

**EXECUTIVE SUMMARY AND DESCRIPTION OF THE PREFERRED SEASON
STRUCTURES AND MANAGEMENT MEASURES, AN EXCERPT FROM THE
PRELIMINARY DRAFT ENVIRONMENTAL IMPACT STATEMENT**

The following document includes the Executive Summary from the preliminary draft Environmental Impact Statement (DEIS), which provides an overview of the proposed action alternatives and environmental impacts. Further, the attachment summarizes the Council’s preferred harvest specifications, management measures, and season structures for the 2013-2014 fisheries. For the most part, the description is excerpted from the preliminary DEIS. As such, the original section references and table numbers have been preserved so the reader can easily refer to the DEIS for more information (Agenda Item D.5.a, Attachment 5 – available electronically).

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Executive Summary

The Pacific Fishery Management Council (Council) develops and recommends harvest specifications and management measures to the National Marine Fisheries Service (NMFS). Examples of a harvest specification include annual catch limits (ACLs) for a species or species complex. Examples of management measures include trip limits for commercial fisheries, rockfish conservation area (RCA) boundary adjustments, bag limits, and seasons. The biennial management process was implemented in 2003 through Amendment 17 to the groundfish Fishery Management Plan (FMP). Under this biennial cycle, management measures are implemented for a two-year period, with the expectation that the measures will likely be adjusted within the biennium to attain, but not exceed, the ACLs. Adjustments during the biennium are, in part, based on catch estimate updates and the latest information from the West Coast Groundfish Observer Program. Separate harvest specifications (including acceptable biological catches and annual catch limits) are identified for each year in the two-year period by groundfish species or species complexes. This cycle provides more time for the Council and NMFS to work on other critical groundfish issues, and more time for public comment. This document provides information about, and analyses of, alternatives for the 2013–14 biennial harvest specifications and management measures, for fisheries covered by the Pacific Coast Groundfish FMP (PFMC 2011b). These alternatives were developed by the Council in collaboration with NMFS.

The Proposed Action

Using the “best available scientific information,” the proposed action is to implement harvest specifications for calendar years 2013 and 2014 for 32 “management units”¹ managed under the Groundfish FMP and to implement new or revised management measures to address resource conservation concerns, habitat conservation concerns, socioeconomic objectives, and other purposes as described in the sections 2.1 and 6.2 of the FMP (PFMC 2011b). The specifications must be consistent with requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), particularly the 10 National Standards enumerated in §301(a) of the MSA and other applicable law. Seven Pacific Coast groundfish species are currently “overfished” and managed under rebuilding plans implemented by secretarial amendment (bocaccio rockfish south of 40°10' N. latitude, canary rockfish, south of 40°10' N. latitude, cowcod south of 40°10' N. latitude, darkblotched rockfish, Pacific ocean perch north of 40°10' N. latitude or POP, petrale sole, and yelloweye rockfish). Within the rebuilding plans, T_{TARGET} is the key rebuilding parameter. T_{TARGET} is the projected year that an overfished species will be rebuilt with at least a 50 percent probability. Any change to T_{TARGET} must be demonstrated by the need to rebuild the stock as soon as possible, taking into account the status and biology of the stock, the needs of fishing communities, and the interaction of the stock within the marine ecosystem. The intent is that 2014 harvest specifications will remain in place until replaced by the 2015 harvest specifications and management measures. The proposed action also includes an amendment to the Pacific Coast Groundfish FMP (Amendment 21-2) to reinstate a provision that was inadvertently deleted in a previous FMP amendment.

The purpose of the proposed action is to conserve and manage Pacific Coast groundfish fishery resources to prevent overfishing, to rebuild overfished stocks, to ensure conservation, to facilitate long-term protection of essential fish habitats (EFH), and to realize the full potential of the Nation’s fishery resources (MSA §2(a)(6)). The need for this proposed action is to set catch limit specifications for 2013-

¹ The count of management units is the number of individual ACLs. These are stocks occurring throughout the west coast EEZ (“coastwide”), geographic subdivisions of stocks in the EEZ, and geographically subdivided stock complexes composed of more than one managed species (see Table ES-2).

2014 that are consistent with existing or revised overfished species target years and harvest control rules for all stocks. These harvest specifications are set consistent with the optimum yield (OY) harvest management framework described in Chapter 4 of the Groundfish FMP.

The Alternatives

This Environmental Impact Statement (EIS) evaluates nine “integrated” alternatives (including the alternative of No Action). The action alternatives incorporate the best available scientific information from current stock assessments to estimate stock status and harvestable yield projections, while the No Action Alternative harvest specifications and management measures are those specified in regulation for 2012. The No Action Alternative is a required element of the EIS that allows the action alternatives to be compared to “‘no change’ from current management direction or level of management intensity.”² The integrated alternatives include the following elements:

- **Setting harvest specifications** for the 32 groundfish management units. Harvest specifications are developed consistent with the OY harvest management framework described in Chapter 4 of the Groundfish FMP (PFMC 2011b). Harvest specifications include maximum sustainable yield (MSY or proxy), a long-term objective, the overfishing limit (OFL), acceptable biological catch (ABC), and the ACL. Identification of the OFL is intended to meet the primary management objective of preventing overfishing, which occurs when this level of harvest is exceeded. The ABC is a downward adjustment of the OFL to account for scientific uncertainty surrounding the scientific estimates of the OFL. The ACL is the limit for total fishing mortality, addressed by management measures intended to keep catch below this level. The ACL is usually set equal to the ABC unless a further reduction is deemed appropriate. One noteworthy special case is overfished stocks managed under rebuilding plans. There are seven such stocks in the groundfish fishery. The ACLs for these stocks are set according to rebuilding analyses (based on information from the most recent stock assessment) that estimate the short-term harvest level (ACL) needed to meet the rebuilding plan objective expressed by the target year for when the stock is expected to rebuild to its MSY biomass. The No Action Alternative employs the 2012 ACLs specified in Federal regulations, applied in both years of the 2013-14 cycle. The No Action Alternative does not employ harvest specifications based on the best available science represented by stock assessments and rebuilding analyses completed since 2010, when stock assessment were adopted by the Council to set 2011-12 harvest specifications. But for 16 management units the No Action ACLs are equal to or less than those identified for the 2013-14 period (see Table ES-1), and therefore the reapplication of these ACLs would not have adverse biological consequences. Conversely, the No Action ACLs greater than action alternative ACLs are inconsistent with stock conservation objectives identified in the Groundfish FMP.
- **Applying deductions to the ACLs** to account for activities not directly managed through this action. These activities include fisheries conducted by Indian tribes pursuant to treaties with the U.S. government, research catches, fishing under exempted fishing permits (EFPs) (which allow fishing otherwise prohibited in regulations), and incidental catch in fisheries targeting species other than groundfish. The quantity once these deductions are made is referred to as the fishery harvest guideline (HG).
- **Allocating fishing opportunity** to different groundfish fisheries based on the fishery HG. For the 2013-14 biennium allocations between trawl and nontrawl portions of the fishery for 21 management units are based on pre-specified proportions enumerated in the allocation

² Question 3, *Forty Most Asked Questions Concerning CEQ's NEPA Regulations*, 46 FR 18026 (March 23, 1981) and 51 FR 15618 (April 25, 1986).

scheme described in the Groundfish FMP (PFMC 2011b, Section 6.3).³ Another eight allocations are determined as part of this biennial decision process, when a fixed allocation is suspended because a stock is overfished, for example. Within the trawl fishery, Pacific whiting is allocated between shoreside and at-sea components of the fishery along with “set asides” of certain overfished species, to account for catches in the at-sea whiting fishery. Allocations are particularly important for IFQ and co-op management since harvesters receive individual allocations of harvest opportunity based on the allocation to the sector, but for some sectors and stocks they are adjusted biennially. The Council considered alternate allocation schemes for these management units and sectors but in all but one case a single, preferred allocation scheme is carried forward into the integrated alternatives. The exception is the allocation scheme for the nearshore fishery where there are sub-alternatives that explore alternative allocations between Oregon and California.

- **Identifying accountability measures** used to prevent harvest from exceeding the ACLs adopted for each stock and achieve other conservation and management objectives described in the groundfish FMP. These measures are described in more detail below.

While incorporating these elements, the action alternatives apply status quo harvest management policies in most cases, but the best available scientific information (more recent stock assessments) is used to determine ACL values. For five of the seven overfished species new information confirms that the harvest rate in the current rebuilding plan will result in the stock being rebuilt by the target year and no changes in their rebuilding plans are proposed. For two overfished species, canary rockfish and POP, the most recent scientific information reveals that it is unlikely that they can rebuild by the current target year even if all catch of these stocks was prohibited beginning in 2013. For these two stocks the harvest rate in the rebuilding plan is maintained, resulting in a revision in the target rebuilding year. Experience in managing groundfish fisheries provides evidence that it is extremely difficult, if not impossible, for harvesters to avoid all catch of these stocks (even when retention is prohibited) so a “zero harvest” scenario (resulting in the fastest possible rebuilding time) would likely involve severely restricting or closing many groundfish fisheries, with significant adverse socioeconomic impacts. Therefore, the rebuilding times for these two stocks should be adjusted consistent with the need to consider the status and biology of the stocks and the impacts of different policies on harvesters and coastal communities. Applying the rebuilding plan harvest rate, canary rockfish is projected to rebuild in 2030 rather than the rebuilding plan target year of 2027, while POP is projected to rebuild by 2051 rather than the current rebuilding plan target year of 2020.

The integrated alternatives are built around these needed changes to the rebuilding plans for canary rockfish and POP north of 40°10 N. latitude. Canary rockfish and POP ACLs are strategically arrayed in the integrated alternatives to illuminate how each species might differentially constrain fishing opportunities by sector (or gear type) and region along the west coast, depending on the amount of allowable harvest of each species (see Table ES-2). The analysis of the integrated alternatives illuminates the tradeoffs between MSA conservation and socioeconomic objectives in terms of alternative ACLs for overfished species (specifically, canary rockfish and POP).

In November 2011 and April 2012 the Council identified a preferred alternative for analysis in this EIS. Under the Council’s decision-making schedule the preferred alternative will be confirmed, with possible modifications, at the June 2012 Council meeting. Any modifications to the preferred alternatives made in June 2012 will be described in the Final EIS (FEIS).⁴

³ Sablefish, because of its value in both trawl and fixed gear fisheries, has a different, more complicated allocation scheme.

⁴ Consistent with Council on Environmental Quality (CEQ) regulations (40 CFR 1502.9), if the “agency makes substantial changes in the proposed action that are relevant to environmental concerns” the DEIS must be

The June Council meeting occurs during the 45-day public comment period on the DEIS. To help those planning to comment, information about the Council's decision will be made available after the June 2012 Council meeting on the Council website (www.pcouncil.org).

Table ES-1. Comparison of No Action and Action Alternatives ACLs.

