverkeeper, et. al vs. Montague Water Conservation District, US Dist. Court, Eastern District of California, Civil Case No 2:12-00717. The settlement in this case was signed in December of 2013, and information on that settlement is available at: www.klamathriver.org/Documents/PR-122313-MWCDsettlement.pdf. The settlement agreement itself is available from the Court's case file archives.	Beyond scope of report
Beginning on Page 54, Section 6.1.7.2 regarding the Scott River			PCFFA	It would be very helpful to have more information about what the original coho salmon runs sizes actually were prior to development of the Scott River basin as a baseline with which to compare.	Data not available
Beginning on Page 56, Section 6.1.8 regarding the Trinity River			PCFFA	Here too it would be very helpful to have more information about what the original coho salmon runs sizes actually were prior to European settlement and development of the Trinity River basin, as a baseline with which to compare. [Note: The prior two comments also apply to all other coastal river systems, i.e., what was the original baseline populations of these river systems	Data not available

				prior to European settlement and development? It would also be helpful to extend all the recent population charts to provide a lower-end comparison of the average escapement of the ten years PRIOR to 2004 (1993-2003) so as once again to have something to compare to in order to ascertain how close numbers have come toward recovery to earlier levels]	
Page 60, insert after line 699			PCFFA	In late 2013, the Environmental Protection and Information Center filed a federal lawsuit (Environmental Protection and Information Center vs. Lehr, et al.) in US District Court of the northern District (SF Division) (Case No. 3:13-CV-02293-MMC) against State and federal agencies which manage the Trinity River Hatchery (TRH), claiming that hatchery practices that release predatory hatchery fish into the river compete against and amount to a "take" of ESA listed wild coho in that same river system. The Hoopa Valley and Yurok Tribes have also intervened, and settlement negotiations are now close to resolving the issues of this case. In fact, that settlement may well be in place by now, and the outcome of that case will likely change TRH practices in a number of ways, with the intent to minimize impacts of hatchery releases on wild coho.	Beyond scope of report
Page 112 – numbered item 42:			PCFFA	PCFFA's name is incorrect, and should be Pacific Coast Federation of Fishermen's Associations (PCFFA), i.e., "Associations" should be plural. This list should also include PCFFA's sister organization	Changes made

				"Institute for Fisheries Resources (IFR)" which is also quite active on this issue	
executive summary		5	JS	line 137: the poor ocean conditions leading to poor marine survival should be indicated as occurring in 2005 and 2006. These resulted in the poor adult returns in 2006-07 and 2007-08. The effect was more severe to the south, so the near depletion of returns in 2007-2010 carried over to more recent years, because of little spawning in 2007-2010. . In addition, six of the last eight years have been drought years (2007-2009 and 2012-2014), further hampering general coho recovery and recovery from the poor ocean conditions of 2005 and 2006, by affecting coho up and downstream migration access and stream flows in rearing and spawning streams.	Changes made
Chapter 1	1.3 status reviews	13	JS	line 408: the poor returns in 2006-2010 were probably the result of poor ocean productivity and coho survival in 2005 and 2006 (Lindley et al. 2009). Poor returns in 2007 and 2008 severely reduced many coho populations, and therefore reduced potential numbers in subsequent years (see above).	Changes made

Chapter 2	2.2 life history	17	JS	lines 570-573: Bell and Duffy (2007) found yearling freshwater coho common in Prairie Creek, but elsewhere in the dominance of one freshwater rearing year appears to be typical, as witness the year class gaps and generally strong 3 year abundance cycles. Smith (2013; attached) is referenced only for the 2009 annual report, but Manfred Kittel and Joe Pisciotto have the other annual reports through 2013. I have found some holdover coho yearlings in Redwood Creek (Marin Co.) and in Waddell and Scott creeks (Santa Cruz County). The holdover percentage appears to range between 2% (in 2003) and 17% (2013), and can be a significant contribution to very weak year classes following strong year classes. In some cases yearlings represented all of the juvenile coho, obscuring the lack of successful coho spawning in a year.	Changes made
Chapter 3 status and trends	3.3 summary of status	25	JS	line 17: In some streams, including southern streams (Redwood Creek in Marin County, and Scott, Waddell, and Gazos creeks, south of San Francisco,) the severe impact of the 2005 and 2006 ocean conditions on adult returns essentially extirpated wild runs, so no natural rebound was possible when ocean conditions improved.	Changes made
Chapter 3 status and trends	3.3 summary of status	25	JS	line 23 and 24: There has been essentially no wild production south of San Francisco Bay, including Scott, Gazos, and Waddell creeks since 2007 (Smith 2013, juvenile sampling results).	Changes made

Chapter 3 status and trends	3.3 current status	26	JS	Line 47-50 #1: Due to the dominant 3 year life cycle of most female coho, there are year class gaps or weak year classes that will only slowly recover without intervention, such as brief captive rearing or broodstock transfers.	Changes made
Chapter 4 factors	4.5 Hatcheries	31	JS	Line 252-257: At Scott Creek the last wild runs of coho were in 2005 and 2006, with no apparent successful wild returns in 2007 through 2011. The captive broodstock program at the hatchery had limited brood stock or egg production until the captive broodstock program ramped up in 2011-12 through 2013-2014 (this included an addition rearing tank, change in food regime, rearing of some captive broodstock at Warm Springs Hatchery, and improved equipment for egg incubation). The hatchery operation with captive brood stock to produce fry, smolts, and some releases of adults to spawn in the wild in Scott (and San Vicente Creek) is preventing extirpation of the stocks south of San Francisco. Those last three years of expanded operations have produced 30,000+ smolts for release in spring of both 2013 and 2014 and about 30,000 eggs in 2013-2014, despite fungus problems associated with drought conditions. Some wild rearing in San Vicente and Scott creeks was produced from release of surplus adults to spawn in the wild in 2012, and substantial wild juveniles were produced in 2013 in Scott Creek by the release of captive broodstock to spawn in the wild (Smith 2013).	Changes made

Chapter 4 factors	4.7 ocean conditions	32	JS	Lines 299-301: The down-turn in ocean productivity should be indicated as occurring in 2005 and 2006 (Lindley et al. 2009). The effects were also severe on Central Valley Fall Chinook (which support the ocean fishery), resulting in the Lindley et al. 2009 analysis. Since the Chinook are heavily support by hatchery rearing, they rebounded much more quickly from the down-turn in ocean conditions in 2005 and 2006.	Changes made
Chapter 6 general comment			JS	The escapement numbers for adult coho may have some problems in interpretation, especially where the runs are small and there is substantial variation among year class abundance, by combining males and females. Precocial males from strong year classes can make an annual run appear large even though females may be relatively scarce (i.e. Table 6.6 Trinity River for 2011, when almost 2/3 of the run consisted of grilse (mostly males), and likely that half of the "adults" were males, so females made up perhaps 1/5 of the run.	Comment noted
Chapter 6 monitoring	6.1.6 Trinity River	60	JS	Table 6.7. The abundant male grilse in the table, especially in 2011, reinforces the comments in 26 above. Also of importance for coho recovery is the presence of some female grilse from the hatchery. Shapovalov and Taft 1954 found no apparent 1 year ocean wild females. However, accelerated growth in the hatchery environment can produce some precocial (grilse or “jills”) female returns. This can help to fill in missing or weak year classes in small runs (and break the	Comment noted

