

STAFF SUMMARY FOR APRIL 13-14, 2016

22. FISHERIES AT RISK (CONSENT)**Today's Item**Information Action

Adoption of proposed changes to the regular rulemaking for fisheries at risk.

Summary of Previous/Future Actions

- Notice hearing Dec 9-10, 2015; San Diego
- Discussion hearing Feb 10-11, 2016; Sacramento
- **Today's Adoption hearing Apr 13-14, 2016; Santa Rosa**

Background

To ensure that California's fisheries are protected now and in the future, DFW is proposing that FGC make permanent the emergency regulations set forth in Section 8.01, Title 14, CCR, as amended in the ISOR (Exhibit 1).

It should be noted that while FGC is considering this regular rulemaking, an emergency regulation was twice extended through the Office of Administrative Law (OAL) for a period of 180 days following action taken by FGC at its Dec 2015 meeting.

The second 90-day extension was approved by OAL on March 28, 2016. Based on the current schedule, the regular rulemaking that this agenda item contemplates may be filed with, approved by OAL and made effective upon filing with the Secretary of State prior to the emergency regulation expiring on June 28, 2016.

Significant Public Comments (N/A)**Recommendation**

Adopt the proposed changes to section 8.01, Title 14 CCR.

Exhibits

1. [ISOR](#)
2. [Dec DFW presentation, for reference](#)

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the consent calendar, items 20-23.

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

Add Section 8.01,
Title 14, California Code of Regulations
Re: Special Measures for Fisheries at Risk due to Drought Conditions

I. Date of Initial Statement of Reasons: August 21, 2015

II. Dates and Locations of Scheduled Hearings:

- | | | | |
|-----|---------------------|-----------|-------------------|
| (a) | Notice Hearing: | Date: | December 10, 2015 |
| | | Location: | San Diego |
| (b) | Discussion Hearing: | Date: | February 11, 2016 |
| | | Location: | Sacramento |
| (c) | Adoption Hearing: | Date: | April 14, 2015 |
| | | Location: | Santa Rosa |

III. Description of Regulatory Action:

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

California continues to suffer under severe drought conditions with record low snow packs since 2014. In early 2014, Governor Edmund G. Brown Jr. proclaimed a State of Emergency for California directing state officials to take all necessary actions to prepare for the record level of drought conditions and also signed an Executive Order redoubling state drought actions with additional measures to strengthen the state's response to drought. On April 1, 2015, the Governor ordered state agencies to impose statewide mandatory water restrictions that will save water, increase enforcement against water waste, streamline the state's drought response, and invest in new drought resilient technologies for California.

California's hydrological conditions are expected to deteriorate from the record low 2014 conditions in the near future. The Department of Fish and Wildlife (Department) continues to evaluate and manage the changing impacts of drought on threatened and endangered species and species of special concern, and develop contingency plans for state Wildlife Areas and Ecological Reserves to manage reduced water resources in the public interest.

Statewide water quality and quantity in many systems is likely to be inadequate to support fisheries as the summer progresses, resulting in impeded passage of spawning fish, increased vulnerability to mortality from predation and physiological stress, and increased angling harvest and/or hooking mortality. Furthermore, survival of eggs and juvenile fish in these systems over the coming months will be extremely low. The historically low water conditions will concentrate coldwater fish populations into shrinking pools of cold water habitat making them easy prey for illegal angling methods such as snagging, increased hooking mortality due to legal catch and release, over-harvest, as well as other human-related disturbances within their freshwater habitat. When coupled with drought-related environmental stressors, such as high water temperature, low dissolved oxygen, and severely reduced suitable habitat, these stressors can seriously affect reproductive success and survival rates.

Since 2014, the Department has worked with the Fish and Game Commission (Commission), using the best available science, to determine whether restricting fishing in certain areas will become necessary and prudent as drought conditions persist. The Department and the Commission have determined that an approach is needed to give the Department effective tools to respond more rapidly to the deteriorating water quality and quantity conditions in California's waters.

Regulatory Proposal

Environmental conditions resulting from the drought may require temporary restrictions on fishing to protect fish populations and sustain future opportunity. These conditional changes may affect each waterbody and fish population differently based on hydrological responses to the drought. Increased angling mortality, harvest, and angling pressure are the key components used to evaluate potential effects associated with degraded environmental conditions and will need to be evaluated on a water by water basis and over time as conditions change.

To ensure that fisheries are protected under critical conditions stemming from the drought, the Department is proposing a set of triggers to guide fishing closure and reopening decisions. The Department's decision to close or open a water will be based on the most current information available, collected by professional staff trained in the associated fields. Criteria for evaluating aquatic conditions are based on site-specific monitoring efforts with an emphasis on listed fish species, species of special concern, and gamefish.