Stock	No Action (2012 ACL)	Action Alternatives ACLs		No Action ACL less than/equal Action ACL?
		2013	2014	
OVERFISHED STOCKS				
Bocaccio S. of 40°10'	274	320	337	Yes
Canary	107	a/	a/	N/A
Cowcod S. of 40°10'	3	3	3	Yes
Darkblotched	296	317	330	Yes
Pacific Ocean Perch	183	a/	a/	N/A
Petrале Sole	1,160	2,592	2,652	Yes
Yelloweye	17	18	18	Yes
NONOVERFISHED STOCKS				
Arrowtooth Flounder	12,049	6,157	5,758	No
Black Rockfish (OR-CA)	1,000	1,000	1,000	Yes
Black Rockfish (WA)	415	411	409	No
Cabezon (CA)	168	163	158	No
Cabezon (OR)	48	47	47	No
California scorpionfish	126	120	117	No
Chilipepper S. of 40°10'	1,789	1,690	1,647	No
Dover Sole	25,000	25,000	25,000	Yes
English Sole	10,151	6,815	5,646	No
Lingcod N. of 42° (OR & WA) b/	2,151	2,010	1,897	No
Lingcod S. of 42° (CA) b/	2,164	2,137	2,044	No
Lingcod N. of 40°10' b/	N/A	3,036	2,878	N/A
Lingcod S. of 40°10' b/	N/A	1,111	1,063	N/A
Longnose skate	1,349	2,000	2,000	Yes
Longspine Thornyhead (coastwide)	N/A	N/A	N/A	N/A
Longspine Thornyhead N. of 34°27'	2,064	2,009	1,958	No
Longspine Thornyhead S. of 34°27'	366	356	347	No
Pacific Cod	1,600	1,600	1,600	Yes
Sablefish (coastwide)	NA	NA	NA	N/A
Sablefish N. of 36°	5,347	4,012	4,349	No
Sablefish S. of 36°	1,298	1,439	1,560	Yes
Shortbelly	50	50	50	Yes
Shortspine Thornyhead (coastwide)	NA	NA	NA	Yes
Shortspine Thornyhead N. of 34°27'	1,556	1,540	1,525	No

recirculated or supplemented. Since meeting this requirement would likely delay implementation of the regulations for the 2013-14 fishery, the Council is not likely to recommend substantial changes at the June 2012 meeting.

Stock	No Action (2012 ACL)	Action Alternatives ACLs		No Action ACL less than/equal Action ACL?
Shortspine Thornyhead S. of 34°27'	401	397	393	No
Splitnose S. of 40°10'	1,538	1,610	1,670	Yes
Starry Flounder	1,360	1,520	1,528	Yes
Widow c/	600	1,500	1,500	Yes
Yellowtail N. of 40°10'	4,371	4,378	4,382	Yes
STOCK COMPLEXES				
Minor Nearshore Rockfish North	99	94	94	No
Minor Shelf Rockfish North	968	968	968	Yes
Minor Slope Rockfish North	1,160	1,160	1,160	Yes
Minor Nearshore Rockfish South	990	990	990	Yes
Minor Shelf Rockfish South	714	714	714	Yes
Minor Slope Rockfish South	626	618	622	No
Other Flatfish	4,884	4,884	4,884	Yes
Other Fish d/	5,575	2,286	2,265	No

a/ A range of alternatives is considered for these stocks; see Table ES-2.

b/ Under the Action Alternatives the lingcod management line is shifted from the OR-CA border at 42° N. latitude to 40°10' N. latitude. The ACLs for the new management line cannot be compared to No Action.

c/ Alternative ACLs for widow are evaluated, but are not included in the integrated alternatives.

d/ Values for these specifications are the sum of known contributions of component stocks.

TableES-2. 2013-14 ACLs for overfished species (mt) under the integrated alternatives.

Species	No Action		Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6		Alt. 7		Alt. 8	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Bocaccio	274	274	320	337	320	337	320	337	320	337	320	337	320	337	320	337	320	337
Canary	107	107	116	119	101	104	116	119	48	49	216	220	101	104	147	151	147	151
Cowcod	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Darkblotched	296	296	317	330	317	330	317	330	317	330	317	330	317	330	317	330	317	330
POP a/	183	183	150	153	150	153	74	76	247	251	74	76	222	226	222	226	150	153
Petrale	1,160	1,160	2,592	2,652	2,592	2,652	2,592	2,652	2,592	2,652	2,592	2,652	2,592	2,652	2,592	2,652	2,592	2,652
Yelloweye	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18

a/ Under No Action, a 157 mt annual catch target (ACT) is implemented.

Accountability Measures

Accountability measures applied under the integrated alternatives are summarized in Table ES-3. Existing measures are described under the No Action Alternative in Chapter 2 and would be reapplied in 2013-14 with any necessary adjustments. The proposed action also includes proposed new accountability measures not yet included in Federal groundfish regulations. Existing and new measures are summarized below.

Existing Accountability Measures

The groundfish fishery is managed using an array of measures that vary by different user groups or what fishery managers refer to as “sectors.” These sectors and the management approach used are:

- The shorebased IFQ fishery is managed with individual fishing quotas for most management units and cumulative landing limits (“trip limits”) for some non-target species. All vessels must carry observers to monitor catch and discards.
- At-sea Pacific whiting with cooperative (co-op) fisheries include the mothership-catcher vessel sector managed by co-op participation established in Federal regulation and the catcher-processor managed by a single voluntary co-op. The mothership-catcher vessel sector must organize as one or more co-ops, or a vessel could participate in the non-co-op fishery. For 2013-14, it is expected that there will be a single mothership-catcher vessel co-op. Mothership-catcher vessel co-op(s) receive a Pacific whiting catch allocation based on the catch history of participants. The catcher-processor sector receives an allocation for the single voluntary co-op. Observers monitor catch aboard the processing vessel. Allocations for those overfished groundfish normally caught in these fisheries are also assigned to the co-ops.
- Limited entry fixed gear (longline and pot): A gear-endorsed limited entry permit is required to participate; vessels may receive an allocation of sablefish to harvest during the “primary or tier fishery” (which is open April to October) based on the permits “stacked” on their vessel. Outside the primary season, vessels fish under daily trip limits. Observers monitor catch and discards on about a fifth of the fleet. These data are used to estimate total mortality of overfished species.
- The “directed open access” sector describes vessels that do not possess a Federal groundfish limited entry permit and target groundfish, principally with fixed gear. These vessels may target sablefish in the “non-nearshore” fishery (i.e., seaward of the RCA) or rockfish in the nearshore fishery. Like the limited entry fixed gear sector this fishery is subject to partial observer coverage, which varies annually between 4 and 15 percent.
- Other vessels catch groundfish incidentally while targeting species not managed under the groundfish FMP. In general, this incidental catch is estimated as part of the effort to track total catch against ACLs.

Groundfish conservation areas are also used to manage bycatch in commercial and recreational groundfish fisheries. These closed areas include gear-specific, depth-based time/area closures—most notably, RCAs—intended to reduce bycatch of overfished rockfish, and other closed areas for bycatch reduction and habitat protection. Section 6.8 in the Groundfish FMP (PFMC 2011b) describes these areas.

Several Washington Coast Indian tribes have treaty rights to fish for groundfish in their usual and accustomed fishing grounds. The Federal government has accommodated these fisheries through a regulatory process described at 50 CFR 660.50. The Council works through the tribes’ representative on the Council to set aside a portion of the ACLs or establish a formal allocation for groundfish to account for tribal harvests.

Recreational fisheries are managed by the states, with their management proposals coordinated through the Council process to ensure these measures are consistent with harvest policies and other elements of the Groundfish FMP. Management measures include seasonal closures by state marine region, bag and size limits, time-area closures, and other closed areas. These measures are used to manage catch of recreational target species but are particularly aimed at limiting the catch of overfished species, most

often yelloweye and canary rockfish. State representatives on the Council develop their recreational management proposals consistent with the ACLs and HGs discussed above.

The states have primary management responsibility for managing fisheries in state waters (generally, within 3 miles of shore). California and Oregon limit entry to the nearshore groundfish fishery by requiring a state limited entry permit to take commercial quantities of nearshore groundfish species. Washington does not allow a nearshore commercial fishery. State harvest targets or guidelines are lower than those specified in Federal regulations for most nearshore species, and state trip limits take precedence over Federal limits in these cases. State trip limits are designed to keep fishing mortality within nearshore species limits while providing year-round fishing opportunity, if possible. Federal management measures for west coast nearshore commercial groundfish fisheries are typically stratified north and south of 40°10' north latitude (near Cape Mendocino, California).

New Accountability Measures

The Council considered several new accountability measures, adopting a subset to recommend for implementation, as indicated below. These measures are primarily intended to improve program performance. For the purpose of evaluating their environmental impacts, the Council-preferred measures are considered to be part of all the action alternatives while under the No Action Alternative none of these measures would be implemented. Appendix C contains more detailed evaluations of these measures. The measures considered by the Council are:

- Modifications to the boundaries defining RCAs (Council preferred)
- Allowing unused amounts of the ACL set aside for certain purposes to be allocated to commercial fisheries (Council preferred)
- Sorting requirements for aurora, shortraker, and rougheye rockfish north of 40°10' N. latitude
- A technical correction for catch accounting between limited entry and open access portions of the fishery (Council preferred)
- Revising requirements for vessel offloading
- Revising within-trawl allocations of widow rockfish
- Revising accumulation limits for the shorebased IFQ fishery
- Specifying a process for determining the carryover of surplus quota pounds from one year to the next in the shorebased IFQ fishery
- Removing the lingcod length limit in the shorebased IFQ fishery (Council preferred)
- Allowing recreational shelf rockfish retention in the Cowcod Conservation Area (Council preferred)
- Removing the California recreational bocaccio size limit (Council preferred)
- Correction to regulations for vessels switching from the primary sablefish fishery to the daily trip limit fishery (Council preferred)

Table ES-3. Summary description of accountability measures in the integrated alternatives

No Action – Section 2.4.1		
2012 Harvest Specifications	OFLs and ABCs described and enumerated in section 2.1; ACLs listed in Table 2-67	
Canary rockfish and POP ACLs (mt)	107	183
Accountability Measures	In place January 1, 2012	
ACL deductions and allocations	See Table 2-70– Table 2-76	
Routine management measures	Sections 2.4.12 – 2.4.1.6	
New management measures	N/A	
Alternative 1 (Preliminary Preferred) – Section 2.4.2		
2013-14 Harvest Specifications	OFLs and ABCs described and enumerated in section 2.1; ACLs listed in Table 2-48 and Table 2-49	
Canary rockfish and POP ACLs (mt)	116/119	150/153
Accountability Measures		
ACL deductions and allocations	Described and enumerated in section 2.2; overfished species allocations in Table 2-82; option to change trawl-nontrawl cowcod allocation	
Routine management measures	Same as No Action for most fisheries; changes to management for 1) nearshore fixed gear fishery off Oregon 2) recreational fisheries in California with options to change current depth restrictions in Southern California	
New management measures	Described in section 2.3; apply across all the action alternatives	
Alternative 2 – Section 2.4.3		
2013-14 Harvest Specifications	OFLs and ABCs described and enumerated in section 2.1; ACLs listed in Table 2-46 and 2-47 except for canary and POP (see Table 2-67 and Table 2-68)	
Canary rockfish and POP ACLs (mt)	101/104	150/153
Accountability Measures		
ACL deductions and allocations	Described and enumerated in section 2.2; overfished species allocations in Table 2-80 except canary and POP allocations in Table 2-88	
Routine management measures	Same as No Action for most fisheries; changes to management for 1) nearshore fixed gear fishery with options for Oregon and California, 2) recreational fisheries in California with options to change current depth restrictions in Southern California	
New management measures	Described in section 2.3; apply across all the action alternatives	
Alternative 3 – Section 2.4.4		
2013-14 Harvest Specifications	As described for Alternative 2	
Canary rockfish and POP ACLs (mt)	116/119	74/76
Accountability Measures		
ACL deductions and allocations	As described for Alternative 2 except canary and POP allocations in Table 2-90	
Routine management measures	As described for Alternative 2	
New management measures	Described in section 2.3; apply across all the action alternatives	