				dominant 3 year life cycle for females and juvenile production). At Scott Creek (Santa Cruz County) precocial returns did help strengthen or restore lost or weak year classes in a number of years prior to the collapse due to ocean conditions (see Smith 2013, introduction).	
Chapter 6 monitoring	6.2.1 introductio n	77	JS	Lines 68-70. The drastic declines began in 2007 (2004 year class smolts hit the ocean in 2005 with reduced production). The declines were generally more pronounced to the south (for example Redwood Creek in Marin County and Scott Creek in Santa Cruz County; Scott Creek had a strong juvenile year class in 2005, but no apparent juveniles in 2008).	Changes made
Chapter 6 monitoring	6.2 introductio n	77	JS	Line 1179: Scott River should be Scott Creek.	Changes made
Chapter 6 monitoring	6.2.3 Russian River	84	JS	lines 71-71. The small number of fish reared of Scott Creek origin are for the captive broodstock program for Scott Creek.	Changes made
Chapter 6 monitoring	5.2.4 should be 6.2.4	**91**	JS		Changes made
Chapter 6 montioring	6.2.4	94	JS	line 10. The decline in adult returns in Lagunitas, compared to 3 years previous, started in 2007-2008 (which was less than 1/3 as abundant as 3 years previously). The low was in 2008-09. Both year classes were affected by the 2005 and 2006 decline in ocean production.	Changes made

Chapter 6 monitoring	6.2.5 San Mateo unit	95	JS	lines 59-60. The coho salmon released in 2003 returned to Pescadero in 2005 and also strayed to adjacent San Gregorio Creek in 2005 and spawned successfully. Smolts were captured in San Gregorio Creek during sampling by Krissy Atkinson DFW.	Changes made
Chapter 6 monitoring	6.2.6 Big Basin unit	95-96	JS	Lines 93-94, page 96. The severe decline in 2007 and 2008 reflects severe impact of poor ocean conditions in 2005 and 2006. The 2009 low reflects a weak year class in 2006 (and previously in 2003, 2000, 1997).	Changes made
Chapter 6 monitoring	6.2.6 Big Basin unit	96	JS	See comments number 20 and 24 above: line 109. The most recent annual report (2013 by Smith) includes all years from 1988, 1992-present. The juvenile data show no coho captured in Scott from 2007-2011, none in Waddell since 2008, and none in Gazos Creek (San Mateo County) since 2005. Wild reared coho juvenile from the release of captive brood stock adult spawning in the wild produced a weak juvenile year class in Scott Creek in 2012 (partially due to storm destruction of redds) and a relatively strong juvenile year class in 2013.	Changes made

Chapter 6 monitoring	6.2.6 Big Basin unit	97	JS	Line 122-124. See comment 24 above. The last wild brood stock year for the hatchery was 2006. A small captive brood stock program accounts for the low numbers of smolts produced from 2007-2011. The broodstock program ramped (this included an addition rearing tank, change in food regime, rearing of some captive broodstock at Warm Springs Hatchery, and improved equipment for egg incubation) during that period so that in 2012 and 2013 it was sufficient to produce 30,000 smolts in each year, and also release some fry (to San Vicente Creek in 2012) and surplus adults to spawn in Scott Creek in 2012 and 2013. Fungus problems associated with drought have reduced egg production in 2014 from about 45,000 to 30,000. Therefore an update would change the statement that the program has limited success on far. The captive brood stock program took six years to gradually ramp up with facilities and techniques, but has made substantial contributions in the last three years.	Changes made
Chapter 8 summary	8.1 summary	99	JS	line 209: The down-turn in ocean productivity was in 2005 and 2006, which affected adult returns in 2007-2009. Severely low returns in those years, especially to the south, , severely reduced some populations, which has affected abundance in subsequent years. In addition, six of the last eight years have been drought years, affecting general recovery and recovery from the poor ocean years.	Changes made

1.3	Line 392	12	Adriane Garayalde	Was this a NOAA coho recovery plan or essential fish habitat?	As referenced
1.5	Table 1.1	14	AG	Shasta Valley RCD not listed as CRT Team member	Changes made
1.5	Line 455-461	14	AG	Not sure how to make the suggestion that the SSRT be revitalized, as a way of improving the working relationships in Siskiyou County.	Comment noted
1.5	Line 463	14	AG	Is there a link to the presentations? "Coho on the Brink"	Not available
1.6	Line 483	15	AG	Not sure that restoration and enhancement projects are largely due to FRGP. We have received much more funding $ from other entities.	Comment noted
2.2	Line 565-573	17	AG	Talk with Yreka fisheries (Chesney/Adams) re: Shasta fish that are out-migrating as 0+. They are growing so fast due to conditions in the Shasta that produce a lot of food.	Comment noted. The 0+ migrants are responding to elevated temperatures and low flows.
3.2	Shasta River graph	24	AG	These graphs need review, as numbers may be based on partial counts due to weather or other factors. Especially for the Shasta. That is not reflected here.	Changes made - graphs revised, data updated
3.3	Line 33-34	25	AG	Coho salmon in the Shasta River has been increasing in numbers since 2009. Also, 2009 was an incomplete count…9 fish were actually counted, weir washed out. Production occurred based on returns in 2012.	Overall, trends in the Shasta River are downward since 2004. Increases since 2009 are likely due to a change of management

					practices at Iron Gate hatchery.
4.2	Line 127-128	28	AG	Verify unscreened diversions in the Shasta per the database	Addressed
4.2	Line 135-136	28	AG	Since the Shasta River is adjudicated and most of the Scott River is, I am not sure that this wording is the best way to characterized the conditions here and makes it sound like there are illegal diversions all over the place that need regulation.	Re-adjudication should be initiated.
4.3	Line 167-168	29	AG	Did SSRT id the need for flow studies on the Scott/Shasta?	Not available
Shasta	Line 202-204	29	AG	Verify data for the Shasta. CalFish data is incorrect for the Shasta River.	Data verified. CalFish data not included
4.5	Hatcheries	30	AG	A mention of other means of supplementation should be made. We need to think outside the box and utilize other methods to save on monetary resources. And potentially have more success.	Comment noted
4.7	Ocean Conditions	32	AG	There is a need for ocean condition forecasting with modifications to Klamath fishing to allow more spawners. Also, modification of hatchery releases, based on natural production. Cite more recent data.	Comment noted
	Figure 5.2	37	AG	Shasta River data does not look correct.	Data verified
	Table 5.2	39	AG	Review…no rotary trap.	Changes made
5.29		42	AG	List all RCDs/website links active in fishery	Changes made