The following proposed criteria will be used to determine if a fishing closure or associated reopening is warranted:

Any water of the state not currently listed in Section 8.00 of these regulations may be closed to fishing by the Department when the Director, or his or her designee, determines one or more the following conditions have been met:

- Water temperatures in occupied habitat exceed 70° Fahrenheit for over eight hours a day for three consecutive days.
- Dissolved oxygen levels in occupied habitat drop below 5 mg/L for any period of time over three consecutive days.
- Fish passage is impeded or blocked for fish species that rely on migration as part of a life history trait.
- Water levels for ponds, lakes and reservoirs drop below 10% of their capacity.
- Adult breeding population levels are estimated to be below 500 individuals.

All waters closed pursuant to this section will be reopened by the Department when the Director, or his or her designee, determines all of the following conditions have been met:

- Water temperatures in occupied habitat do not exceed 70° Fahrenheit for over eight hours a day for seven consecutive days.
- Dissolved oxygen levels in occupied habitat rise above 5 mg/L and are maintained at that level for seven consecutive days.
- Fish passage is available and that no impediment exists to strand or concentrate adults or juveniles during their migration.
- Water levels for ponds, lakes and reservoirs have recovered to greater than 10% of their capacity.
- Adult breeding populations are estimated to be recovered to greater than 500 individuals.

Justification and associated data for closure and reopening decisions will be provided to the Commission for any water that is subject to a fishing closure.

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

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

Reference: Sections 200, 205, 240, and 315, 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:

If any closures of waters due to proposed regulatory criteria enacted, the Department's approach will be to achieve adequate resource protection with minimized disruptions to recreational activities and the economy of the immediate surrounding locales. Closures are expected to be implemented over limited areas for short time periods. In many instances, anglers can shift to other areas of the river that remain open. Additionally, other recreational activities such as rafting, hiking, and swimming will most often still be allowed, which can mitigate potential losses in visitor spending to the local economies. However, to derive the most conservative estimates of future economic impacts, any potential mitigation of total economic impact from shifts in effort was not formally considered in the Department quantitative analysis. Estimates of future economic impacts are done with the assumption that anglers would not substitute fishing for other activities in the area or shift trips to other higher effort months of the year.

Impacts of Potential Closures:

Economic impact assessments of past emergency closures provide reasonable estimates of the potential impact of future closures under the proposed regulations. In 2013, a combined emergency closure of the lower American River, Russian River, and a combined coastal area consisting of portions of North Coast, Central Coast and South Central District Low Flow Restricted Areas were in effect for up to three months. In 2014 and 2015, emergency closures along of a portion of the Merced River were put into effect for up to five months. Additionally a hypothetical 2016 seasonal closure of the Klamath River Basin (~50% of the available area) was used to model potential impacts of large watershed closure. Table 1 presents a comparison of the above economic

impact assessments to illustrate the potential low-, mid- and high-economic impact of potential closures under Section 8.01.

Table 1. Economic Impact of Potential Closures (2015\$)

Year	Affected Area	Angler Spending	Total Output Loss	Job Loss
2013	American River	-\$77,000	-\$93,000	-1.9
2013	Russian River	-\$24,000	-\$29,000	-0.6
2013	Coastal Low-Flow Areas	-\$34,000	-\$41,000	-0.8
2014	Merced River	-\$1,300	-\$1,500	-0.03
2015	Merced River	-\$1,000	-\$1,200	-0.02
2016	Klamath River	-\$1,000,000	-\$1,040,000	-21.3

- The Merced River 2014 and 2015 closures resulted in a relatively low total economic output loss estimate of \$1,200 to \$1,500 with less than one job lost for each closure.
- The 2013 Russian River closure occurred during peak fishing months and resulting in an estimated loss of 280 angler trips with an associated \$24,000 drop in angler spending resulting in a mid-range total output loss of \$29,000 and less than one job lost from the three month closure period.
- The concurrent 2013 coastal low-flow closures resulted in a slightly higher total economic output loss estimate of \$34,500 with less than one job lost.
- The American River closure during the same time, resulted in a higher estimated loss of 900 angler trips with an associated \$77,000 drop in angler spending resulting in a higher total output loss of \$93,000 and about two jobs lost.
- The 2016 hypothetical Klamath River Basin closure is projected to result in the loss of 4,000 angler trips with an associated \$1,000,000 drop in angler spending resulting in the highest expected total output loss of \$1,040,000 and about 21 jobs lost.

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

The Commission does not anticipate significant adverse impacts on the creation or elimination of jobs to be precipitated by temporary closures of isolated inland fisheries.