Alternative 4 – Section 2.4.5		
2013-14 Harvest Specifications	As described for Alternative 2	
Canary rockfish and POP ACLs (mt)	48/49	247/251
Accountability Measures		
ACL deductions and allocations	As described for Alternative 2 except canary and POP allocations in Table 2-92	
Routine management measures	Changes needed mainly because of the low canary rockfish ACL; adjustments to RCAs for the shorebased IFQ fishery and nonnearshore fixed gear fishery; changes to Oregon and California recreational fisheries; various suboptions included for these management measure changes	
New management measures	Described in section 2.3; apply across all the action alternatives	
Alternative 5– Section 2.4.6		
2013-14 Harvest Specifications	As described for Alternative 2	
Canary rockfish and POP ACLs (mt)	216/220	74/76
Accountability Measures		
ACL deductions and allocations	As described for Alternative 2 except canary and POP allocations in Table 2-96	
Routine management measures	As described for Alternative 2	
New management measures	Described in section 2.3; apply across all the action alternatives	
Alternative 6 – Section 2.4.7		
2013-14 Harvest Specifications	As described for Alternative 2	
Canary rockfish and POP ACLs (mt)	101/104	222/226
Accountability Measures		
ACL deductions and allocations	As described for Alternative 2 except canary and POP allocations in Table 2-97	
Routine management measures	As described for Alternative 2	
New management measures	Described in section 2.3; apply across all the action alternatives	
Alternative 7 – Section 2.4.7		
2013-14 Harvest Specifications	As described for Alternative 2	
Canary rockfish and POP ACLs (mt)	147/151	222/226
Accountability Measures		
ACL deductions and allocations	As described for Alternative 2 except canary and POP allocations in Table 2-100	
Routine management measures	As described for Alternative 2	
New management measures	Described in section 2.3; apply across all the action alternatives	
Alternative 8 – Section 2.4.7		
2013-14 Harvest Specifications	As described for Alternative 2	
Canary rockfish and POP ACLs (mt)	147/151	150/153
Accountability Measures		
ACL deductions and allocations	As described for Alternative 2 except canary and POP allocations in Table 2-102	
Routine management measures	As described for Alternative 2	

New management measures	Described in section 2.3; apply across all the action alternatives
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Impacts of the Alternatives

Groundfish Species

Table ES-1 compares the groundfish ACLs between No Action and the action alternatives. As discussed above, in terms of biological impact, No Action ACLs that are less than the action alternatives ACLs would also have a less adverse biological impact, although they could result in less socioeconomic benefit. In Table ES-1, there are 15 cases where the No Action ACL exceeds the action alternative ACL, which is inconsistent with the harvest management framework and could result in greater adverse impacts. Pacific whiting is not included in Table ES-1 because this species is assessed annually and the harvest limit is set based on the terms of the Agreement with Canada on Pacific Hake/Whiting (discussed further below). For the purposes of analysis, the 2011 value is used along with a discussion of potential impacts if the actual total allowable catch (TAC) in 2013-14 differs from that level.

Overfished Species

Only the ACLs for canary rockfish and POP vary both between the No Action and the action alternatives and among the action alternatives. Thus, comparing biological impacts of the alternatives focuses on these two overfished stocks. The ACLs can be compared to rank the alternatives. ACLs represent a short-term biological impact in terms of the potential fishing mortality that would be authorized. In addition, since the ACLs are determined from the harvest rate that would be incorporated into the revised rebuilding plan they can serve as a proxy for the long-term rebuilding objective. Comparing the action alternatives to No Action is problematic since the No Action ACL for these two stocks is based on different assumptions about the status of these stocks, using information on older stock assessments. But for comparison only, these No Action ACLs may be associated with a harvest rate that, if applied for the duration of the rebuilding period, would result in a corresponding target rebuilding year earlier than a target year associated with a higher ACL. Using this logic, Figure ES-1 shows how the alternatives rank in terms of the canary rockfish and POP ACLs. A lower rank value corresponds to a lower ACL and presumed less adverse biological impact. One way to compare the alternatives with respect to both ACLs is to simply re-rank them based on the individual rankings for the two species. Using that approach, Alternative 2 has the least adverse biological impact while the Preferred Alternative (Alternative 1) ranks third after Alternative 3 and tied with No Action, Alternative 4, and Alternative 6.

Table ES-4 and ES-5 show estimates of the projected catch of overfished species under the alternatives and these estimates as a percentage of the ACL. It can be seen that for many of the overfished species this attainment rate is well below 100 percent. Over time, if actual catches stay proportionately below the implemented ACL, the overfished species are likely to rebuild earlier than predicted based on the ACLs.

Species	No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Canary	3	4	2	4	1	6	2	5	5
POP	3	2	2	1	5	1	4	4	2

Figure ES–1. Rank of canary rockfish and POP ACLs across the integrated alternatives. 1=lowest ACL/least adverse impact.

Table ES–4. Projected 2013 mortalities (landings plus discard mortalities in mt) of overfished west coast groundfish stocks under the integrated alternatives.

Species		No Action Alt.	Alt. 1b Pref.	Alt. 2b	Alt. 3b	Alt. 4b	Alt. 5b	Alt. 6b	Alt. 7b	Alt. 8b
Bocaccio	mt	67.9	59.2	59.2	59.2	30.8	59.2	59.2	59.2	59.2
	% of ACL	24.8%	18.5%	18.5%	18.5%	9.6%	18.5%	18.5%	18.5%	18.5%
Canary	mt	53.6	54.6	52.6	54.3	37.7	67.1	52.6	58.5	58.5
	% of ACL	50.1%	47.1%	45.4%	46.8%	32.5%	57.8%	45.4%	50.5%	50.5%
Cowcod	mt	0.6	0.3	0.3	0.3	0.1	0.3	0.3	0.3	0.3
	% of ACL	20.6%	11.2%	11.2%	11.2%	4.6%	11.2%	11.2%	11.2%	11.2%
Darkblotched	mt	92.5	86.6	86.6	76.4	81.5	76.4	86.6	86.6	86.6
	% of ACL	31.3%	27.3%	27.3%	24.1%	25.7%	24.1%	27.3%	27.3%	27.3%
POP	mt	62.3	57.6	57.6	47.9	57.8	47.9	59.8	59.8	57.6
	% of ACL	34.1%	38.4%	38.4%	31.9%	38.5%	31.9%	39.9%	39.9%	38.4%
Petrale	mt	675.9	618.7	618.7	546.7	550.0	546.7	618.9	618.9	618.7
	% of ACL	58.3%	23.9%	23.9%	21.1%	21.2%	21.1%	23.9%	23.9%	23.9%
Yelloweye	mt	15.8	15.9	15.9	15.9	13.8	15.9	15.9	15.9	15.9
	% of ACL	93.2%	88.6%	88.6%	88.5%	76.4%	88.5%	88.6%	88.6%	88.6%

Table ES-5. Projected 2014 mortalities (landings plus discard mortalities in mt) of overfished west coast groundfish stocks under the integrated alternatives.

Species		No Action	Alt. 1b Pref.	Alt. 2b	Alt. 3b	Alt. 4b	Alt. 5b	Alt. 6b	Alt. 7b	Alt. 8b
Bocaccio	mt	67.9	59.2	59.2	59.2	33.8	59.2	59.2	59.2	59.2
	% of ACL	24.8%	17.6%	17.6%	17.6%	10.0%	17.6%	17.6%	17.6%	17.6%
Canary	mt	53.6	55.1	53.1	54.4	38.3	67.7	53.1	59.2	59.2
	% of ACL	50.1%	46.3%	44.6%	45.7%	32.2%	56.9%	44.6%	49.8%	49.8%
Cowcod	mt	0.6	0.3	0.3	0.3	0.1	0.3	0.3	0.3	0.3
	% of ACL	20.6%	11.2%	11.2%	11.2%	4.6%	11.2%	11.2%	11.2%	11.2%
Darkblotched	mt	92.5	87.4	87.5	77.3	82.6	77.3	87.5	87.5	87.4
	% of ACL	31.3%	26.5%	26.5%	23.4%	25.0%	23.4%	26.5%	26.5%	26.5%
POP	mt	62.3	57.4	57.6	47.9	58.1	47.9	60.2	60.0	60.0
	% of ACL	34.1%	37.5%	37.7%	31.3%	37.9%	31.3%	39.4%	39.2%	39.2%
Petrale	mt	675.9	616.3	618.7	546.7	550.0	546.7	618.9	618.9	616.3
	% of ACL	58.3%	23.2%	23.3%	20.6%	20.7%	20.6%	23.3%	23.3%	23.2%
Yelloweye	mt	15.8	16.0	16.0	16.0	13.7	16.0	16.0	16.0	16.0
	% of ACL	93.2%	89.1%	89.1%	89.1%	75.8%	89.1%	89.1%	89.1%	89.1%

Change in the Target Year for Canary Rockfish and POP

Applying the current rebuilding plan SPR harvest under Preferred Alternative 1 using information in the latest stock assessments and rebuilding analyses results in increasing the canary rockfish ACL by 9 mt while the POP ACL is reduced by 30 mt compared to No Action.⁵ As discussed above, the target year for canary rockfish changes by 3 years, from 2027 to 2030 and the target year for POP changes by 31 years, from 2020 to 2051.

The current rebuilding plan harvest rate produces different results for POP compared to canary rockfish because of revised estimates of certain stock parameters. Figure ES-2 depicts estimates for unfished spawning biomass and current spawning biomass from 2009 and 2011. For both stocks the estimate of terminal year (i.e., the last year modeled in each respective assessment) spawning biomass increased slightly between 2009 and 2011: by 16 percent for POP and 5 percent for canary rockfish. The estimate of POP unfished spawning biomass increased dramatically, with a 74 percent higher estimate than that estimated in 2009. Since depletion, the metric used to gauge stock status expresses the ratio of current to unfished spawning biomass; this change resulted in the estimate of depletion declining from 27 percent in 2009 to 16 percent in 2011 (i.e., in 2011 the stock was slightly less than about one-sixth the size it would be if no fishing had occurred).⁶ The resetting of the depletion level, because of the re-estimation of unfished biomass, means that POP has “farther to go” to get to the rebuilt target biomass. Also, new information indicates POP is a less productive stock than previously thought, as measured by the

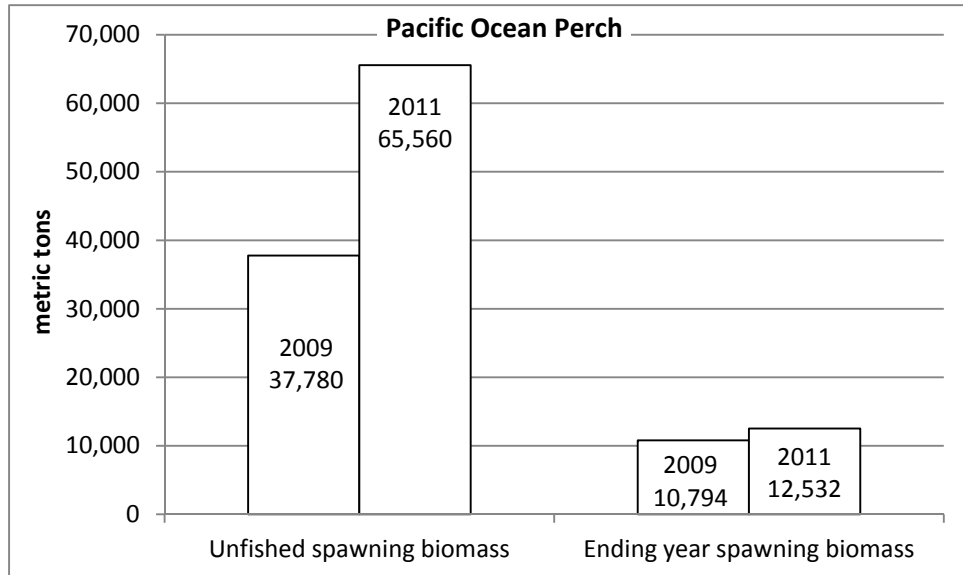
⁵ Harvest rates are presented in terms of the spawning potential ratio (SPR). This is a percent value indicating an effective harvest rate that would return the population to a given level of spawning potential (reproductive output) in relation to the spawning potential of the unfished population. A *higher* SPR harvest rate value corresponds to a *lower* effective fishing mortality rate. (An SPR harvest rate of 100%, for example, corresponds to the zero harvest level.) Expressing the harvest policy in terms of an SPR rate allows more straightforward comparison across a range of species and policy choices.