				improvement.	
5.26		41	AG	No mention of any watershed groups in the Shasta/Scott. SVRCD website has lots of information on projects.	Changes made
	SONCC ESU Recovery Units	44	AG	Should say Shasta **River**	The Shasta Valley Recovery Unit is listed in the Strategy
6.1.7		51	AG	Habitat Restoration data is incorrect. Why only use 04-09? Update.	Changes made
	Line 454-456	52	AG	I would change to 9+, as all counted were male, yet when the weir was out females must have come in, as there was production that year.	Changes made
	Line 458	52	AG	Delete: If conditions do not improve.	No changes made
	Figure 6.3	52	AG	Need to add 2013 and note that 2009 was incomplete data.	Report timeframe is 2004-2012
	Figure 6.4	53	AG	Update with current data.	Report timeframe is 2004-2012
	Table 6.4	53	AG	Data does not match above figure.	Changes made
Chapter 7	PACT program	98	AG	Update. Past development stage.	Comment noted
	Line 216	99	AG	Re-word: Increased inter-agency collaboration **with landowners** to implement recovery...	Comment noted
8.2		100	AG	None of this will happen without support $ for Watershed coordinators. Dedicated funding needs to be provided to groups undertaking these recommendations.	Comment noted
8.2		100	AG	Streamline permitting	Beyond scope of report

8.2		100	AG	Permit fee reduction	Beyond scope of report
8.2		100	AG	Regulatory certainty for landowners.	Beyond scope of report
8.2		100	AG	All agencies to have common criteria.	Comment noted
Chapter 9	Line 259	101	AG	Delete: achieve Change: reversal to reverse Delete: of	Changes made
	Line 264	101	AG	Add: Development of one common set of criteria/standards to be met that will satisfy all agencies	Comment noted
General	Executive Summary	3	TU- Mary Ann King	The Executive Summary states that the main types of recovery actions include restoration of habitat conditions, continued operation of captive rearing program, and "improvements in permitting and regulatory enforcement," yet the progress report does not cover the permitting or regulatory work in any systematic way (and certainly with less detail than either habitat or captive rearing work). This seems worth mentioning in terms of both progress and future actions.	Comment noted
Chapter 1	1.4	13	Mary Ann King	Addition to Mattole recovery plan list: Sanctuary Forest Inc., Trout Unlimited, and the Center for Ecosystem Management and Restoration prepared a Streamflow Improvement Plan for the Mattole River Headwaters.	Comment noted

Chapter 4	4.2	28	Mary Ann King	Line 138: This paragraph appears to lump proactive actions to improve streamflow (e.g., diversion to storage tanks for summer use) with threats to coho (e.g., water diversion for marijuana cultivation). We recommend parsing these out and providing additional detail on how DFW is addressing some of the threats and also working toward proactive solutions (e.g., DFW's recent work with the SWRCB to streamline small domestic use registrations during the drought). http://cdfgnews.wordpress.com/2014/03/13/state-streamlines-domestic-water-tank-storage-process-in-response-to-drought/	Comment noted - section refers to water flow regulation
Chapter 4	4.3	29	Mary Ann King	DFW, through FRGP, also funded part of an instream flow-habitat study in San Gregorio Creek through American Rivers.	Comment noted
Chapter 4	4.7	32	Mary Ann King	Typos in lines 308 and 314 where the word "percent" appears.	Changes made
Chapter 5	5.2.2	35	Mary Ann King	The link at line 404 is not working anymore. Please substitute this one instead: http://www.tucalifornia.org/index.php?page=north-coast-coho-recovery	Changes made
Chapter 5, 6	5.2.2, 5.2.8, 6.1.13, 6.2.2		Lisa Bolton - TU	Comments on these sections have been included as track changes and attached to this document (Main Document Selections)	Changes made
Chapter 5	Table 5.2	39	Mary Ann King	It is striking how few projects have been funded that pertain to Water.	Comment noted
Chapter 6	6.2.3	86	Mary Ann King	Line 13: Please add that the infrastructure improvements are to benefit instream flow; Line 23: the project has been completed; Line 26: Please add the following partners - SCWA, DFW, RWQCB, UC Cooperative	Changes made

				Extension.	
Chapter 6	6.2.5	94	Mary Ann King	TU has some additions and revisions to the content for the San Mateo Recovery Unit. I will include these as a Word document attachment with these comments (Main Document Selections).	Changes made
General	4.3, Chapter 7, 8.1 and throughout	-	Mary Ann King	Streamflow monitoring is noticeably absent from the document in at least two regards: (a) what resources are available and what monitoring is being conducted in watersheds and (b) as a recommendation for action in tandem with fisheries and habitat monitoring efforts. Streamflow monitoring is the foundation for recommendation (3) under Section 8.3 and also should be critically important to many of the other recommendations as well.	Comment noted
Chapter 8	8.2	100	Mary Ann King	The sense of urgency and specific, tangible section seem to be missing from this list. Why not consider breaking this down into short, medium and long-term actionable recommendations? The near-term actions ought to include specific steps for targeting high priority areas and turning DFW recovery strategy and NOAA's recovery plan into tangible and implementable items, providing technical support and streamlined processes for landowners to ramp up habitat and instream flow restoration projects, etc. If anything, it seems like this section ought to provide a plan for addressing the urgent need commensurate with the dire status of coho.	Comment noted

Appendix E		113	Mary Ann King	This list is not complete, but DFW could consider adding at least the following organizations (in no particular order): Sea Grant, California Coastal Conservancy, National Fish and Wildlife Foundation, Gold Ridge Resource Conservation District, Sonoma Resource Conservation District, Marin RCD, San Mateo RCD, American Rivers, Stewards of the Coast and Redwoods, SWRCB, Occidental Arts and Ecology Center, Center for Ecosystem Management and Restoration. In addition, FishNet4C is included twice: #15 and #65.	Changes made
Appendix I		219	Mary Ann King & Lisa Bolton	TU is providing an updated copy of its materials as a Word document attachment to these comments.	Changes made
General			CalTrout - Darren Mierau	Does the Department have more detailed plans to change the listing status of coho salmon in California?	Currently, no plans
General			CalTrout	In addition regarding the Shasta River, the Department initiated a multi-phased Instream Flow Assessment program, beginning with an FRGP grant to CalTrout in 2006. During the ensuing 8 years, two critically important instream flow assessment reports have been completed, providing interim flow recommendations for the Shasta River Big Springs Complex, and more detailed, long-term recommendations in a second report for the Shasta Canyon. However, beginning in 2010, the Department initiated a wholly separate Instream flow program (with Normandeau Associates), but has not articulated why	Comment noted - Related to comments on flow needs for fish and wildlife in the Shasta River – updates of current efforts to develop study plans for instream flow studies in those watersheds are available at:

				there is need for two separate processes, nor how the results of each program will be utilized by the Department to secure adequate instream flows for Shasta River Coho salmon. A well-developed strategy for resolving long-standing instream flow issues in the Shasta River, provided by your Department, is critically needed. More clarity is needed on how these various flow studies will be interpreted and used to establish policy in the Shasta River.	http://www.normandeau.com/scottshasta/
	Page 28, Section 4.3		CalTrout	Your report (Page 28, Section 4.3) describes the Water Branch's Instream Flow Program, initiated in 2008, and which is purportedly pursuing instream flow studies on a set of 22 priority streams, some of which are within coho salmon range. We are all keenly aware of the need for sustained instream flows to promote coho salmon recovery. However, since this program's inception six years ago, the Department has not transmitted any instream flow study results or flow recommendations to the State Water Resources Control Board. The program has, however, created a set of "protocols" for conducting studies. These protocols are often inadequately peer reviewed and are frequently in direct conflict with methods being pioneered in the Regions to deal with the ongoing water crisis. A review of this Program's focus and execution is critically needed.	Comment noted