The potential impacts of a short-term closure were estimated to result in the loss of less than one job loss at the low end to a high impact of up to 21 jobs loss depending upon area, duration and location of the potential closure. However overall, the number of visitors and thus probable visitor expenditures in the fisheries areas is expected to decline for the closure period but most often,

significant impacts on job creation or elimination is not likely to occur given the short time period and lags in employment level adjustment.

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

The projected loss in angler spending for a freshwater closure is estimated to range from \$1,000 to \$1,000,000. This spending loss is associated with a drop in total economic output as each dollar spent is passed through the economy in the range of \$1,200 to \$1,040,000. This estimated output loss would be shared by a number of businesses over several months, such that it is not anticipated to constitute sufficient impact to trigger the creation of new businesses or elimination of existing businesses.

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

The projected loss in angler spending for a freshwater closure is estimated to range from \$1,000 to \$1,000,000. This spending loss is associated with a drop in total economic output as each dollar spent is passed through the economy in the range of \$1,200 to \$1,040,000. This estimated output loss would be shared by a number of businesses over more several months, such that it is not anticipated to constitute sufficient impact to trigger expansion of new businesses.

D. Benefits of the Regulation

Concurrence with Federal Law: N/A

Benefits of the Regulation to the Health and Welfare of California

Residents:

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. 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.

Benefits to the Environment:

The Commission anticipates benefits to the environment through the protection of aquatic and riparian habitats and the fish and wildlife resources that depend upon them. Stream flows in many systems are inadequate to allow passage of spawning anadromous fish, increasing their vulnerability to mortality from predation, physiological stress, and fishing. Furthermore, survival of eggs and

juvenile fish in these systems is likely to be extremely low in higher temperature waters. Under these extreme conditions, conservation and protection of the juvenile fish populations will protect as many adult fish as possible. 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.

Benefits to Worker Safety: The Commission does not anticipate benefits to worker safety because the proposed regulations will not impact worker conditions.

Informative Digest/Policy Statement Overview

California continues to suffer under severe drought conditions with record low snow packs since 2014. In early 2014, Governor Edmund G. Brown Jr. proclaimed a State of Emergency for California directing state officials to take all necessary actions to prepare for the record level of drought conditions and also signed an Executive Order redoubling state drought actions with additional measures to strengthen the state's response to drought. On April 1, 2015, the Governor ordered state agencies to impose statewide mandatory water restrictions that will save water, increase enforcement against water waste, streamline the state's drought response, and invest in new drought resilient technologies for California.

California's hydrological conditions are expected to deteriorate from the record low 2014 conditions in the near future. The Department of Fish and Wildlife (Department) continues to evaluate and manage the changing impacts of drought on threatened and endangered species and species of special concern, and develop contingency plans for state Wildlife Areas and Ecological Reserves to manage reduced water resources in the public interest.

Statewide water quality and quantity in many systems is likely to be inadequate to support fisheries as the summer progresses, resulting in impeded passage of spawning fish, increased vulnerability to mortality from predation and physiological stress, and increased angling harvest and/or hooking mortality. Furthermore, survival of eggs and juvenile fish in these systems over the coming months will be extremely low. The historically low water conditions will concentrate coldwater fish populations into shrinking pools of cold water habitat making them easy prey for illegal angling methods such as snagging, increased hooking mortality due to legal catch and release, over-harvest, as well as other human-related disturbances within their freshwater habitat. When coupled with drought-related environmental stressors, such as high water temperature, low dissolved oxygen, and severely reduced suitable habitat, these stressors can seriously affect reproductive success and survival rates.

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with degraded environmental conditions and will need to be evaluated on a water by water basis and over time as conditions change.

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The following proposed criteria will be used to determine if a fishing closure or associated reopening is warranted:

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- Water temperatures in occupied habitat exceed 70° Fahrenheit for over eight hours a day for three consecutive days.
- Dissolved oxygen levels in occupied habitat drop below 5 mg/L for any period of time over three consecutive days.
- Fish passage is impeded or blocked for fish species that rely on migration as part of a life history trait.
- Water levels for ponds, lakes and reservoirs drop below 10% of their capacity.
- Adult breeding population levels are estimated to be below 500 individuals.

All waters closed pursuant to this section will be reopened by the Department when the Director, or his or her designee, determines all of the following conditions have been met:

- Water temperatures in occupied habitat do not exceed 70° Fahrenheit for over eight hours a day for seven consecutive days.
- Dissolved oxygen levels in occupied habitat rise above 5 mg/L and are maintained at that level for seven consecutive days.
- Fish passage is available and that no impediment exists to strand or concentrate adults or juveniles during their migration.
- Water levels for ponds, lakes and reservoirs have recovered to greater than 10% of their capacity.
- Adult breeding populations are estimated to be recovered to greater than 500 individuals.

