

At the federal level, new, more robust methodologies have been approved for use in determining allowable harvest amounts for data poor stocks (which includes kelp greenling). The new methodologies have changed the Department of Fish and Game (Department's) perception and improved our understanding of the kelp greenling resource in California. As a result, there is a new, significantly higher federal allowable harvest of kelp greenling. The Department proposes to increase the state's TAC for conformance with the federal limit, and adjust the allocations, recreational sub-bag limits and commercial bi-monthly trip limits accordingly.

Background

The Marine Life Management Act of 1998 (MLMA) established the Legislature's concern for the status of nearshore fish stocks off California, particularly nearshore rockfish, California scorpionfish, cabezon, greenlings, and California sheephead which are targeted by the state's recreational and commercial fisheries. Sections 7071 and 8587.1 of the Fish and Game Code authorize the Commission to adopt regulations based on the advice and recommendations of the Department to regulate nearshore fish stocks and fisheries. However, regulatory authority for most nearshore stocks is shared jointly between state and federal governments as species are included both in the Federal Groundfish Fishery Management Plan (FGFMP) and the NFMP – specifically, shallow and deeper nearshore rockfish, cabezon, kelp greenling and California scorpionfish. These stocks are managed based on both federal annual catch limits (ACL) recommended by the PFMC, and Commission-established TACs.

Many of the nearshore species have yet to be assessed because there is insufficient data to produce full assessments. Previously, state and federal harvest levels were set by applying a 50 percent precautionary catch reduction for these “data poor” species—which included the greenlings¹ (see Supplemental Report 1: Past Status Determination Methodologies and Allocation History). This method is referred to as the “Restrepo method” and was used by the Commission in 2003 to establish the current TAC for greenlings and other NFMP species consistent with both the NFMP and federal guidelines.

In 2009, NOAA Fisheries initiated an effort to improve upon existing catch-based overfishing limit (OFL) estimates for many data poor groundfish stocks within the FGFMP that were based on the Restrepo approach. Depletion based-stock reduction analysis (DB-SRA) was one of the new catch based methodologies developed, and it has been approved for use in federal management by the Pacific Fishery Management Council's (PFMC) Scientific and Statistical

¹ Although federal scientists attempted to assess California's kelp greenling stock in 2005, the assessment was not accepted for management.

Committee. The DB-SRA methodology estimates a sustainable yield from average catch over the historical time period, includes fishery discards, considers a species' life history characteristics, and then provides estimates of OFLs for the historical time period. This results in a yield that would likely have been sustainable over the historical time period and facilitates the development of sustainable future harvest levels.

Some federal groundfish species lacking sufficient data are managed in groupings or complexes. Kelp greenling is one of them, and is managed in the "Other Fish" complex with several other species. For the federal 2011-2012 management cycle, the contribution of kelp greenling in California to the Other Fish complex OFL is 111 mt – based on the DB-SRA method. A precautionary reduction² of 50 percent was taken from the OFL contribution, resulting in a kelp greenling ACL contribution of 55.3 mt (121,900 pounds).

Although the Commission adopted changes to its groundfish regulations for consistency with new federal regulations in May of 2011, the Department did not propose an increase to the state's TAC for greenlings at that time pending a peer review of the new DB-SRA methodology. That review was recently completed and the methodology was approved by the PFMC at their June 2011 meeting. As a result, federal regulations now specify a kelp greenling ACL contribution of 121,900 pounds. Meanwhile, the current state TAC for greenlings remains at 17 mt (37,600 pounds) and will remain so unless regulatory action is taken to conform to the new, higher federal limit.

In response to this higher federal ACL, the proposed changes to Title 14 regulations will increase the statewide TAC for greenlings, as well as adjust commercial trip limits and recreational sub-bag limits while keeping within the precautionary guidelines established by the Commission in the NFMP.

Comparative Information From Other West Coast States:

Increasing the TAC to the federal ACL level would also be consistent with greenling management in other states, specifically Oregon. A kelp greenling assessment was conducted in 2005 for the Oregon stock and adopted for use in management. As such, the harvest limit in Oregon has been much greater than the more precautionary harvest limit California chose to adopt in the absence of an approved stock assessment. Oregon currently averages kelp greenling harvests of just under 60,000 pounds annually, despite having less coastline and greenling-preferred habitat than California, as well as fewer ports where greenlings are landed.