			CalTrout	The CDFW Coho Report describes the Fisheries Restoration Grants Program, or FRGP. CalTrout continues to strongly support the goals of this program in restoring critical habitat for coho salmon and other anadromous species. We also applaud efforts by the Department to secure a consistent funding base for this program, as well as your efforts to develop the Coastal Monitoring Program to provide an overall strategy, design, and methods for monitoring salmonid populations. Both these efforts are commendable, and should continue to be implemented. However, much more strategic planning is needed in order to implement successful recovery efforts. For example:	Comments noted
			CalTrout	Funding for research is critically needed but is largely unavailable to restoration practitioners; this situation must be remedied for recovery efforts to continue to tackle increasingly complex issues;	Comment noted
			CalTrout	The Department should work with restoration practitioners and partners to develop a plan for the strategic expenditure of the next $100 million in FRGP funds;	Comment noted
			CalTrout	The FRGP program should not be the permanent source of funding for the Department's monitoring programs. We understand the Department's budget constraints, but we nevertheless recommend a separate and permanent source of funding for salmonid population monitoring be established;	Comment noted

			CalTrout	The past decades of implementing the "low hanging fruit" of habitat restoration is rapidly coming to a close, and the Department will increasingly be confronted with more challenging implementation projects, particularly related to water management and estuarine restoration. It would behoove the Department to begin developing strategies to tackle these critical issues;	Comment noted
	Table ES1, page 4	4	CalTrout	It is important to document past and ongoing funding expenditures and restoration project implementation (for example as reported in Table ES1, Page 4), but the Department should place these metrics into context of what proportion of the total restoration need has been accomplished, so that we can track progress. For example, 118 passage barriers have been removed, but how many remain? This context is extremely useful in justifying continued funding support.	Comment noted
			CalTrout	The FRGP Programmatic Permitting Program has become quite successful, helping facilitate and streamline environmental compliance for FRGP-funded projects. This permit program could be significantly expanded to include non-FRGP projects, as well as to include estuarine and tidal marsh restoration projects in the Coastal zone, which currently are hugely expensive to permit. Perhaps the Department could consider adding a Coastal Commission member to the CRT.	Comment noted

			CalTrout	Finally, we wish to emphasize that while we understand the current economic strain in state and federal government budgets, much more financial resources are needed to ensure the recovery of coho salmon. Conservation organizations such as CalTrout, and the entire salmonid restoration community have the capacity to expand to meet this level of funding allocation, and the knowledge needed to implement meaningful recovery actions. With the Recovery Strategy's continued implementation, more detailed population status and effectiveness monitoring is needed throughout the coho region and coastal watersheds.	Comment noted
		11, line 312	Sierra Club - Richard Gienger	I think the history of the state Coho listings needs to be more complete, including events, circumstances, people and organizations that petitioned for the listings, followed and aided the processes, and represented the many stakeholders in the formation and content of the Coho Recovery Strategy. One important example is the inclusion of the "achieve harvestable populations of coho salmon" as an objective. Another is the content of the Timber Management section of the Range-Wide Recommendations	Comment noted - this information is detailed in the Recovery Strategy
		14	Sierra Club	The paragraph above is pertinent to the discussions starting at line 443 of page 14	Comment noted
		14	Sierra Club	I think it was the Joint Committee on Fisheries and Aquaculture Committee hearing, not the California Legislature Commission on Fisheries and Aquaculture	Changes made

		21/22	Sierra Club	On page 21 & 22 it would be good to give a more complete set of streams/rivers being monitored for Coho populations (Usal Creek isn't included, for instance, but many are referenced later in the Report & Addenda).	The streams listed are sites at which CDFW has some involvement in monitoring programs
		28	Sierra Club	Off channel water storage is actually a positive action to stop water diversion in crucial summer and fall low stream flows.	Changes made
		40-42	Sierra Club	Some additions/corrections: (some entities are listed elsewhere) Sanctuary Forest, Eel River Recovery Project, Eel River Forum, Eel River Salmon Restoration Project, North Coast RWQCB, Coastal Conservancy, Hoopa Tribe (rather than "Hoopa Valley Tribe", Redwood Forest Foundation Inc./Usal Redwood Forest, Campbell Timberland Management is now Campbell Global (much of Campbell's Coho work is done on Campbell-Hawthorne lands e.g: Wages and Pudding Creeks)	Changes made
		87	Sierra Club	page 87, between lines 6 & 7 (description of goals Russian River Coho Water Resources Partnership), I would draw attention to "developing a watershed recovery model applicable to other watersheds throughout the state." – which fits right in with the Summary on page 99, line 218-220; Recommendations on page 100, line 25-26; and the Conclusions on page 101, line 261-263	Comment noted

			Sierra Club	The emphasis on a watershed recovery model is very basic and important. Recovery actions should generally be directed based on the evaluation and priorities in the watershed, and the basic/foundational 'building-block' watershed is the Cal Water Planning Watershed. The Report should include some serious emphasis on the relationship between forestland Timber Harvest Plan requirements to evaluate and respond to cumulative impacts on a Planning Watershed scale, and the recommendation in the Recovery Strategy that the Department of [now] F&W carry out Recovery Plans, determine Limiting Factors , and organize data/information on a Planning Watershed basis. NMFS has stated that 80% of the land essential for Coho protection and recovery are in the forestlands of the Central California Coho ESU. The information that will facilitate adequate actions is sequestered in the hundreds (or more) of logging plans that have invaluable information digitalized, but remain to be brought to bear on the recovery actions that need to take place.	Comment noted
		100	Sierra Club	In the Recommendations (page 100, line 235-238) about “high priority areas” – I would use as an example the Ten Mile River north of Fort Bragg. It has it all – few landowners & related complications, beaucoup low-gradient coho habitat, and a REAL estuary. Of course it also has an array of significant legacy problems, but problems that are not insurmountable if	Comment noted

				good watershed models for recovery are applied	
		99	Sierra Club	Lastly, I would emphasize the need for expanded community engagement and development of employment in the arts and sciences of recovery. Please add this to page 99, line 216, in the Summary, to page 100, line 228-229 in the Recommendations, and to page 101, line 263-264 in the Conclusions.	Changes made
			Sierra Club	I am attaching some of the important Timber Management Recommendations to implement, a recent letter to the Assembly Budget Committee, and a text flow-chart regarding pilot projects (that would lead to integration of recovery measures in the forest practice process – of a much more beneficial and long-lasting impact then the current Section (v) of 14 CCR 916.9). Thank you for your consideration, and I hope for some additions to the Progress Report	Comment noted