Justification and associated data for closure and reopening decisions will be provided to

the Commission for any water that is subject to a fishing closure.

Regulatory Language

Section 8.01, Title 14, CCR is added to read:

Section 8.01. Special ~~Gear Provisions~~[Repealed]Measures for Fisheries at Risk due to Drought Conditions.

(a) In response to continued extreme drought conditions, the commission has established a quick response process to temporarily close fisheries experiencing degraded environmental conditions that may affect fish populations or their habitat within waters of the state. The criteria set forth in subsections (b) and (c) are intended to ensure that fisheries are protected under critical conditions stemming from the drought. These criteria will be monitored in statewide inland fisheries, and they will be evaluated on a water by water basis over time as conditions change.

(b) The department may close to angling any waters of the state not currently listed in Section 8.00 of these regulations if the director, or his or her designee, finds one or more of the following conditions have been met:

(A) Water temperatures in occupied habitat exceed 70° Fahrenheit for over eight hours a day for three consecutive days

(B) Dissolved oxygen levels in occupied habitat drop below 5 mg/L for any period of time over three consecutive days.

(C) Fish passage is impeded or blocked for fish species that rely on migration as part of a life history trait.

(D) Water levels for ponds, lakes and reservoirs drop below 10% of their capacity.

(E) Adult breeding population levels are estimated to be below 500 individuals.

(c) Waters closed pursuant to subsection (b) shall be reopened by the department when the director, or his or her designee, finds all of the following conditions have been met:

(A) Water temperatures in occupied habitat do not exceed 70° Fahrenheit over eight hours a day for seven consecutive days

(B) Dissolved oxygen levels in occupied habitat rise above 5 mg/L and are maintained at that level over seven consecutive days.

(C) Fish passage is available and no impediment exists to strand or concentrate adults or juveniles during their migration.

(D) Water levels for ponds, lakes and reservoirs have recovered to greater than 10% of their capacity.

(E) Adult breeding population levels are estimated to be recovered to greater than 500 individuals.

(d) It shall be unlawful to take fish in any waters of the state closed to angling pursuant to this Section.

(e) Notification of department actions.

(1) The department shall maintain a list of closed waters of the state and update that list on Wednesday of each week by 1:00 pm. In the event that water conditions change later in the week, the fishing status for each specific water will not change until the day following the next Wednesday. It shall be the responsibility of the angler to use the telephone number provided below or go to the department's website at <https://www.wildlife.ca.gov/Regulations> to obtain the current status of any water. The

number to call for information is (916) 445-7600.

Note: Authority cited: Sections 200, ~~202 and 240~~, 205, 240, and 315, Fish and Game Code. Reference: Sections 200, 202, ~~205 and 240~~, 240, and 315, Fish and Game Code.

Fisheries at Risk

Proposed Regulatory Action



Fish and Game Commission Meeting
December 10, 2015
Stafford Lehr
Fisheries Branch



Overarching Goal

To ensure that fisheries are protected from increased angling mortality, harvest, and angling pressure under critical environmental conditions.

Problem Statements

- Environmental conditions resulting in degraded habitat quality and/or extremely low population size may require temporary restrictions on fishing to protect fish populations and sustain future opportunity
- The Department needs a quick response process to temporarily close fisheries experiencing degraded habitat quality and or quantity or extremely low population size within waters of the state

Proposed Solution

- Department **may** close any water when established criteria have been met
- Decisions based on current information collected by trained staff
- Emphasis on listed fish species, species of special concern, and gamefish
- Justification for any closure will be provided to the Commission

Criteria for Fishing Closures

Any water may be closed to fishing when one or more the following conditions have been met:

- Water temperatures exceed 70°F for over eight hours a day for three consecutive days
- Dissolved oxygen levels drop below 5 mg/L for any period of time over **two** consecutive days

Criteria for Fishing Closures

- Fish passage is impeded or blocked for fish species that rely on migration as part of a life history trait
- Water levels for ponds, lakes and reservoirs drop below 10% of capacity
- Adult breeding population levels are estimated to be below **50 individuals for a subpopulation** and **500 for a standard or meta-population**

Re-opening Criteria

- Waters closed to fishing will be reopened when the initial closure-based criteria are no longer met; and
- **Water temperatures do not exceed 70°F for over eight hours a day for 14 consecutive days**
- **DO levels remain above 5 mg/L for 14 consecutive days**

Changes from Emergency Regulations

- A consecutive two day exposure for DO addresses natural variability and risk for juvenile and early life stages of fish
- The 50/500 rule addresses the effects on both the localized level for smaller sub-populations and larger meta-population complexes
- A 14 day recovery for water temperature and DO accounts for natural variability and fluctuations once the upper limits have been exceeded

Questions / Thank You