² At the federal level, precautionary reductions are taken from the OFL level, consistent with FGFMP Amendment 23.

Proposed Management Changes

Amend Section 28.29, Title 14, CCR, to modify the recreational sub-bag limit for greenlings from two fish to ten fish within the Rockfish, Cabezon, Greenling (RCG) complex.

The current recreational sub-bag limit for greenlings was designed to keep catches within the 34,200 pound per year recreational allocation. An increased TAC and allocation amount allows room for an increased recreational sub-bag limit for greenlings.

Sub-bag limits within the ten fish RCG bag limit ranging from two (status quo) to ten fish were analyzed to estimate the amount of increased catch expected from a proposed bag limit increase (see Supplemental Report 2: Analysis of Recreational Sub-bag Limit Increase for more detailed methodology and results). At a two-fish bag limit (status quo), the estimated take would be approximately 35,794, pounds (16.3 mt) based on the average of the past two years. At a 10 fish per day bag limit, the estimated take would be 52,500 pounds (23.8 mt). Ten fish is the maximum number of kept fish allowed for the RCG complex, and provides one estimate of what the maximum take might be. It should be noted that the recreational take of greenlings exceeded 50,000 pounds only twice between 1998 and 2010—in 2001 and 2003.

Predicting maximum catch resulting from a bag limit increase is not a precise science and is an estimate based on past behavior. However, the Department's projections of catch suggest it is highly unlikely that allowing a sub-bag limit of ten fish would result in catches higher than the proposed recreational allocation.

Although it can be difficult to predict angler behavior, an increased sub-bag limit for greenlings should provide increased fishing opportunity in what has otherwise become an increasingly restricted fishery for the RCG complex due to the need to protect yelloweye rockfish.

Amend Section 52.10, Title 14, CCR, to modify the statewide annual TAC for greenling from 37,600 pounds (17 metric tons) to 121,900 pounds (55.3 metric tons) consistent with recent actions by the Council.

The Council, at its June 2010 meeting, chose a kelp greenling ACL value of 121,900 pounds (55.3 metric tons) for 2011 and 2012, based on the new DB-SRA method, which is half of the OFL level. For the foreseeable future, federal ACL levels are expected to remain at 121,900 pounds or may increase.

Current state regulation sets the TAC for kelp and rock greenlings at 37,600 pounds (approximately 17 metric tons). If the Commission increases the TAC for greenlings, the state TAC will be in conformance with the federal ACL level of

121,900 pounds (55.3 metric tons) for 2012. The higher amount will still be precautionary because it is only half of the federal overfishing limit, and, while the federal limit only applies to humpback greenling, the state TAC would apply to all greenlings. This level of take will increase fishing opportunities, yet will prevent overfishing and remain precautionary – consistent with the NFMP.

Amend Section 52.10, Title 14, CCR, to modify the allocated amount to the recreational sector to 66,500 pounds (consistent with the highest recent catch) and manage the commercial sector such that harvests do not exceed the remainder of the TAC not allocated to the recreational sector.

State management of greenlings is currently based on the TAC and sector allocations set by the Commission in 2003 (for a more detailed history on allocations, see Supplemental Report 1: Past Status Determination Methodologies and Allocation History). The proposed higher TAC also means more fish to allocate between the sectors. The Department considered historical recreational and commercial participation, the efficiency of the fishery, current participation, bycatch, and other fishery factors in proposing allocation of the increased TAC to the recreational and commercial fishery sectors.

The highest yearly catches for greenlings since 1998 occurred between 2000 and 2003 (Table 1), when some fishery restrictions were in place, but not the full suite of restrictions that are in place at present. Between 2000 and 2003, catches varied widely, and often exceeded not only the sector allocated amounts, but also the TAC. These overages were a result of fewer regulations being in place to limit catch amounts, as well as less robust inseason tracking abilities. Current regulations (from 2004 forward), including a restricted access program, combined with improved inseason tracking and an effective strategy for taking inseason action, have kept catches within or near to the allowed harvest amounts. Based upon the proposed increase to the TAC, and past fishery participation, the Department recommends allocating a set harvest amount to the recreational fishery, and managing the commercial fishery such that harvests do not exceed the remainder of the TAC not allocated to the recreational sector.