COMMISSION COHO RECOVERY UPDATE REPORT REVIEW COMMENTS

Commenting Agency	**Fisheries and Oceans Canada**

Name	Dr. J.R. Irvine
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Comment Type (General,Chapter Title, Appendix Title, or Attachment Title)	Section Name	Page #	Reviewer	Comment	CDFW Response
General			Jim Irvine	An impressive report documenting a huge range of recovery activities. I am not familiar with the watersheds investigated and will not comment on site specific activities. My review will focus on "bigger picture" issues and suggestions for improvements, whether through revision of the current document, or future work. I have had a long history assessing the status of coho salmon in British Columbia including the production of a Conservation Assessment (similar	Comment noted

				to your Recovery Strategy) - see document at http://www.dfo-mpo.gc.ca/Library/329140.pdf . Some of my comments will try to present some of the "lessons learned" through our experiences.	
General			Jim Irvine	I was surprised not to see any real data analyses in the Recovery Strategy. Below I try to provide constructive criticism on some of the general types of analyses that I suggest could have been undertaken. Perhaps this type of work is being done elsewhere? Regardless, in my view, the only way to evaluate whether the implementation of specific tasks will return coho to a level of sustained viability or to achieve harvestable populations is through the rigorous implementation of an experimental approach with appropriate data analyses.	Comment noted - experimental studies are currently underway
Executive Summary		3-5	Jim Irvine	I did not see a clear statement of the 2 primary objectives of this review in this summary as stated on pg 12 and suggest these should be given	Changes made

Executive Summary		5	Jim Irvine	In the penultimate paragraph, I question validity of 2nd sentence "The positive effects of habitat restoration, as measured by increased fish distribution and abundance, are usually associated with a time lag of several years, even for robust populations, and probably longer where populations are below depensation levels." If the habitat restoration is expected to benefit juvenile coho salmon, one would expect a benefit in terms of juvenile coho growth/survival to be detectable reasonably quickly. However, an experimental approach would be needed to detect this (more on this later).	Benefits to coho recovery are likely to depend on the form of habitat restoration undertaken (see; Roni et al. 2008).
Introduction		12	Jim Irvine	I question whether the two main goals of the Recovery Strategy are achievable "The primary objective of the Recovery Strategy is to identify tasks that when implemented will return coho salmon to a level of sustained viability, while protecting the genetic integrity of coho salmon in both ESUs. A second objective of the Recovery Strategy is to achieve harvestable populations of coho salmon for Tribal, recreational, and commercial fisheries for the cultural and economic well-being of California." The authors may wish to consider including a section in this report on the feasibility of recovery (see section starting on p. 67 in 2006	Comment noted

				Canadian Conservation Strategy document cited in first comment above.)	
			Jim Irvine	California coho salmon are at the extreme southern extent of the distribution of the species. It is entirely natural for species and populations at the extremes of their distribution to "wink out" periodically, often to be replaced at some future time when environmental conditions permit them to do so (we are talking over periods of perhaps centuries). In general, coho salmon populations that enter the California Current (i.e. coho from California, Oregon, Washington and southern British Columbia) have experienced significant declines in recent decades. There is little reason to be optimistic about the future of California coho salmon.	Comment noted

		20-21	Jim Irvine	The obvious question with populations such as California coho salmon is "what to do". The approach taken has been to focus on watershed restoration. Given the concerns related to increasing urbanization, water abstraction, etc., this seems reasonable. However, I see little evidence in this recovery strategy of any evaluation of the effectiveness of these many and costly restoration projects. The California Monitoring Program and Life Cycle Monitoring Stations as described in Adams et al (2011) (NB note that Boyston is misspelled in on p. 21) will help resolve these questions. The Recovery Strategy document seems to present finding from many separate projects rather than a comprehensive analysis of all the results.	The implementation of effectiveness monitoring of habitat restoration is a high priority issue in California coastal watersheds

		205	Jim Irvine	For example, given the numbers of projects funded and reported upon, I was surprised not to see results from any experiments, although such an approach was referred to on p 205. It is very easy to imagine a series of experiments designed to evaluate short term and longer term effects (on coho salmon survival, growth and production) of watershed restoration. These would include control and experimental reaches within watersheds to compare the benefits in terms of juvenile coho salmon growth and survival of restoration. And, more importantly, experimental and control watersheds where restoration occurs in the experimental watersheds and not in similar, nearby control watersheds and pre-smolt and post smolt survivals are monitored in each. Power analysis could be undertaken to evaluate how many replicate sites/watersheds would be required and the likely duration of the experiments in order to detect an effect. Maybe this type of work has been done, but I saw no evidence of it in the Recovery Strategy.	Several projects are underway in California coastal watersheds to evaluate using a scientific experimental approach the effects of habitat restoration on coho abundance and population dynamics

		33-34	Jim Irvine	In addition to a lack of studies to evaluate the effectiveness of restoration efforts, I expected to see more effort expended to relative importance of mortality in fresh water versus the ocean in controlling populations of coho salmon in California, as well as the effects of climate change and variability. The reviews on pages 33-34 were a start but why not more analysis of data from the various projects?	Comment noted
		24 and elsewhere	Jim Irvine	The document presents numerous escapement time series for individual streams. Is the stream the appropriate unit to report spawner numbers? How much gene flow is there among streams? Has straying been evaluated? In interior streams in British Columbia we find there is relatively little site fidelity and we generally present our time series at the Conservation Unit level (similar to American ESU's).	Comment noted - few such genetic studies of coho populations have so far been undertaken in California
General			Jim Irvine	The authors may benefit from viewing some of the types of analyses performed on Canadian coho salmon that were classified as biologically endangered by the Committee for the Committee on the Status of Wildlife in Canada (COSEWIC) - see recent reports at http://publications.gc.ca/collections/collection_2013/mpo-dfo/Fs70-5-2013-121-eng.pdf and http://www.dfo-mpo.gc.ca/csas-	Comment noted

				sccs/publications/sar-as/2014/2014_032-eng.pdf	
Conclusions and recommendations		104	Jim Irvine	I suggest that these recommendations and conclusions should highlight the need for implementation of a proper experimental design to evaluate effects of restoration on coho salmon, additional analyses of data sets gathered to date, assessment of the relative importance of marine vs. fresh water factors on recruitment variability, and a realistic assessment of the feasibility of recovery.	Comment noted - changes made

NOAA SW SCIENCE CENTER

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Comment Type (General, Chapter Title, Appendix Title, or Attachment Title)	Section Name	Page #	Reviewer	Comment	CDFW RESPONSE
		5	TW	As you know, depensation levels are a difficult thing to "calculate" and in addition, the use of the term requires lots of explanation - seems easier just to say low numbers.	Changes made
		20	TW	The specific approaches that will be used in the different areas appears to be changing - I suggest deleting this whole paragraph so as not to box in folks as they plan the monitoring efforts	Changes made
		27	TW	in the SONCC, coho are found in a large portion of their historical range (with the exception of those areas upstream of Iron Gate, other dams, etc.), but clearly not the issue as it is in the CCC	Comment noted