⁶ Under the groundfish FMP a rockfish stock is considered overfished when the current biomass falls to one-quarter of its estimated unfished biomass.

steepness of the stock-recruitment relationship. This means that—other things being equal—the rate of natural increase in the population is slower than previously thought. Even if no POP were caught in fisheries the estimated time to rebuild the stock changed from 2018 based on information available in 2009 to 2043 using the most recent, 2011, information.

For canary rockfish estimated unfished spawning biomass increased by only 7 percent resulting in a small change in the depletion estimate (from 23.7 to 23.2 percent). In contrast to POP, applying the current SPR harvest rate results in small increases in the canary ACLs for 2013-14, because there was no change to the assumed steepness value in the most recent canary stock assessment model—the estimated productivity or rate of natural increase remained the same. Therefore the estimated increase in population size translates directly into an increase in the ACL. Furthermore, different assumptions were used in the most recent canary rockfish rebuilding analysis about the relative catch by different gear types so that the portion of the biomass vulnerable to the fishery was determined to be higher, affecting the computation of the ACLs.

a.



b.

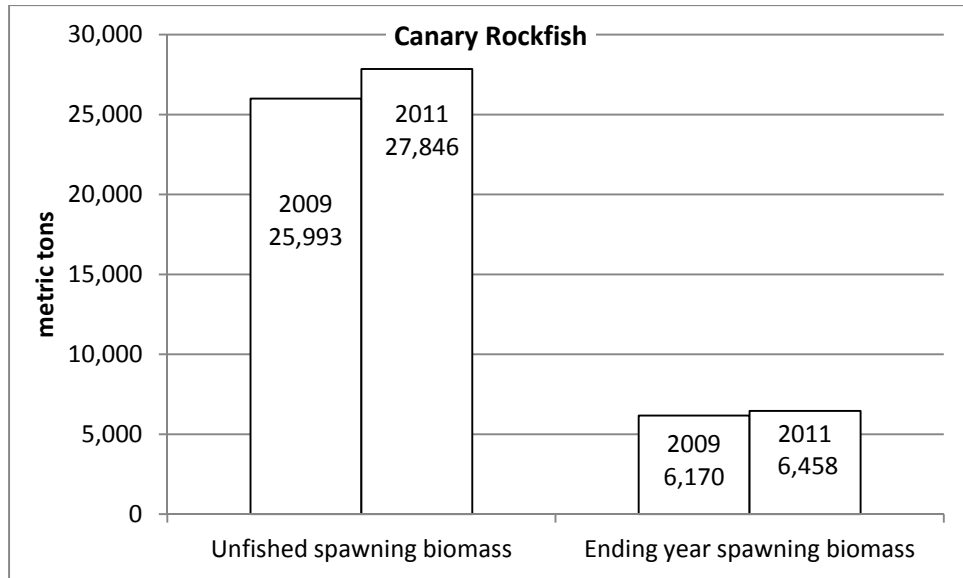


Figure ES-2. Estimates of unfished spawning biomass and current year spawning biomass from 2009 and 2011 for a.) Pacific ocean perch and b.) canary rockfish.

The Council is recommending keeping to a constant harvest rate because, as stock biomass increases, the ACL increases correspondingly (essentially, a constant fraction of the population, rather than quantity, is removed from the population). Maintaining the No Action ACL of 107 mt would imply a constant catch policy in which the ACL would be set at a fixed value for the duration of the rebuilding period. This strategy is problematic if, as the stock becomes more abundant, harvesters have a harder time avoiding incidental catch. Fishery managers would then have to impose even more restrictive measures to prevent the ACL from being exceeded. Furthermore it is not clear that a harvest rate associated with this lower ACL would rebuild the stock any faster than the Preferred Alternative since decreasing the SPR harvest rate from the default 88.7 percent to 90 percent—an ACL of 101 mt in 2013—shortens rebuilding by only one year.

Slight absolute changes in the canary rockfish ACL (such as the 9 metric tons referenced above) can disproportionately affect performance of the fishery because this species is distributed across a wide depth range, increasing the risk of catching them across a variety of groundfish fisheries. The shoreside IFQ fishery offers an example of how the canary rockfish ACL can affect fishing. The IFQ fishery caught 17 percent of their canary rockfish allocation in 2011, which likely reflects a high level of risk aversion, because of the unpredictability and potentially high cost of a tow containing a large amount of canary rockfish that would have to be covered by purchased quota pounds (Holland and Jannot 2012). Since canary rockfish are more likely to be caught in shallower depths on the continental shelf, IFQ fishery participants avoided fishing in these areas, also foregoing some target species catch, such as flatfish, that are also more abundant on the continental shelf. This is reflected in the 21 percent reduction from 2010 to 2011 in flatfish landings during the months of June to August.⁷ Flatfish are caught almost exclusively on the continental shelf during these months.

Widow Rockfish and Pacific Whiting

In addition to the variation in the canary rockfish and POP ACLs that form the basis of the integrated alternatives, this EIS also evaluates alternate ACLs for widow rockfish and Pacific whiting. Widow

⁷ Based on a query of PacFIN data, May 16, 2012.

rockfish, a previously overfished species, was determined to be rebuilt to the target biomass in 2011. The widow rockfish ACL included in the No Action Alternative (600 mt) represents a continuation of the current harvest policy. However, this stock could sustain higher harvest levels, which could allow limited target fishing opportunities to develop. Conversely, given scientific uncertainty about its status, the Council wants to proceed cautiously in recommending higher harvest limits. To this end, the action alternatives include an ACL of 1,500 mt and a 2,500 mt ACL is evaluated outside the integrated alternatives.⁸ A directed fishery could yield additional ex-vessel revenue of \$1.2 to 4.2 million. Pacific whiting is managed consistent with the Agreement with Canada on Pacific Hake/Whiting (the Agreement) and the Pacific Whiting Act (the Act). The Joint Management Committee established pursuant to the Agreement and the Act recommends the coastwide TAC and corresponding U.S. TAC for Pacific whiting no later than March 25 of each year. Therefore, the actual U.S. TACs for 2013 and 2014 were not known when this EIS was prepared. Instead, for the purpose of analysis, the 2011 harvest level is used in the integrated alternatives. The effects of higher and lower TACs are then analyzed outside the integrated alternatives. Potential revenues, if 2013 or 2014 TACs varied from the 2011 harvest level in this range, could be between \$12.1 and \$98.1 million compared to 2011 ex-vessel revenue of \$53.3 million.

Groundfish Fisheries

Table ES-5 shows the change in projected ex-vessel revenue from No Action across the integrated alternatives by fishery sector. All sectors show a decline in ex-vessel revenue compared to the No Action alternative.

- The shoreside IFQ fishery (shoreside whiting and nonwithing trawl) shows the smallest decline from No Action under Alternatives 6 and 7 followed by Alternatives 1, 2, and 8. Alternatives 3 and 5 show the largest decline from No Action.
- Limited entry fixed gear shows the same decline in ex-vessel revenue of \$3.8 million across all the alternatives. This change is mainly due to the lower ACL for sablefish, which is the most valuable species coastwide.
- Nearshore open access fixed gear ex-vessel revenue changes depending on the two sub-alternatives considered. Under sub-alternative A revenue declines by \$733,000 under Alternatives 1-3 and 5-8 and \$698,000 under Alternative 4. Under sub-alternative B revenue declines by \$539,000 under Alternatives 1-3 and 5-8 and \$1.5 million under Alternative 4.
- Non-nearshore open access fixed gear shows the same decline in revenue across all the alternatives of \$539,000 and tribal fisheries show a decline of \$1million across all the alternatives.
- Across all groundfish fishery sectors Alternative 4 would result in the largest decline in ex-vessel revenue of between \$14.70 and \$15.53 million while Preferred Alternative 1 shows a decline of between \$8.98 and \$9.17 million.

West Coast Fishing Communities Engaged in Groundfish Fisheries

Table ES-7 summarizes the impacts of the alternatives on fishing communities expressed as the change in personal income from No Action. Summarizing this information still further at the state level, in absolute terms Oregon shows the largest absolute decline in revenue, ranging between \$5.0 and \$11.8 million depending on the alternative, followed by Washington (\$2.5-\$3.6 million) and California (\$1.3-\$8.9

⁸ The socioeconomic impacts of projected landings (ex-vessel revenue, personal income, employment) are estimated for the integrated alternatives. These “outside” variations in ACLs are evaluated with respect to potential ex-vessel revenue but personal income impact estimates were not made, since such estimates require modeling coastwide fisheries for each different ACL.

million). Similar to the change in ex-vessel revenue, the largest decline in personal income would be experienced under Alternative 4 (\$16.8-\$23.9 million depending on sub-alternative). Changes in coastwide personal income from No Action under Preferred Alternative 1 declines between \$9.0 to \$9.2 million (depending on sub-alternative), the second lowest decline behind Alternatives 6 and 7.

Table ES-6. Change in groundfish ex-vessel revenues from No Action by groundfish harvest sector under the 2013-14 integrated alternatives (\$1,000).

	No Action	1	2	3	4	5	6	7	8	
Shoreside Sectors:										
Whiting	23,650	-278	-278	-2,296	-2,584	-2,296	-110	-110	-278	
Nonwhiting Trawl	26,912	-3,175	-3,175	-6,238	-5,157	-6,238	-3,162	-3,162	-3,175	
Limited Entry Fixed Gear	19,068	-3,782	-3,782	-3,782	-3,782	-3,782	-3,782	-3,782	-3,782	
Nearshore Open Access (A)	4,218	733	733	733	-698	733	733	733	733	
Nearshore Open Access (B)		539	539	539	-1,531	539	539	539	539	
Non-nearshore Open Access	7,687	-1,436	-1,436	-1,436	-1,436	-1,436	-1,436	-1,436	-1,436	
Incidental Open Access	151	-	-	-	-	-	-	-	-	
Tribal (incl. whiting)	11,825	-1,042	-1,042	-1,042	-1,042	-1,042	-1,042	-1,042	-1,042	
At-Sea Sectors:										
Non Tribal Whiting	30,890	-	-	-	-	-	-	-	-	
Tribal Whiting	9,675	-	-	-	-	-	-	-	-	
TOTAL CHANGE IN SHORESIDE REVENUES (\$1,000)	93,512									
Nearshore Sub-alternative A		-8,980	-8,980	-14,061	-14,698	-14,061	-8,798	-8,798	-8,980	
Nearshore Sub-alternative B		-9,174	-9,174	-14,255	-15,531	-14,255	-8,992	-8,992	-9,174	

Table ES-7. Change in combined commercial plus recreational fishery income impacts (from No Action) by community group (\$1,000).*

Community Groups	No Action	Alternative 1A	Alternative 2A	Alternative 3A	Alternative 4A	Alternative 5A	Alternative 6A	Alternative 7A	Alternative 8A
Puget Sound	2,376	-509	-509	-610	-513	-610	-509	-509	-509
Washington Coast	16,905	-1,952	-1,952	-3,019	-2,736	-3,019	-1,952	-1,952	-1,952
Astoria-Tillamook	27,877	-1,888	-1,888	-5,540	-5,826	-5,540	-1,700	-1,700	-1,888
Newport	16,025	-1,558	-1,558	-1,937	-2,180	-1,937	-1,526	-1,526	-1,558
Coos Bay-Brookings	13,881	-1,810	-1,810	-2,026	-2,453	-2,026	-1,810	-1,810	-1,810
Crescent City-Eureka	7,937	-902	-902	-1,735	-907	-1,735	-889	-889	-902
Fort Bragg - Bodega Bay	5,786	-600	-600	-629	-496	-629	-600	-600	-600
San Francisco Area	7,616	-299	-299	-302	-624	-302	-299	-299	-299
SC – Mo - MB	13,948	+453	+453	+431	-1,120	+431	+453	+453	+453
SB – LA - SB	52,167	+69	+69	+69	+25	+69	+69	+69	+69
Coastwide Total	164,518	-8,996	-8,996	-15,297	-16,830	-15,297	-8,761	-8,761	-8,996

Community Groups	No Action	Alternative 1B	Alternative 2B	Alternative 3B	Alternative 4B	Alternative 5B	Alternative 6B	Alternative 7B	Alternative 8B
Puget Sound	2,376	-509	-509	-610	-513	-610	-509	-509	-509
Washington Coast	16,905	-1,952	-1,952	-3,019	-2,736	-3,019	-1,952	-1,952	-1,952
Astoria-Tillamook	27,877	-1,909	-1,909	-5,561	-5,941	-5,561	-1,721	-1,721	-1,909
Newport	16,025	-1,564	-1,564	-1,943	-3,197	-1,943	-1,532	-1,532	-1,564
Coos Bay-Brookings	13,881	-1,925	-1,925	-2,140	-2,650	-2,140	-1,924	-1,924	-1,925
Crescent City-Eureka	7,937	-902	-902	-1,735	-1,401	-1,735	-889	-889	-902
Fort Bragg - Bodega Bay	5,786	-600	-600	-629	-1,406	-629	-600	-600	-600
San Francisco Area	7,616	-299	-299	-302	-2,642	-302	-299	-299	-299
SC – Mo - MB	13,948	+453	+453	+431	-3,387	+431	+453	+453	+453
SB – LA - SB	52,167	+69	+69	+69	-28	+69	+69	+69	+69
Coastwide Total	164,518	-9,138	-9,138	-15,439	-23,901	-15,439	-8,903	-8,903	-9,138

Note: upper panel shows A sub-alternatives for nearshore open access and recreational sectors; lower panel shows B sub-alternatives. SC- Mo –MB: Santa Cruz - Monterey - Morro Bay; SB – LA – SB: Santa Barbara - Los Angeles - San Diego.