Table 1. Commercial and recreational landings, allocation amounts, and total landings and TAC of greenlings (in pounds) from 1998-2010.

Year	Commercial ¹		Recreational ¹		Total	
	Landings	Allocation Amount	Landings	Allocation Amount	Landings	TAC ²
1998	14,177	NA	25,751	NA	39,928	NA
1999	30,925	NA	17,006	NA	47,931	NA
2000	51,070	13,420	38,783	26,403	89,853	39,823
2001	23,432	13,420	56,585	26,403	80,017	39,823
2002	17,817	13,420	37,544	26,403	55,361	39,823

2003	10,930	13,420	66,484	26,403	77,414	39,823
2004	4,533	3,400	29,403	34,200	33,936	37,600
2005	3,840	3,400	20,252	34,200	24,092	37,600
2006	3,581	3,400	17,934	34,200	21,515	37,600
2007	3,295	3,400	23,376	34,200	26,671	37,600
2008	3,036	3,400	23,199	34,200	26,235	37,600
2009	3,144	3,400	33,627	34,200	36,771	37,600
2010	3,587	3,400	38,332	34,200	41,919	37,600

¹ Data source: CFIS/CMASTR for commercial data and MRFSS and CRFS for recreational data

² Beginning in 2011, the federal ACL for kelp greenling is 121,900 pounds.

The highest recreational catch between 1998 and 2010 was 66,500 pounds in 2003 (Table 1)—significantly higher than the predicted catch with a 10 fish bag limit (52,500 pounds). Uncertainties have been noted regarding predicting increased catch from a bag limit increase based on past behavior. It is also challenging to predict future angler behavior resulting from increased opportunity. Therefore, the Department proposes to set the recreational allocation amount at 66,500 pounds per year; equal to the 2003 catch. This amount is higher than the Department’s projected take with a 10-fish sub bag limit increase, and should provide sufficient flexibility given the uncertainty that surrounds predicting future fishing behavior, while providing recreational anglers as much opportunity possible.

The difference between the increased TAC proposed (121,900 pounds) and the recreational allocation is 55,400 pounds. The commercial sector would be managed such that harvest amounts do not exceed that amount (the remainder of the TAC not allocated to the recreational sector.) Currently, the commercial fishery only allows for bycatch of greenlings due to the low allocation (only nine percent of the TAC) and very low trip limits. When the fishery was much less restricted, greenlings could be targeted and the highest recent commercial catch was over 50,000 pounds in 2000.

The proposed amount available to the commercial fishery is roughly 16 times greater than the current commercial allocation³, and should provide for a longer fishing season and higher bi-monthly trip limits. Some commercial fishermen may even be able to target greenlings again with the larger allocation in place. In addition, this amount will allow the fish not allocated to the recreational fishery (and unlikely to be utilized by the recreational fishery) to be available to the commercial fishery up to the TAC.

³ The current commercial allocation for greenlings of 3,400 pounds per year, and bimonthly trip limits of 25 pounds have resulted in an incidental fishery. The trip limits allowed under a nearshore species bycatch permit are actually higher than what is allowed for those with a Nearshore Fishery Permit.

Through the use of a restricted access fishery, bi-monthly trip limits, in-season catch monitoring, and the ability to take swift inseason action to modify trip limits or close the fishery altogether⁴, adequate protections are in place to ensure both the commercial and recreational fisheries will stay within their respective limits, and the TAC will not be exceeded.

Amend existing Section 150.16, Title 14, CCR, to change the existing cumulative trip limits for greenlings.

Commercial harvest is regulated to provide seasonal take of greenlings using cumulative trip limits per individual Nearshore Fishery Permit permittee that are low enough to keep commercial harvest within the sector allocation. Under the higher proposed TAC, the trip limits can be increased to allow fishery participants to fully access the resource available to them.

In August 2003, the Commission established cumulative trip limits for greenling similar to the federal management approach for nearshore rockfish by limiting each permittee's take to a specified maximum level in a two-month period. This allows commercial take to be spread over a longer fishing season, prevents a derby-style fishery from developing, and ensures a more stable market supply. However, the current commercial allocation only allows for very low trip limits, which essentially accounts for bycatch while pursuing other high value targets like cabezon, and about a three to five month season.