		28	TW	We are not as up on these issues as folks at NMFS Regional Office, specifically recovery planners. Best to have some Region staff comment on Chapter 4 NOTE - Carlos Garza reviewed hatchery section given his involvement in hatchery reviews, etc. (section 4.5) AND Nate Mantua is a recognized expert on climate change and ocean conditions. Both of their reviews are in separate files.	Comment noted
		49	TW	My understanding is that these are counts, not estimates, and that how representative of the recovery unit is uncertain. I would just use the word "counts" to be clear that they are not estimates (in the since that they are statistically rigorous and do not have measures of uncertainty/error provided - neither process OR observer error). The are minimum counts - not estimates	Changes made
		55	TW	Note footnote on Appendix B - these are minimums. Perhaps a style thing, but I try to limit the use of the word "estimate " to those situations where we have an estimate with error(s) estimated. It is an easy way to let the reader know the nature of the data that is being considered.	Changes made

		58	TW	My understanding is that this is a count, not an estimate - at least for fish counted a video weir (i.e., there is no "recapture" or efficiency estimates for weir).	Changes made
		70	TW	NOTE: The Freshwater Creek data are not listed in Appendix B - there needs to be an entry for these data on the summary table in the Appendix. Also - Bogus Creek data are listed in Appendix B, I do not see them presented in the body of report (NOTE - no need to add narrative for Bogus in body of report; but if data are not going to be discuss perhaps best to delete from Appendix B)	Data are listed
		76	TW	I am not sure about this - the Van Duzen was likely a very big coho producer prior to the late 1800s and clearly prior to 1964 event. The TRT considered the lower portions of the basins, especially the Van Duzen to have been very productive coho producers prior to land use activities starting in the mid to late 1800 and clearly these areas were hit very hard with the 1964 event that brought down from the hillsides the legacy of the past 100+ years of land use.	Comment noted
		17	CG	Best to reference the dataset from the standardized 2003 collections which is over 1,500 fish. Citation	Changes made`

				would be Southwest Fisheries Science Center (or Gilbert-Horvath et al.) unpublished data.	
		53	CG	I don't think that this is accurate. In fact, starting in 2010, IGH began to release all HO adults in excess of broodstock needs, instead of sacrificing them, due to concerns about demographic and genetic status of naturally spawning fish in the upper Klamath/Shasta River populations.	Changes made
		87	CG	founder effects	Changes made
		87	CG	Should say descendants of fish produced by…	Changes made
		97	CG	Should be Redwood Creek and should indicate that collections have already occurred, with fish being held at WSH.	Outside time-frame of report
		97	CG	t is not my understanding that the Redwood Creek fish would be used for this purpose, although ALL of the Lagunitas fish that are collected to date are for this purpose.	Comment noted
		16	BS	The BRT does not accept or reject the petition. They merely provide a scientific opinion on it merits.	Comment noted

		19	BS	One could make the case that the precipitous declines began in 2006, at least south of San Francisco	Comment noted
		22	BS	This figure is outdated. Adult monitoring throughout the Mendocino Coast area (Usal Creek to Garcia River), as well as south of San Francisco, has been ongoing for at least a couple years.	The time-frame of the report is 2004-2012
		23	BS	Again, this table needs updating. Additionally, I think it would be useful to delineate which of these populations have life-cycle monitoring stations. Otherwise, watersheds for which there is only summer juvenile surveys and adult spawner surveys are not distinguished from those where smolts are being estimated.	Changes made TO DO
		24	BS	A figure showing Scott Creek data should be added, as it is an LCM station.	Changes made TO DO
		24	BS	IS this inclusive of Olema Creek and other Lagunitas tributaries? If so, why is San Geronimo listed separately? And if not, then why is Olema data not presented?	TO DO
		26	BS	Seems odd to be citing a 2009 publication to explain increases in abundance that have occurred since 2011.	Changes made

		26	BS	Implies you know how long the extirpation will last. Did you mean "near-term"?	Changes made
		26	BS	We did find naturally produced coho in 5 different watersheds south of SF in 2008.	Comment noted
		26	BS	Caspar not Casper	Changes made
		28	BS	Again, this is outdated. Adult monitoring has been initiated in the Santa Cruz Mountains as well and more Mendocino area streams than indicated in the figure	The time-frame of the report is 2004-2012
		87	BS	Seems like this could be updated fairly easily.	The time-frame of the report is 2004-2012
		87	BS	given that many of this fish are likely progeny of hatchery fish, it seems like "naturally produced" is the more fitting term	Changes made
		97	BS	Is this still being considered? I thought it was abandoned and Redwood Creek has now been proposed as a site for a captive rearing program	Changes made
		98	BS	This is not accurate. NOAA Fisheries SWFSC conducted juvenile monitoring in the Santa Cruz Mountain diversity stratum (San Gregorio Creek to Aptos Creek) during the summers of 2006, 2007, and 2008 using	Changes made

				spatially balanced design. In each year, approximately 40 stream reaches were surveyed. Coho salmon were found in two watersheds (Scott and San Vicente creeks) in 2006, no watersheds in 2007, and five watersheds in 2008 (San Gregorio, Waddell, Scott, San Vicente, and Soquel). Numbers were low (less than 200 individuals) and genetic evidence taken at three of the 2008 locations indicate the young produced were the result of 1-2 spawning pairs in each case.	
		99	BS	This has more or less been the goal of the monitoring since its inception in 2003.	Comment noted
		100	BS	I am aware of no direct evidence to support the idea that redds were destroyed	Changes made
		101	BS	This information is dated. In 2013 and 2014, 32,007 and 28,676 smolts were released, respectively	The time-frame of the report is 2004-2012

Update of 2004 Coho Salmon Recovery Strategy

Fish and Game Commission Meeting

October 8, 2015

Kevin Shaffer
Fisheries Branch

SS7

Summary of Presentation

- The purpose of this presentation is to provide the Commission with an update of recovery efforts since the approval of the Recovery Strategy
- Extensive river habitat restoration
- Population monitoring to assess status
- Annual consultation with the advisory committee
- Collaboration with National Marine Fisheries Service

Slide 2

SS7 Mention major stresses and threats to coho - not changed significantly since 2004, maybe worsened?
Swales, Stephen@DFG, 7/13/2015

Coho salmon Distribution in California

Southern Oregon~Northern California Evolutionary Significant Unit [SONCC ESU]

Punta Gorda to Oregon Border (Mendocino Co.)

Central California Coast ESU

Punta Gorda to San Lorenzo River (Santa Cruz Co.)