* Although strictly speaking, the two measures are not directly additive due to the slightly different estimation procedures used, combined income impacts generated by commercial and recreational fishing activities are displayed here in order to facilitate comparison of the alternatives.

Comparison of the Socioeconomic Impacts of Alternative 1 and Alternative 8

At the April 2012 meeting, the Council added Alternative 8 to the analysis to evaluate the effect of proceeding with the preferred alternative (Alternative 1) but substituting a higher canary rockfish ACL of 147 mt in 2013 and 151 mt in 2014. These ACLs are associated with a higher SPR harvest rate (85.9 percent versus 88.7 percent) but the estimated target rebuilding year of 2030 does not differ from the preferred alternative. (A higher harvest rate assumes a slightly higher risk of not rebuilding by the target year.) The evaluation of socioeconomic impacts in terms of projected ex-vessel revenue and personal income does not differ between Alternatives 1 and 8, however, even with the higher ACL. This lack of contrast is likely a limitation of the models used to project landings and resulting revenue and income.

Target species catch in fixed gear fisheries is affected the most by management controls needed to limit yelloweye rockfish catch so model projections for these fisheries are less sensitive to changes in the canary rockfish ACL. The shoreside trawl (IFQ) fishery has historically accounted for almost 45 percent of coastwide groundfish ex-vessel revenue (see Table 3-23) so modeling of this fishery has a big effect on overall revenue projections. In addition, trawl gear, especially when used on the continental shelf, does not catch yelloweye rockfish as frequently (because this species lives in rocky habitat inaccessible to trawl gear) but does catch canary rockfish. Catch projection for this fishery is based on catch in 2011—the first year under IFQ management—which may not accurately characterize the future performance of this dynamic fishery. Furthermore, because of the scheduling of this EIS process, data for the last months of 2011 were not yet available at the time catch projection modeling was conducted. As a result fishing patterns in late 2011 had to be inferred from the seasonal distribution in prior years. However as it turned out, catch rose dramatically in December 2011, likely because harvesters were more assured that their quota pound (QP) holdings were sufficient to last the year. Once fishermen have gained more experience with IFQ fishery management, behavior in the future is likely to be different than 2011. For example, an increase in the diversity of species caught is already evident from comparing the first three months of 2012 to 2011 (Sean Matson, NMFS NWR, pers. comm., April 2012). Under IFQ management, where harvesters are individually accountable for covering their catch with matching quota pounds, rebuilding stocks function like performance standards.

Model projections of landings and revenue may not therefore capture the actual benefit of a higher canary rockfish ACL in terms of resulting catch of target species. While the direct revenue realized from landing the small amounts of available rebuilding species stocks is negligible, these stocks leverage access to much higher levels of target species landings. Consequently a higher allocation of canary rockfish to the shoreside IFQ fishery may generate more actual revenue than is forecast using the current catch projection models. As discussed above, the ACL and allocation to the shoreside IFQ fishery dictates the amount of QP available to the fleet based on quota share holdings. Smaller canary rockfish QP holdings in relation to potential unavoidable high bycatch events (so called “disaster tows”) increase risk aversion, affecting fishing behavior (Holland and Jannot 2012). The higher ACL under Alternative 8 could reduce perceived risk, affecting behavior and resulting fleetwide landings and revenue from higher target species landings. These effects are not captured in the catch projection models.

Other Environmental Components

The EIS also evaluates impacts to nongroundfish species, the California current large marine ecosystem, essential fish habitat, and protected species. No models have been developed to predict effects on these environmental components as a result of changes to harvest specifications and management measures established under the proposed action. General inferences may be based on an assumed positive correlation between catch limits and fishing effort and the size and configuration of area closures (e.g.,

RCA) that differ under the alternatives. However, given that only ACLs for canary rockfish and POP vary among the action alternatives, and the management measures are similar across the alternatives it is difficult to differentiate between the alternatives in terms of effects to these resources. Because the proposed changes to management are slight in comparison to No Action it is likely that effects of similar type and magnitude would be experienced during the 2013-14 management period as have occurred in previous years. These resources and the effects of fishing on them are described in Chapter 3. Potentially different impacts among the alternatives are as follows:

- **Ecosystem and habitat:** Because a larger RCA would be implemented under Alternative 4 effects may be reduced under this alternative
- **Nongroundfish species:** Alternative 1, 3, 5, and 8 would have greater effects on inshore species while Alternatives 4 and 6 would have greater effects on offshore species. Alternative 7 would affect nongroundfish species equally in both areas.
- **Protected species:** Effects cannot be distinguished among the alternatives. NMFS NWR Sustainable Fisheries Division is consulting with the Protected Resources Division on the likelihood that groundfish fisheries in 2013 and beyond would jeopardize the continued existence of any species listed under the Endangered Species Act pursuant to section 7 of the Act. Any jeopardy finding would be addressed through mandatory or discretionary measures to avoid jeopardy.

Summary Ranking of the Alternatives

Figure ES-3 provides a summary ranking of the alternatives using the ACLs for canary rockfish and POP and the projected coastwide personal income under the alternatives as metrics. The alternatives are ranked for each of these metrics. To arrive at the overall ranking the individual rank values were summed and the alternatives re-ranked. This approach assigns equal weight to the rebuilding decisions for canary rockfish and POP and the associated personal income estimated to result. This approach relates to the tradeoff established in MSA §304(e)(4) between rebuilding in a time “as short as possible” while, among other things, taking into account the “needs of fishing communities.” The rebuilding rankings can be compared to socioeconomic costs (“needs of fishing communities”). From a policy or legal perspective equal weighting of these metrics may not be appropriate but there is no clear guidance on an alternative weighting.

Metric	No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Canary	3	4	2	4	1	6	2	5	5
POP	3	2	2	1	5	1	4	4	2
Income	1	3	3	4	5	4	2	2	3
Overall	1	3	1	3	5	5	2	5	4

Figure ES-3. Rank of canary rockfish and POP ACLs (from Figure ES-1) and coastwide personal income (from Table ES-7). Overall score sums individual metric scores and re-ranks the alternatives. 1=lowest impact/highest benefit.

2.2 Accountability Measures

Accountability measures, which are also referred to as management measures, are used to meet the goals of the MSA and groundfish FMP, including preventing the ACL from being exceeded and correcting or mitigating overages of the ACL if they occur. For the 2013-14 cycle, the first set of AMs are implemented when deductions from the ACL, also called set-asides, are made to account for groundfish

mortality in other sectors. The ACL less the set-asides is called the fishery HG or commercial HG (sablefish north of 36° N. latitude and Pacific whiting), which is the amount available for the sector-specific allocations. Sector allocations include formal long-term allocations (e.g., Amendments 6 and 21) and short-term allocations implemented for the biennial period. Section 2.2 details the proposed set-asides and allocations for 2013-14. Section 2.3 and Section 2.4 detail the remaining AMs including groundfish conservation areas (including recreational and commercial area closures), season dates, cumulative landing limits for the commercial fisheries, and bag limits for the recreational fisheries.

2.2.1 Deductions from the ACL

Deductions from most groundfish ACLs are made to account for groundfish mortality in the Pacific Coast treaty Indian tribal fisheries, scientific research, nongroundfish target fisheries (hereinafter incidental open access fisheries), and, as necessary, EFPs. Set-asides from the sablefish north of 36° N. latitude ACL are slightly different due to the sablefish allocation framework (see DEIS Section 2.2.2.1, Amendment 6). Set-asides from the sablefish north of 36° N. latitude ACL include groundfish mortality in tribal fisheries, research, recreational fisheries, and EFPs. The Council and NMFS do not have direct management control over these activities, except for EFPs and recreational fisheries. While NMFS has direct control over the terms and conditions of the EFP permits and recreational fishery management, sufficient yield set-aside must be available to accommodate the anticipated groundfish impacts. Deductions from the ACL to account for these activities are important accountability measures that increase the probability that catches will remain below the ACLs.

If the Council discovers that groundfish mortality in tribal fisheries, scientific research, nongroundfish fisheries, recreational fisheries (sablefish only), and EFPs is higher than estimated during the biennial process, inseason adjustments to management measures may be needed. A wide range of management measure adjustments can be considered for the nontrawl sector (e.g., bag limits, trip limits, season dates), however, limited adjustments can be made in the trawl sector since quota pounds (QP) for the year have already been issued.

Under the No Action Alternative, if the deductions from the ACL are higher than actual mortality, unused portions of the set-aside could allow management measures in the nontrawl fisheries to be adjusted through inseason action to allow for harvest that attains the fishery HGs and ultimately the ACLs. Under No Action, additional catch cannot be reassigned to the trawl sector without recalculating QP for the year, an action which is not considered routine. A proposed action for 2013-2014 would allow the ACL set-asides to be redistributed to the trawl and nontrawl sectors in the event that the amounts set aside are higher than necessary to accommodate groundfish mortality in research, EFP, and incidental open access fisheries. Any amount available for reapportionment would be reapportioned to the sectors in proportion to the original allocations for the calendar year, modified to account for Council recommendations with respect to reapportionment to: 1) sectors that are closed, 2) for reapportionments after September 1 in the IFQ sector, and 3) sectors for which catch of the species to be reapportioned would not be projected to be reached (see Appendix C Section C.2 for more information).

Table 2-48 and Table 2-49 detail the deductions from the preferred ACLs for the 2013-14 cycle, which were used in the analysis of the integrated alternatives. The ACLs for canary and POP vary between the integrated alternatives (see DEIS Section 2.4); however, the set-aside values remain constant. The set-asides for sablefish north of 36° N. latitude are outlined in Table 2-50 and were also used in the analysis of the integrated alternatives. The approach used to calculate appropriate set-asides is similar to the approach used in 2011-2012 (No Action). A brief summary of the calculations behind the set-asides follows below.

2.2.1.1 Tribal Fishery Set-Asides

Tribal fisheries consist of trawl (bottom, mid-water, and whiting), fixed gear, and troll. The requested tribal set-asides are based on the amounts in the January 1, 2012 regulations except for petrale sole and widow rockfish, which were updated based on the projected catches outlined in a letter received from Makah at the November 2011 Council meeting (Agenda Item E.4.b, Supplemental Tribal Report, November 2011). The 2011-2012 set-aside of 45.4 mt for petrale sole was used in the analysis of the integrated alternatives, instead of the tribal projected catches for 2012 of 70 mt noted in the Tribal Report, which was an error. Further, at the April Council meeting, the Makah requested changes to the minor shelf rockfish and shortspine thornyhead set-asides (Agenda Item I.3.b, Supplemental Tribal Report, April 2012). Revisions to the tribal fishery set-asides will be included in the analysis of the final preferred alternative for the FEIS.