The 2011 trip limit for greenlings per individual, designed to keep catches to the allowable commercial catch of 3,400 pounds, are as follows:

January-February: 25 pounds
March-April: 25 pounds
May-June: 25 pounds
July-August: 25 pounds
September-October: 25 pounds
November-December: 25 pounds

The proposed values per two-month period range from 0 to 300 pounds. The Department will provide recommended bimonthly levels to the Commission at a later date based upon public input solicited by the Department.

While fleet behavior can be difficult to predict, especially when increasing fishing opportunities, the Department feels secure in its ability to monitor the fishery inseason and take timely action (decrease trip limits or close the fishery) to

⁴ Since 2004, the Department has used its authority under Section 52.10, Title 14, CCR, to take inseason action necessary to prevent the current commercial allocation from being exceeded.

remain within the TAC pursuant to Section 52.10, Title 14, CCR.

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

Authority: Sections 200, 202, 205, 702, 7071, 8587.1 and 8588, Fish and Game Code.

Reference: Sections 97, 200, 202, 205, 1802, 7056, 7071, 8585.5, 8586, 8587, 8587.1, and 8588, Fish and Game Code. 50 CFR Part 660, Subpart G; 50 CFR 660.384; and 14 CCR 27.20.

- (c) Specific Technology or Equipment Required by Regulatory Change:
None

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

[Supplemental Report 1: Past Status Determination Methodologies and Allocation History](#)

[Supplemental Report 2: Analysis of Recreational Sub-bag Limit Increase](#)

[Nearshore Fishery Management Plan](#). Adopted October 25, 2002.
Department of Fish and Game.

[Restrepo, V. R. et al. 1998. Technical Guidance On the Use of Precautionary Approaches to Implementing National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act. NOAA Technical Memorandum NMFSF/SPO-40.](#)

PFMC Briefing Book June 2010, Agenda Item B.3.a, Supplemental Attachment 7; Estimating Yield for Unassessed Species in the Pacific Coast Groundfish Fishery Management Plan, REVISED DRAFT for SSC Review

http://www.pcouncil.org/wp-content/uploads/B3a_SUP_ATT7_ESTYIELD_JUNE2010BB.pdf

PFMC Briefing Book June 2010, Agenda Item B.3.a, Attachment 2: Description of Harvest Specifications Alternatives, Rebuilding Alternatives, and 2011-2012 Management Measures (pg 10, 19, 75)

http://www.pcouncil.org/wp-content/uploads/B3a_ATT2_CHPTR_2_JUNE2010BB.pdf

PFMC Briefing Book September 2011, Agenda Item G.5.a, Supplemental REVISED Attachment 2: 2012 OFLs (mt) and Recommended 2013 and

2014 OFLs (mt) for West Coast Groundfish Stocks

http://www.pcouncil.org/wp-content/uploads/G5a_SUP_REVISED_ATT2_OFLs_SEPT2011BB.pdf

PFMC Briefing Book September 2011, Agenda Item G.5.a, Supplemental Attachment 8: Revisions to OFL Contributions for Category 3 Stocks

http://www.pcouncil.org/wp-content/uploads/G5a_SUP_ATT8_REVISIONS_OFL_SEPT2011BB.pdf

Fish and Game Commission's Economic Impact Analysis

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

The Pacific Fishery Management Council discussed options for setting the greenling OFL and ACL at the March, April and June 2010 meetings. The Department held a public meeting to discuss proposed management measures for 2011-2012 in conjunction with the March 2010 PFMC meeting in Sacramento—with 17 attendees. Public comments were accepted during the federal process between November 2009 and June 2011. The Department did not hold any public meetings to discuss these proposed changes to regulations affecting greenlings.

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 continue management of the greenling resource much more conservatively than the federal greenling ACL adopted for 2011 and 2012. Not adopting a modified greenling TAC would cause the current regulations, which provide for a TAC of approximately 17 metric tons, to stay in effect. In addition, managing greenling with the current TAC would conflict with Goals I through IV of the NFMP.