SS2

Habitat Restoration

Several themes have developed as to priority activities for achieving recovery:

- Increasing instream habitat complexity for juvenile rearing
- Removing barriers to fish migration
- Improving water conservation and management
- Restoring estuary function

Slide 4

SS2 include map of 2 ESUs with conservation status?
Swales, Stephen@DFG, 7/13/2015

SS3

SS6

Population Monitoring

CDFW now oversees an interagency monitoring program to evaluate the status of coho salmon. The program was initiated in 2007

- The overall trend in most monitoring watersheds is downward for both ESUs
- Some northern populations have shown increases from 2009-2012
- Population declines of greatest concern are for those south of San Francisco Bay
- Drought effects are yet unknown

SS3 Lowest populations in 2006-2008 in response to poor ocean conditions in 2005/6 - some improvement since then as ocean conditions have recently improved
Swales, Stephen@DFG, 7/13/2015

SS6 CCC - best populations in Lagunitas Creek, Mendocino streams. Poorest - all streams south of SF Bay
SONCC - best populations in SF Eel (wild), Trinity R. (60-90% hatchery stocks), Smith R. (wild).
Poorest populations - Shasta, Mattole, Humboldt Bay tribs.
Swales, Stephen@DFG, 7/13/2015

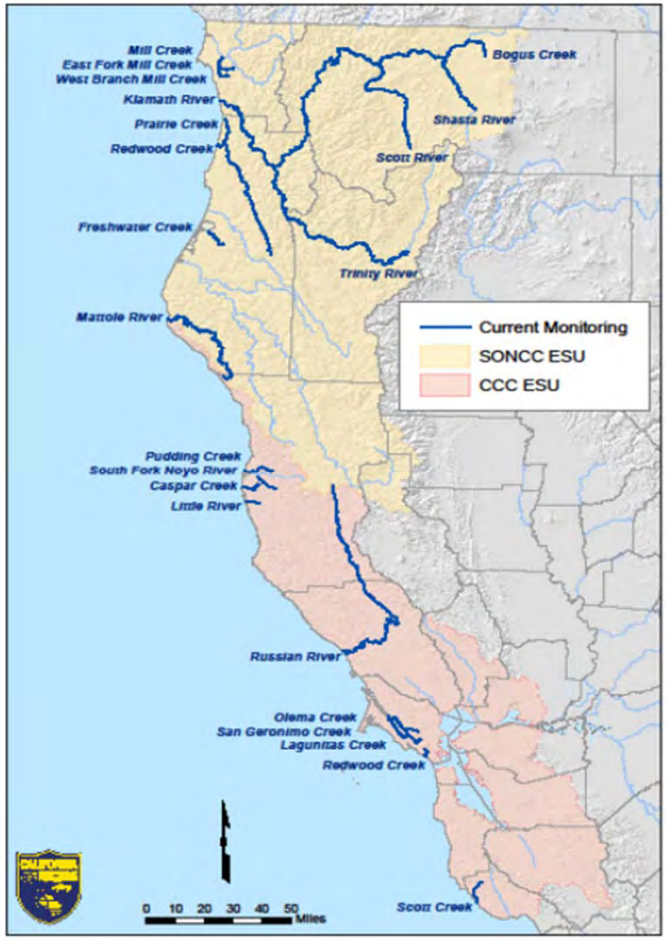
Current Population Monitoring

SONCC-

- Smith
- Shasta & Scott River
- Klamath & Trinity
- Freshwater
- Mendocino Coast

CCC-

- Russian
- Lagunitas
- Scott Creek



SS5

Partner Collaboration

- CDFW statewide recovery strategy team, -
  - state and federal agencies, tribes, landowner representatives, environmental groups, scientific experts
- Priority Coho Action Team (PACT) for the CCC
- Regional collaborations exist in many watersheds

SS5 Conservation hatchery programs - Warm Springs returns climbing each year, up to over 500 recently. Kingfisher Flat on Scott Creek - 150 adults returned in 2014/15

Swales, Stephen@DFG, 7/13/2015

SS9

Integrated Recovery

- NMFS finalized their two recovery plans for the CCC (2012) and SONCC (2014)
- The emphasis is coordinated actions and priorities for recovery- e.g. PACT
- 2015 priorities:
  - refining the focal objectives for coastal restoration activities.
  - Securing an <u>improved</u> conservation hatchery program south of San Francisco Bay

SS9 Developing PACT style approach in SONCC focusing on priority streams?

Swales, Stephen@DFG, 7/13/2015

Presentation Summary

- Many coho salmon populations continue to struggle to recover
- Emphasis on key actions to prevent extirpations and secure recovery
- A monitoring program to inform everyone on the status of fish and habitat
- Coho salmon recovery continues to be a CDFW programmatic priority
- Actions since 2004 have aided species

Questions ◈ Thank You

Kevin Shaffer
Environmental Program Manager
(916) 327-8841
Kevin.shaffer@wildlife.ca.gov

California Fish and Game Commission

Potential Agenda Items for December 2015 Commission Meeting

September 29, 2015

The next regular meeting of the California Fish and Game Commission is scheduled for December 9-10, 2015 in San Diego. This document identifies potential agenda items, including items to be received from the California Department of Fish and Wildlife (Department).

Wednesday, December 9: Marine-related and Administrative Items

1. Tribal Committee update
2. Marine Resource Committee update
3. Notice: Pacific halibut
4. Notice: Ocean salmon (sport)
5. Notice: Klamath River
6. Adopt: Marine protected areas proposed regulations
7. Receive: Lobster Fishery Management Plan
8. Receive: Master Plan for Marine Protected Areas update
9. Discuss/Approve/Renewal or Extend Existing: Hog Island state water bottom lease
10. Discuss/Approve/Renewal or Extend Existing: Santa Barbara Mariculture state water bottom lease
11. Discuss/Approve: Santa Barbara Mariculture new state water bottom lease
12. Discuss/Approve/Renewal or Extend Existing: Charles Friend Oyster Co. state water bottom lease
13. Discuss/Approve/Renewal or Extend Existing: Pt. Reyes Oyster Co. state water bottom lease
14. Direct staff/Action: Regulatory and non-regulatory requests from prior meetings
15. Department informational items
16. Other information (staff report, legislative, federal)

Thursday, December 10: Non-marine-related and Administrative Items

17. Wildlife Resources Committee update
18. Notice: Waterfowl
19. Notice: Central Valley salmon
20. Notice: Mammal 2016-2017
21. Re-adopt: Fisheries at risk emergency
22. Notice: Fisheries at risk
23. Notice: Falconry cleanup
24. Discussion: Commission meeting procedures proposed regulations
25. Adopt: Sport fish 2016 proposed regulations
26. Adopt: Gray wolf
27. Discuss: Potential nonlead ammunition coupon program
28. Receive/Approve: Private lands management licenses, management plans and

annual harvest programs

29. Receive status review for Townsend's big-eared bat
30. Receive status review for Northern spotted owl
31. Receive DFW evaluation of Humboldt marten petition
32. Discuss/Approve: Tricolored blackbird petitions
33. Receive/Approve: Wild trout waters designation
34. Discuss/Approve: Future agenda items
35. New business

State of California
Department of Fish and Wildlife

RECEIVED
CALIFORNIA
FISH AND GAME
COMMISSION

2015 SEP 29 PM 2:03

Memorandum

Date: September 29, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: Request for changes to the Fish and Game Commission's 2015 regulatory calendar