2.2.1.2 Research Set-Asides

Research activities include the NMFS trawl survey, International Pacific Halibut Commission longline survey, and other Federal and state research. The Council approach is that set-asides should be equal to the maximum historical scientific research catch from 2005-2010, except for canary rockfish and yelloweye rockfish. The maximum historical catch for canary rockfish was considered a rare event and therefore not used. The yelloweye rockfish set-aside was set higher than the historical maximum to accommodate anticipated research. The Council adopted set-aside values for darkblotched, POP, and widow rockfish, which were used in the integrated alternatives analysis, were incorrectly specified. The Council will be asked in June 2012 to adopt the maximum values, consistent with their preferred approach. There is no practical impact of this error on the results of the integrated alternatives since the maximum value is only slightly higher than the value used in the analysis (see footnote b in Table 2-48 and Table 2-49). The corrected set-asides will be included in the analysis of the final preferred alternative for the FEIS.

As stated above, the Council policy for canary and yelloweye rockfish was not based on the maximum historical value. The Council considered the high canary rockfish research catches of 7.2 mt in 2006 a rare event. The largest catches came from the NMFS trawl survey, and surveys in later years encountered substantially less canary. The Council adopted a 4.5 mt canary rockfish set-aside, which is higher than the average research catch from 2005-2010. For yelloweye rockfish, the Council adopted a 3.3 mt research set-aside based on anticipated research needs of the International Pacific Halibut Commission (1.1 mt), Washington Department of Fish and Wildlife (1 mt), Oregon Department of Fish & Wildlife (1 mt), and other projects (0.2 mt).

2.2.1.3 Incidental Open Access Set-Asides

Deductions from ACLs are made to account for groundfish mortality in the incidental open access fisheries. The set-asides for all species, except longnose skate, were derived from the maximum historical values in the 2007-2010 WCGOP Total Mortality reports. The recommended set-aside for longnose skate was based on data from the 2009 and 2010 Total Mortality reports, the years in which longnose skate were reported separately from the Other Fish category.

2.2.1.4 EFP Set-Asides

The Council adopted three EFPs and set-asides for public review at their November 2011 meeting. The first EFP seeks to test the effectiveness of trolled longline gear to selectively harvest chilipepper rockfish in waters off central California (Agenda Item E.3.a, Attachment 1, November 2011). The second EFP

seeks to test the effectiveness of vertical hook-and-line gear to selectively harvest midwater species such as yellowtail rockfish (Agenda Item E.3.a, Attachment 2, November 2011). The third EFP seeks to survey the distribution and size of overfished species in the Rockfish Conservation Area (RCA) off the central coast of California using hook-and-line and trap gear (Agenda Item E.3.a, Attachment 3, November 2011).

The Council adopted a range of EFP total catch limits for the trolled longline and the vertical hook-and-line EFPs but narrowed the values for use in the integrated alternatives analysis. No total catch limits or yield set-asides are required for the third EFP since those catches will be covered using QP allocated in the shorebased IFQ fishery.

2.2.1.5 Recreational (Sablefish north of 36° N. latitude only)

The allocation framework for sablefish north of 36° N. latitude specifies that anticipated recreational catches of sablefish be deducted from the ACL prior to the commercial limited entry and open access allocations. For 2013-2014, the set-aside is the maximum historical value from recreational fisheries from 2004-2011.

Table 2-48. 2013 preferred ACLs and estimates of tribal, EFP, research (Res.), and incidental open access (OA) groundfish mortality in metric tons, used to calculate the fishery harvest guideline, under all integrated alternatives.

Species	Area	ACL	Tribal a/	EFP	Res. b/	OA	Fishery HG
Arrowtooth flounder	Coastwide	6,157	2,041	0	8	30	4,078.0
Black rockfish	N of 46°16' N. lat.	411	14	0	0	0	397.0
Black rockfish	S of 46°16' N. lat.	1,000	0	0	0	0	1,000.0
Bocaccio	S of 40°10' N. lat.	320	0	2.6	1.7	0.7	315.0
Cabezon	46°16' to 42° N.	47	0	0	0	0	47.0
Cabezon	S of 42° N. lat.	163	0	0	0	0	163.0
California scorpionfish	S of 34°27' N. lat.	120	0	0	0	2	118.0
Canary rockfish	Coastwide	116	9.5	0.8	4.5	2	99.2
Chilipepper	S of 40°10' N. lat.	1,690	0	200	9	5	1,476.0
Cowcod	S of 40°10' N. lat.	3	0	0.02	0.1	0	2.9
Darkblotched rockfish	Coastwide	317	0.1	0.2	1.4	18	297.3
Dover sole	Coastwide	25,000	1,497	0	38	55	23,410.0
English sole	Coastwide	6,815	91	0	5	7	6,712.0
Lingcod	N of 40°10° N. lat.	3,036	250	0	5	16	2,765.0
Lingcod	S of 40°10° N. lat.	1,111	0	1.9	0	7	1,102.1
Longnose skate	Coastwide	2,000	56	0	3	3	1,938.0
Longspine thornyhead	N of 34°27' N. lat.	2,009	30	0	13	3	1,963.0
Longspine thornyhead	S of 34°27' N. lat.	356	0	0	1	2	353.0
Minor nearshore rockfish	N of 40°10' N. lat.	94	0	0	0	0	94.0
Minor nearshore rockfish	S of 40°10' N. lat.	990	0	0	0	0	990.0
Minor shelf rockfish north	N of 40°10' N. lat.	968	9	0	3	26	930.0
Minor shelf rockfish south	S of 40°10' N. lat.	714	0	30.2	6	9	668.8
Minor slope rockfish north	N of 40°10' N. lat.	1,160	36	0	6	19	1,099.0
Minor slope rockfish south	S of 40°10' N. lat.	618	0	5.2	2	17	593.8
Other fish	Coastwide	2,286	0	3	0	0	2,283.0
Other flatfish	Coastwide	4,884	60	0	17	125	4,682.0
Pacific cod	Coastwide	1,600	400	0	0	2	1,198.0
Pacific whiting	Coastwide	TBD	TBD	2.3	133	2,000	
Petrale sole	Coastwide	2,592	45.4	0	4.7	0.1	2,541.8
POP	Coastwide	150	10.9	0	1.6	0.4	137.1
Sablefish	N of 36° N. lat.	4,012	401	12.2	26	35	Table
Sablefish	S of 36° N. lat.	1,439	0	0	3	2	1,434.0
Shortbelly	Coastwide	50	0	0	2	0	48.0
Shortspine thornyhead	N of 34°27' N. lat.	1,540	38	0	5	2	1,495.0
Shortspine thornyhead	S of 34°27' N. lat.	397	0	0	1	41	355.0
Splitnose	S of 40°10' N. lat.	1,610	0	0.5	9	0	1,600.5
Starry flounder	Coastwide	1,520	2	0	0	5	1,513.0
Widow	Coastwide	1,500	60	18	1.6	3.3	1,417.1
Yelloweye rockfish	Coastwide	18	2.3	0.02	3.3	0.2	12.2
Yellowtail	N of 40°10' N. lat.	4,378	490	30	4	3	3,851.0

a/ The tribal set-aside for petrale sole was mis-specified as 45.4 mt (No Action value) and should be 70.0 mt. Analysis of the final preferred alternative will include the correct set-aside.

b/ Slight increases to the research set-aside values for darkblotched (from 1.4 to 2.1 mt), POP (from 1.6 to 2.7 mt), and widow (1.6 to 5.3 mt) are anticipated under the final preferred alternative.

Table 2-49. 2014 preferred ACLs and estimates of tribal, EFP, research (Res.), and incidental open access (OA) groundfish mortality, used to calculate the fishery harvest guideline, under all integrated alternatives.

Species	Area	ACL	Tribal a/	EFP	Res. b/	OA	Fishery HG
Arrowtooth flounder	Coastwide	5,758	2,041	0	8	30	3,679.0
Black	N of 46°16' N. lat.	409	14	0	0	0	395.0
Black	S of 46°16' N. lat.	1,000	0	0	0	0	1,000.0
Bocaccio	S of 40°10' N. lat.	337	0	2.6	1.7	0.7	332.0
Cabazon	46°16' to 42° N.	47	0	0	0	0	47.0
Cabazon	S of 42° N. lat.	158	0	0	0	0	158.0
California scorpionfish	S of 34°27' N. lat.	117	0	0	0	2	115.0
Canary rockfish	Coastwide	119	9.5	0.8	4.5	2	102.2
Chilipepper	S of 40°10' N. lat.	1,647	0	200	9	5	1,433.0
Cowcod	S of 40°10' N. lat.	3	0	0.02	0.1	0	2.9
Darkblotched rockfish	Coastwide	330	0.1	0.2	1.4	18	310.3
Dover sole	Coastwide	25,000	1,497	0	38	55	23,410.0
English sole	Coastwide	5,646	91	0	5	7	5,543.0
Lingcod	N of 40°10' N. lat.	2,878	250	0	5	16	2,607.0
Lingcod	S of 40°10' N. lat.	1,063	0	2.6	0	7	1,053.4
Longnose skate	Coastwide	2,000	56	0	3	3	1,938.0
Longspine thornyhead	N of 34°27' N. lat.	1,958	30	0	13	3	1,912.0
Longspine thornyhead	S of 34°27' N. lat.	347	0	0	1	2	344.0
Minor nearshore rockfish	N of 40°10' N. lat.	94	0	0	0	0	94.0
Minor nearshore rockfish	S of 40°10' N. lat.	990	0	0	0	0	990.0
Minor shelf rockfish north	N of 40°10' N. lat.	968	9	0	3	26	930.0
Minor shelf rockfish south	S of 40°10' N. lat.	714	0	30.2	6	9	668.8
Minor slope rockfish north	N of 40°10' N. lat.	1,160	36	0	6	19	1,099.0
Minor slope rockfish south	S of 40°10' N. lat.	622	0	5.2	2	17	597.8
Other fish	Coastwide	2,286	0	3	0	0	2,283.0
Other flatfish	Coastwide	4,884	60	0	17	125	4,682.0
Pacific cod	Coastwide	1,600	400	0	0	2	1,198.0
Pacific whiting	Coastwide	TBD	TBD	3.4	133	2,000	TBD
Petrale sole	Coastwide	2,652	45.4	0	4.7	0.1	2,601.8
POP	Coastwide	153	10.9	0	1.6	0.4	140.1
Sablefish	N of 36° N. lat.	4,349	435	16	26	35	Table
Sablefish	S of 36° N. lat.	1,560	0	0	3	2	1,555.0
Shortbelly	Coastwide	50	0	0	2	0	48.0
Shortspine thornyhead	N of 34°27' N. lat.	1,525	38	0	5	2	1,480.0
Shortspine thornyhead	S of 34°27' N. lat.	393	0	0	1	41	351.0
Splitnose	S of 40°10' N. lat.	1,670	0	0.5	9	0	1,660.5
Starry flounder	Coastwide	1,528	2	0	0	5	1,521.0
Widow	Coastwide	1,500	60	18	1.6	3.3	1,417.1
Yelloweye rockfish	Coastwide	18	2.3	0.02	3.3	0.2	12.2
Yellowtail	N of 40°10' N. lat.	4,382	490	30	4	3	3,855.0

a/ The tribal set-aside for petrale sole was mis-specified as 45.4 mt (No Action value) and should be 70.0 mt. Analysis of the final preferred alternative will include the correct set-aside.

b/ Slight increases to the research set-aside values for darkblotched (from 1.4 to 2.1 mt), POP (from 1.6 to 2.7 mt), and widow (1.6 to 5.3 mt) are anticipated under the final preferred alternative.