- (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, would be as effective and less burdensome to the affected private persons than the proposed regulation, or would be

more cost-effective to the 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 management actions would relax recreational fishing regulations for greenlings statewide, and may have positive impacts to some businesses in California. 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 recreationally pursue greenlings off California may be positively affected to some degree from increases to business relative to previous management cycles. Likewise, commercial fishing industry businesses and coastal communities may realize positive benefits from increased bimonthly trip limits and catches, a decrease to regulatory discarding, and the possibility of a longer open season for greenlings (and thus a more consistent product for markets). However, anticipated impacts are speculative and would vary considerably by geographic location and by the nature and extent of the regulatory action taken.

(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:

The proposed regulatory action could produce some impact on the creation or elimination of jobs or businesses that rely on recreational or

commercial fishing for greenlings. However, the degree of impact is highly speculative in nature and cannot be quantified. See response to VI(a) above.

(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

(i) Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The proposed management actions would relax recreational fishing regulations for greenlings statewide, and may have positive impacts to some businesses in California. 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 recreationally pursue greenlings off California may be positively affected to some degree from increases to business relative to previous management cycles. Likewise, commercial fishing industry businesses and coastal communities may realize positive benefits from increased bimonthly trip limits and catches, a decrease to regulatory discarding, and the possibility of a longer open season for greenlings (and thus a more consistent product for markets).

Informative Digest/Policy Statement Overview

Current state regulations provide for: a statewide total allowable catch (TAC) for greenlings of the genus *Hexagrammos*, allocation of the TAC for greenlings between the recreational and commercial fisheries, and establishment of commercial trip limits and recreational sub-bag limits for greenlings.

The Marine Life Management Act of 1998 establishes the Legislature's concern for the status of nearshore fish stocks off California, particularly nearshore rockfish, California scorpionfish, cabezon, greenlings, and California sheephead which are targeted by recreational and commercial fisheries in the state. Sections 7071 and 8587.1 of the Fish and Game Code authorize the Commission to adopt regulations based on the advice and recommendations of the Department to regulate nearshore fish stocks and fisheries. However, regulatory authority is shared jointly between state and federal governments in the case of species which are also included in the Federal Groundfish Fishery Management Plan – including kelp greenling. As a result, the state's regulatory and management actions must not allow catches of these species to exceed these federally established levels, nor can they conflict with other federal regulations such as fishing seasons, trip limits and bag limits. The state may however, impose additional and/or more restrictive requirements as it sees fit. As a result, while kelp greenling is also managed at the federal level using ACLs, the state may regulate the resource more actively— setting TACs, sector allocations and commercial trip limits.

Past stock status determination methodologies, used on both the federal and state side, only used historical catch data in determining future harvest levels. At the federal level, a new methodology was approved for use in determining allowable harvest amounts for data poor stocks (which includes kelp greenling). The new methodology resulted in a higher, sustainable federal harvest level, and the Department is proposing to increase the state TAC in conformance with the new, higher federal ACL level. In conjunction with the higher TAC, modifications to the recreational sector allocation, the recreational sub-bag limits and commercial bi-monthly trip limits are also proposed.

Proposed Management Changes

The Department proposes the following modifications to Sections 28.29, 52.10, and 150.16, Title 14, CCR:

- Increase the recreational sub-bag limit for greenlings from two fish to ten fish.
- Increase the statewide TAC for greenlings from 37,600 pounds (approximately 17 metric tons) to 121,900 pounds (55.3 metric tons) consistent with the federally adopted kelp greenling ACL contribution to the federal "Other Fish" complex. This will provide an increase to the TAC that is more than three times the current TAC.

- Modify allocation to recreational sector to highest recent catch and manage the commercial sector such that yearly harvest will not exceed the remainder of the TAC.
- Increase the commercial bimonthly trip limits from the current 25 pounds per two months, to a value between zero and 300 pounds per two months.

The proposed management actions would relax recreational fishing regulations for greenlings statewide, and may have positive impacts to some businesses in California. 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 recreationally pursue greenlings off California may be positively affected to some degree from increases to business relative to previous management cycles. Likewise, commercial fishing industry businesses and coastal communities may realize positive benefits from increased bimonthly trip limits and catches, a decrease to regulatory discarding, and the possibility of a longer open season for greenlings (and thus a more consistent product for markets).

The proposed regulations are neither inconsistent nor incompatible with existing state regulations.