The Department of Fish and Wildlife requests the following schedule changes to the Fish and Game Commission's (Commission's) 2015 regulatory calendar:

- Replace the Trawl Logbooks rulemaking on the October 2015 meeting with Electronic Reporting of Marine Logbooks, and move the notice hearing to the February 2016 meeting with discussion/adoption at the April 2016 meeting.
- Move the request to publish notice of the Commission's intent to amend the Lands Pass regulations in sections 550 *et seq.* from the October 2015 meeting to the February 2016 meeting in Sacramento, with discussion at the April 2016 meeting and adoption at the June 2016 meeting. Additional time is needed to resolve production and distribution issues with the passes.
- Add a request to extend the emergency action set to expire on Dec 29, 2015 and publish notice of the Commission's intent to make permanent the June 2015 emergency regulations to protect fisheries at risk to the December meeting in San Diego. Discussion would occur at the February 2016 meeting, with adoption at the April 2016 meeting.
- Change the request to publish notice of the Commission's intent to amend the falconry regulations in Section 670 from the October meeting in Los Angeles to the February 2016 meeting in Sacramento. Discussion would occur at the April 2016 meeting, with adoption at the June 2016 meeting.
- Re-schedule the request to publish notice of the Commission's intent to amend the sport and commercial regulations for spiny lobster from the December meeting in San Diego to the February 2016 meeting in Sacramento. Discussion would occur at the April 2016 meeting, with adoption at the June 2016 meeting.

If you have any questions or need additional information, please contact Regulations Unit Manager, Craig Martz at (916) 653-4674 or at Craig.Martz@wildlife.ca.gov.

PERPETUAL TIMETABLE FOR CALIFORNIA FISH AND GAME COMMISSION ANTICIPATED REGULATORY ACTIONS

Note: Dates shown reflect the actual date intended for the subject regulatory action. Please check commission and committee meeting agendas to confirm dates and actions.

Updated: 09/24/15

ITEMS PROPOSED FOR CHANGE ARE SHOWN IN **BLUE**

QTRLY PUB	DFW RU ANALYST	FGC ANALYST	LEAD	REGULATORY CHANGE CATEGORY	ACTION DATE, TYPE AND LOCATION	2015 OCT 7	2015 OCT 8	2015 NOV 4	2015 DEC 9	2015 DEC 10	2016 JAN 20	2016 FEB 10	2016 FEB 11	2016 MAR 15	2016 MAR 21	2016 APR 12	2016 APR 13	2016 APR 14	2016 APR 18	2016 MAY 18	2016 JUN 21	2016 JUN 22	2016 JUN 23	2016 JUL 21	2016 AUG 24	2016 AUG 25	2016 SEP 21
FOR FGC STAFF USE						FGC LOS ANGELES		MRC VENTURA	FGC SAN DIEGO		WRC SACRAMENTO	FGC SACRAMENTO		TELECONFERENCE	MRC LOS ANGELES	TRIBAL COMMITTEE GEYSERVILLE	FGC SANTA ROSA		TELECONFERENCE	WRC SACRAMENTO	TRIBAL COMMITTEE HUNTINGTON BEACH	FGC HUNTINGTON BEACH		MRC NAPA	FGC SACRAMENTO		WRC SACRAMENTO
					File Notice w/OAL by	8/11/15			10/13/15			12/15/15		1/19/16			2/16/16		2/23/16			4/26/16			6/28/16		
					Notice Published	8/21/15			10/23/15			12/24/15		1/29/16			2/26/16		3/4/16			5/6/16			7/8/16		
✱	SB	SF	MR	COMMERCIAL MARKET SQUID LOGBOOK	149	A					E 1/1																
✱	MR	SF	MR	COMMERCIAL HAGFISH - 40 GAL BARRELS	180.6	D/A					E 1/1																
✱	MR	ST	MR	COMMERCIAL HERRING	163, 164	D/A					E 1/1														N		
	SB	ST	MR	SPORT DUNGENESS CRAB/SPORT CRAB TRAP	29.80, 29.85	A		E 11/1																			
✱	SB	SF	MR	MARINE PROTECTED AREAS	632	D			A						E 3/1												
	SB	JS	FB	SPORT FISH	1.05 et al.		D			A					E 3/1					R						N	
✱	MR	JS	FB	TRANSGENIC DEFINITION, APPLICATION & FEE	1.92, 703		D/A				E 1/1																
✱	~~MR~~	~~CW~~	~~MR~~	~~TRAWL LOGBOOKS~~	~~190~~	~~N~~			~~A~~							~~E 4/1~~											
		SF	FGC	COMMISSION MEETING PROCEDURES	665		N			D			A			E 4/1											
	SB	SF	MR	PACIFIC HALIBUT	28.20				N			D					A			E 5/1							
	SB	SF	MR	OCEAN SALMON SPORT FISHING (PHASE I)	27.80(c)				N			D			A	E 4/1											
	SB	SF	MR	OCEAN SALMON SPORT FISHING (PHASE II)	27.80(d)							D							A	E 5/1							
	SB	SF	FB	KLAMATH RIVER SPORT FISHING	7.50(b)(91.1)				N			D							A	V					E 8/1		
	MR	JS	FB	CENTRAL VALLEY SALMON	7.50(b)					N			D						A						E 8/1		
	MR	JS	WLB	MAMMAL 2016-2017	265 et. al.					N			D					A		V				E 7/1			
	MR	JS	WLB	FISHERIES AT RISK EM RE-ADOPT	8.01					EM											Expires 6/28/2016						
				FISHERIES AT RISK	8.01					N			D					A		Effective NLT 6/28/2016							
	MR	JS	WLB	WATERFOWL	502					N			D					A						E 7/1			
✱	MR	CW	MR	ELECTRONIC REPORT OF MARINE LOGBOOKS	190							N					D/A							E 7/1			
✱	SB	ST	MR	SPINY LOBSTER, SPORT AND COMMERCIAL	29.80, 29.90, 121-122				~~N~~			N					D					A		~~E 7/1~~			
	SB	CW	WLB	DFW LANDS PASS	550, 550.5, 551, 630, 703					~~N~~			N					D					A	~~E 7/1~~			
✱	MR	JS	WLB	FALCONRY CLEAN-UP	670								N					D					A				
	MR	CW	WLB	UPLAND (RESIDENT) GAME BIRD	300						R							N					D			A	E 9/1
	MR	JS	FB	BIG GAME TAG QUOTA REPORTING PROCESS	360, 361, 362, 363, 364																					N	
✱			MR	KELP FEES, RATE AND DEPOSITS [2016]	165, 165.5, 704			V																			
✱			MR	COMMERCIAL SEA CUCUMBER [2016]	128																						
✱			MR	COMMERCIAL SEA URCHIN [TBD]	120.7																						
			OGC	AZA/ZAA [TBD]	671.1																						

EM = Emergency, E = Anticipated Effective Date (RED = expedited review), N = Notice Hearing, D = Discussion Hearing, A = Adoption Hearing, V =Vetting, R = Committee Recommendation, WRC = Wildlife Resources Committee, MRC = Marine Resources Committee