Table 2-50. Sablefish ACLs and estimates of tribal, research, recreational, and EFPs mortality in metric tons used to calculate the commercial harvest guideline, under all integrated alternatives.

Year	ACL	Tribal	Research	Recreational	EFP	Commercial HG
2013	4,012	401	26	6.1	10	3,569
2014	4,349	435	26	6.1	10	3,872

2.2.2 Allocations

The fishery HGs (Table 2-48 and Table 2-49) for most species are further allocated between the trawl and nontrawl fisheries. The trawl and nontrawl allocations are based on the percentages adopted under Amendment 21 to the groundfish FMP or decided during the 2013-14 biennium. Sablefish north of 36° N. latitude is allocated under the Amendment 6 framework, which allocates the commercial HG (Table 2-50) between the limited entry (trawl and fixed gear) and open access sectors. Further, the FMP outlines criteria for allocating Pacific whiting between the shorebased IFQ, catcher-processor, and mothership sectors. For some species, no allocations are necessary since ACL attainment has historically been low due to the lack of market demand, limited access as a result of the RCA configurations, or the need to limit overfished species interactions. Further, some species are managed and allocated by the west coast states (e.g., nearshore species).

For any stock that has been declared overfished, the formal trawl/nontrawl and open access/limited entry allocation established under provisions of the FMP and regulations (50 CFR 660.50) may be temporarily revised for the duration of the rebuilding period. Details of formal allocations that are temporarily suspended are detailed in the following sections.

2.2.2.1 Long-Term Allocations

Amendment 6

Amendment 6, established allocation procedures in the FMP between the open access (including directed and incidental open access) and limited entry sectors. Amendment 21-1 modified the list of species subject to Amendment 6 allocations. The species and complexes that continue to have open access and limited entry allocations, unless modified by the biennial actions, are found in Table 2-51. The species that comprise the nearshore and shelf complexes are outlined in Chapter 2.1, Table 2-40, Table 2-41, Table 2-43, and Table 2-44.

The limited entry and open access allocations for bocaccio, canary, cowcod, and yelloweye are temporarily suspended since the stocks are overfished. Further, the shelf rockfish allocations are suspended since access is limited by RCAs and the need to limit overfished species catches. Nearshore rockfish allocations are also suspended due to overfished species constraints. As such, the Council adopted two-year allocations, except for nearshore rockfish, which are described in Section 2.2.2.2. The nearshore rockfish complex is managed by the west coast states which implement allocations through state regulations.

Detailed descriptions of the allocations for sablefish north of 36° north latitude can be found in Chapter 6 of the FMP. Table 2-52 to Table 2-57 detail the sablefish allocations calculations for use in the 2013-2014 cycle.

Table 2-51. Limited entry and open access allocations established by FMP Amendment 6.

Stock or Stock Complex	Limited Entry Share	Open Access Share
Nearshore and Shelf Rockfish North of 40°10 N. latitude	91.7%	8.3%
Nearshore and Shelf Rockfish South of 40°10 N. latitude	55.7%	44.3%
Sablefish north of 36° N. latitude	90.6%	9.4%

Table 2-52. Limited entry and open access FMP allocations applied to the 2013-2014 ACLs and resulting commercial harvest guideline for sablefish north of 36° N. latitude (in mt).

Year	ACL	Commercial HG (MT) a/	Limited Entry Harvest Guideline		Open Access Harvest Guideline	
			%	MT	%	MT
2013	4,012	3,569	90.6%	3,233	9.4%	335
2014	4,349	3,872	90.6%	3,508	9.4%	364

a/ Set-asides from the ACL used to calculate the commercial HG can be found in Table 2-48 and Table 2-49.

Table 2-53. Sablefish north of 36° N. latitude allocations, in metric tons, between limited entry fixed gear and limited entry trawl for 2013-2014.

Year	Limited Entry HG	Limited Entry Fixed Gear		Limited Entry Trawl	
	MT	%	MT	%	MT
2013	3,233	42%	1,358	58%	1,875
2014	3,508	42%	1,473	58%	2,035

Table 2-54. Sablefish north of 36° N. latitude allocations, in metric tons, within the limited entry fixed gear sector for 2013-2014. The total catch share is reduced by approximately 16 percent to account for discard mortality, a value calculated from WCGOP observations.

Year	Limited Entry Fixed Gear			
	Total Catch Share (mt)	Landed Catch Share (mt)	Primary Season Share (mt)	LEFG DTL Share (mt)
2013	1,358	1,315	1,118	197
2014	1,473	1,427	1,213	214

Table 2-55. Tier limits in pounds for the primary season for sablefish north of 36° N. latitude.

Year	Limited Entry Fixed Gear			
	Primary Season Share (mt)	Tier 1 (lbs)	Tier 2 (lbs)	Tier 3 (lbs)
2013	1,118	34,455	15,661	8,949
2014	1,213	37,383	16,992	9,710

Table 2-56. Sablefish north of 36° N. latitude allocations, in metric tons within the limited entry trawl sector for 2013-14.

Year	Limited Entry Trawl		
	All Trawl (mt)	At-sea Whiting (mt)	Shorebased IFQ (mt)
2013	1,875	50	1,825
2014	2,035	50	1,985

Table 2-57. Open access allocations in metric tons for sablefish north of 36° N. latitude allocations for 2013-14. Sablefish mortality in nongroundfish fisheries is accounted for in the incidental OA column. The total catch share is reduced by approximately 16 percent to account for discard mortality, a value calculated from WCGOP observations.

Year	Open Share (OA) (mt)	Incidental OA Removals (mt)	Directed OA Total Catch Share (mt)	Directed OA Landed Catch Share (mt)
2013	335	35	300	291
2014	364	35	329	319

Amendment 21

Amendment 21 to the FMP specified allocations between the trawl and nontrawl sectors. The trawl allocation is necessary for the shorebased IFQ and at-sea co-op programs. Long-term, formal allocations are expected to provide more stability to the trawl fishery sectors by reducing the risk of the trawl sector being closed as a result of a nontrawl sector exceeding an allocation or HG (e.g., recreational fisheries).

The Council recommended suspending the allocation of petrale sole (95 percent to trawl and 5 percent to nontrawl) during rebuilding and using a two-year allocation of 35 mt to nontrawl with the remainder allocated to trawl (Table 2-58 and Table 2-59). This same approach was used in 2011-2012. The 35 mt value represents roughly twice the maximum nontrawl catch of petrale from 2004-2008 (see Figure 2 in Agenda Item B.7.b, Supplemental GMT Report, June 2010).

Amendment 21 also specified procedures for Pacific halibut bycatch allocations to the shorebased IFQ fishery. The FMP and regulations sets the trawl bycatch mortality limit at 15 percent of the Area 2A total constant exploitation yield (TCEY) for legal size halibut (net weight), not to exceed 130,000 pounds annually for legal size halibut (net weight) for 2012 through 2014 and, beginning in 2015, not to exceed 100,000 pounds annually for legal size halibut (net weight). Details of the Pacific halibut calculation can be found in 50 CFR 660.55(m). The Pacific halibut harvest specifications and associated allocations have not yet been specified for 2012, therefore the analysis of the integrated alternatives uses the 2011 values.

Pacific Whiting

Pacific whiting is managed consistent with the agreement with Canada on Pacific hake/whiting and the Pacific Whiting Act. The Joint Management Committee (U.S. and Canada) recommends the coastwide TAC and corresponding U.S. TAC for Pacific whiting no later than March 25 of each year. Except for establishing the catch level, all other aspects of Pacific whiting management are subject to the MSA. The FMP states that the commercial HG for Pacific whiting is allocated among three sectors, as follows: 42 percent to the shorebased IFQ program, 34 percent for the catcher-processor co-operative program, and 24 percent for the mothership co-operative program. The Pacific whiting harvest specifications and associated allocations have not yet been specified for 2012, therefore the analysis of the integrated alternatives uses the 2011 allocations.

2.2.2.2 Short-Term Allocations

Two-year trawl and nontrawl allocations are decided during the biennial process for those species without long-term allocations or species where the long-term allocation is suspended. The preferred ACLs and allocations for species subject to short-term allocations are indicated in Table 2-58 and Table 2-59. The No Action trawl and nontrawl allocation percentages for cowcod south of 40°10' N. latitude (66 percent to trawl, 34 percent to nontrawl) were identified as the preferred allocation scheme for 2013-2014 (Table 2-59). Additionally, an option is analyzed that would allocate 34 percent of the cowcod HG to the trawl sector and 66 percent to the nontrawl sector (see Appendix C Section C.3). Further, the integrated alternatives explore a range of canary and POP ACLs and allocations which are described by alternative in Section 2.4.

The Council recommended a two-year trawl and nontrawl HG for longnose skate of 90 percent to the trawl fishery and 10 percent to the nontrawl fishery. The allocation percentages reflect historical catch of longnose skate between the two sectors (see Appendix C, Table C-54).

2.2.2.3 Species Without Allocations

Species without trawl and nontrawl or limited entry and open access allocations include: black rockfish, cabezon (Oregon and California), California scorpionfish, longspine thornyhead south of 34° 27' N. latitude, minor nearshore rockfish north and south, shortbelly, and the Other Fish complex, including spiny dogfish. The nearshore species, including nearshore rockfish, are managed and allocated by the west coast states. For the remaining species, ACL attainment has historically been low due to the lack of market demand, limited access as a result of the RCA configurations, or the need to limit overfished species interactions. While there is no need for allocations between sectors, management measures for these species are proposed to keep total catch within the ACL (e.g., trip limits, bag limits, etc.).

Table 2-58. Species-specific fishery harvest guidelines and allocations, in metric tons, for 2013.

Species	Area	Fishery HG	Allocation Type	Allocations			
				Trawl		Nontrawl	
				%	Mt	%	Mt
Arrowtooth flounder	Coastwide	4,078.0	FMP	95%	3,874	5%	204
Black	N of 46°16' N. lat.	397.0	None				
Black	S of 46°16' N. lat.	1,000.0	None				
Bocaccio	S of 40°10' N. lat.	315.7	Biennial	NA	76.9	NA	243.1
Cabazon	46°16' to 42° N.	47.0	None				
Cabazon	S of 42° N. lat.	163.0	None				
California scorpionfish	S of 34°27' N. lat.	118.0	None				
Canary rockfish	Coastwide	99.2	Biennial	NA	53.1	NA	46.4
Chilipepper	S of 40°10' N. lat.	1,476.0	FMP	75%	1,107	25%	369
Cowcod	S of 40°10' N. lat.	2.9	Biennial	NA	1.9	NA	1
Darkblotched rockfish	Coastwide	297.3	FMP	95%	282	5%	15
Dover sole	Coastwide	23,410.0	FMP	95%	22,240	5%	1,171
English sole	Coastwide	6,712.0	FMP	95%	6,376	5%	336
Lingcod	N of 40°10' N. lat.	2,765.0	FMP	45%	1,244	55%	1,521
Lingcod	S of 40°10' N. lat.	1,102.1	FMP	45%	496	55%	606
Longnose skate	Coastwide	1,938.0	Biennial	90%	1,744	10%	194
Longspine thornyhead	N of 34°27' N. lat.	1,963.0	FMP	95%	1,865	5%	98
Longspine thornyhead	S of 34°27' N. lat.	353.0	None				
Minor nearshore	N of 40°10' N. lat.	94.0	None				
Minor nearshore	S of 40°10' N. lat.	990.0	None				
Minor shelf rockfish	N of 40°10' N. lat.	930.0	Biennial	60.2	560	39.8	370
Minor shelf rockfish	S of 40°10' N. lat.	668.8	Biennial	12.2	82	87.8	587
Minor slope rockfish	N of 40°10' N. lat.	1,099.0	FMP	81%	890	19%	209
Minor slope rockfish	S of 40°10' N. lat.	593.8	FMP	63%	374	37%	220
Other fish	Coastwide	2,283.0					
Other flatfish	Coastwide	4,682.0	FMP	90%	4,214	10%	468
Pacific cod	Coastwide	1,198.0	FMP	95%	1,138	5%	60
Pacific whiting	Coastwide	TBA		100%	TBA	0%	TBA
Petrale sole	Coastwide	2,541.8	Biennial	NA	2,507	NA	35
POP	Coastwide	137.1	FMP	95%	130	5%	7
Sablefish	N of 36° N. lat.	See Table 2-52 to Table 2-57					
Sablefish	S of 36° N. lat.	1,434.0	FMP	42%	602	58%	832
Shortbelly	Coastwide	48.0	None				
Shortspine thornyhead	N of 34°27' N. lat.	1,495.0	FMP	95%	1,420	5%	75
Shortspine thornyhead	S of 34°27' N. lat.	355.0	FMP	NA	50	NA	305
Splitnose	S of 40°10' N. lat.	1,600.5	FMP	95%	1,520	5%	80
Starry flounder	Coastwide	1,513.0	FMP	50%	757	50%	757
Widow	Coastwide	1,417.1	FMP	91%	1,290	9%	128
Yelloweye rockfish	Coastwide	12.2	Biennial	NA	1	NA	11.2
Yellowtail	N of 40°10' N. lat.	3,851.0	FMP	88%	3,389	12%	462

Table 2-59. Species-specific fishery harvest guidelines and allocations, in metric tons, for 2014.

Species	Area	Fishery HG	Allocation Type	Allocation			
				Trawl		Nontrawl	
				%	Mt	%	Mt
Arrowtooth flounder	Coastwide	3,679.0	FMP	95%	3,495	5	184
Black	N of 46°16' N. lat.	395.0	None				
Black	S of 46°16' N. lat.	1,000.0	None				
Bocaccio	S of 40°10' N. lat.	332.7	Biennial	NA	79.8	N	252.2
Cabazon	46°16' to 42° N.	47.0	None				
Cabazon	S of 42° N. lat.	158.0	None				
California scorpionfish	S of 34°27' N. lat.	115.0	None				
Canary rockfish	Coastwide	103.7	Biennial	NA	54.7	N	47.8
Chilipepper	S of 40°10' N. lat.	1,433.0	FMP	75%	1,075	25	358
Cowcod	S of 40°10' N. lat.	2.9	Biennial	NA	1.9	N	1
Darkblotched rockfish	Coastwide	310.3	FMP	95%	295	5	16
Dover sole	Coastwide	23,410.0	FMP	95%	22,240	5	1,171
English sole	Coastwide	5,543.0	FMP	95%	5,266	5	277
Lingcod	N of 40°10' N. lat.	2,607.0	FMP	45%	1,173	55	1,434
Lingcod	S of 40°10' N. lat.	1,053.4	FMP	45%	474	55	579
Longnose skate	Coastwide	1,938.0	Biennial	90%	1,744	10	194
Longspine thornyhead	N of 34°27' N. lat.	1,912.0	FMP	95%	1,816	5	96
Longspine thornyhead	S of 34°27' N. lat.	344.0	None				
Minor nearshore rockfish	N of 40°10' N. lat.	94.0	None				
Minor nearshore rockfish	S of 40°10' N. lat.	990.0	None				
Minor shelf rockfish north	N of 40°10' N. lat.	930.0	Biennial	60.2	560	39	370
Minor shelf rockfish south	S of 40°10' N. lat.	668.8	Biennial	12.2	82	87	587
Minor slope rockfish north	N of 40°10' N. lat.	1,099.0	FMP	81%	890	19	209
Minor slope rockfish south	S of 40°10' N. lat.	597.8	FMP	63%	377	37	221
Other fish	Coastwide	2,283.0					
Other flatfish	Coastwide	4,682.0	FMP	90%	4,214	10	468
Pacific cod	Coastwide	1,198.0	FMP	95%	1,138	5	60
Pacific whiting	Coastwide	TBA		100	TBA	0	TBA
Petrale sole	Coastwide	2,601.8	Biennial	NA	2,567	N	35
POP	Coastwide	140.1	FMP	95%	133	5	7
Sablefish	N of 36° N. lat.	See Table 2-52 to Table 2-57					
Sablefish	S of 36° N. lat.	1,555.0	FMP	42%	653	58	902
Shortbelly	Coastwide	48.0	None				
Shortspine thornyhead	N of 34°27' N. lat.	1,480.0	FMP	95%	1,406	5	74
Shortspine thornyhead	S of 34°27' N. lat.	351.0	FMP	NA	50	N	301
Splitnose	S of 40°10' N. lat.	1,660.5	FMP	95%	1,577	5	83
Starry flounder	Coastwide	1,521.0	FMP	50%	761	50	761
Widow	Coastwide	1,417.1	FMP	91%	1,290	9	128
Yelloweye rockfish	Coastwide	12.4	Biennial	NA	1	N	11.2
Yellowtail	N of 40°10' N. lat.	3,855.0	FMP	88%	3,392	12	463

2.2.3 Within Sector Allocations

2.2.3.1 Within Trawl Allocations

Amendment 21 Within Trawl Allocations

Amendment 21 and implementing regulations specified that the within trawl whiting allocations of darkblotched, POP, and widow would be done pro-rata to the sector's whiting allocation. The whiting allocations are 42 percent to shoreside, 34 percent to the catcher-processor, and 24 percent to the mothership sector. The whiting shoreside sector allocations are combined with the nonwhiting shorebased allocations to create the total shorebased IFQ sector allocation. Table 2-60 and Table 2-61 detail the allocation calculations for darkblotched, POP, and widow for 2013 and 2014.

The Council adopted the rebuilt widow rockfish Amendment 21 within trawl allocation as the preferred alternative, as specified in the FMP and regulations. Additionally, the Council requested analyzing a range of widow rockfish within trawl allocations to the whiting sectors. The requested range for the at-sea sector is the status quo 2012 level (147.9 mt) to 300 mt, which would be further allocated between the mothership and catcher-processor sector pro-rata to the sectors whiting allocation. The remainder would be allocated to the shoreside whiting sector which is combined with the nonwhiting shorebased allocations to create the total shorebased IFQ sector. This analysis can be found Appendix C and in Chapter 4.

Table 2-60. Darkblotched, POP, and widow within trawl FMP allocations for 2013.

Species	Trawl Allocation (mt)	Allocation Formula		Nonwhiting (mt)	Whiting (mt)
		Nonwhiting	Whiting		
Darkblotched	282	The rest	9% or 25 mt, whichever is greater	257	25
POP	130	The rest	17% or 30 mt, whichever is greater	100	30
Widow	1,290	The rest	10% or 500 mt, whichever is greater	790	500

Species	Within Whiting Sector Allocations			
	Whiting Sector Total (mt)	Shorebased 42% (mt)	Catcher-processor 34% (mt)	Mothership 24% (mt)
Darkblotched	25	10.7	8.6	6.1
POP	30	12.6	10.2	7.2
Widow	500	210.0	170.0	120.0

Shorebased IFQ Total Allocations			
Species	Shorebased Whiting (mt)	Nonwhiting (mt)	Shorebased IFQ Total (mt)
Darkblotched	10.7	257	268
POP	12.6	100	113
Widow	210.0	790	1,000

Table 2-61. Darkblotched, POP, and widow within FMP trawl allocations for 2014.

Species	Trawl Allocation (mt)	Allocation Formula		Nonwhiting (mt)	Whiting (mt)
		Nonwhiting	Whiting		
Darkblotched	295	The rest	9% or 25 mt, whichever is greater	268	27
POP	133	The rest	17% or 30 mt, whichever is greater	103	30
Widow	1,290	The rest	10% or 500 mt, whichever is greater	790	500

Species	Within Whiting Sector Allocations			
	Whiting Sector Total (mt)	Shorebased 42% (mt)	Catcher-processor 34% (mt)	Mothership 24% (mt)
Darkblotched	27	11.1	9.0	6.4
POP	30	12.6	10.2	7.2
Widow	500	210.0	170.0	120.0

Shorebased IFQ Allocation Calculations			
Species	Shoreside Whiting (mt)	Shorebased Nonwhiting (mt)	Shorebased IFQ Total (mt)
Darkblotched	11.1	268	279
POP	12.6	103	116
Widow	210.0	790	1,000

At-Sea Whiting Set-Asides

Unlike set-asides that are taken as off-the-top deductions after setting the ACL, set-asides for some species are taken from the trawl allocation to accommodate bycatch in the at-sea whiting fishery (catcher-processor and mothership). Like other set-asides, these catches are not actively managed inseason, therefore the set-aside amounts need to be set high enough to accommodate the historical maximum or any increased catch that is anticipated. Recent catch in the at-sea sectors from 2009-2010 was evaluated and set-asides were recommended by the Council in November 2011 (Table 2-62). The proposed changes from No Action for arrowtooth flounder, lingcod north of 42° N. latitude, and minor slope rockfish north of 40°10 N. latitude were calculated by roughly doubling the maximum value.

Table 2-62. At-sea whiting set-asides, which are deducted from the trawl allocation, for 2013-14.

Species or Species Complex	Area	Set Aside (mt)
Arrowtooth Flounder	Coastwide	20
Dover Sole	Coastwide	5
English Sole	Coastwide	5
Lingcod	N. of 40°10 N. lat.	15
Longnose Skate	Coastwide	5
Longspine Thornyhead	N. of 34°27 N. lat.	5
Minor Shelf Rockfish	N. of 40°10 N. lat.	35
Minor Slope Rockfish	N. of 40°10 N. lat.	100
Other Fish	Coastwide	520
Other Flatfish	Coastwide	20
Pacific Cod	Coastwide	5
Pacific Halibut	Coastwide	10
Petrale Sole	Coastwide	5
Sablefish	N. of 36° N. lat.	50
Shortspine Thornyhead	N. of 34°27 N. lat.	20
Starry Flounder	Coastwide	5
Yellowtail	N. of 40°10 N. lat.	300

2.2.3.2 Within Nontrawl Allocations

The Council adopted two-year within nontrawl allocations for bocaccio, canary, and yelloweye for 2013-2014 under the preferred alternative (Table 2-63). The recreational values would be implemented as HGs. The canary within nontrawl allocations vary by alternative and are further explained under the analysis of the integrated alternatives (Section 2.4).

The Council recommended trip limits for sablefish south of 36° N latitude be modeled assuming a 55 percent to limited entry and 45 percent to open access allocation, based on the historical landings from 2000-2009 (see Table 9 in Agenda Item E.9.b, Supplemental GMT Report 3, November 2011). These percentages are not implemented as HGs but influence the catch and revenue for each sector under the integrated alternatives.

Table 2-63. Preferred two-year within nontrawl allocations for bocaccio, canary, and yelloweye for 2013-2014.

2013			
Sector	Bocaccio (mt)	Canary (mt)	Yelloweye (mt)
ACL	320	116	18
Total Set-Asides	5	16.8	5.82
Fishery Harvest Guideline	315.0	99.2	12.2
Non-Nearshore	74.2	3.6	1.1
Nearshore Fixed Gear	0.9	6.2	1.2
Washington Recreational HGs	N/A	3.1	2.9
Oregon Recreational HGs	N/A	10.9	2.6
California Recreational HGs	167.9	22.6	3.4
2014			
Sector	Bocaccio (mt)	Canary (mt)	Yelloweye (mt)
ACL	337	119	18
Total Set-Asides	5	17	5.8
Fishery Harvest Guideline	332.0	102.0	12.2
Non-Nearshore	77	3.7	1.1
Nearshore Fixed Gear	0.9	6.4	1.2
Washington Recreational HGs	N/A	3.2	2.9
Oregon Recreational HGs	N/A	11.2	2.6
California Recreational HGs	174.2	23.3	3.4

Harvest Guidelines

Accountability measures that increase the likelihood that total catch stays within the ACL include HGs, which are a specified numerical harvest objective that is not a quota. Attainment of an HG does not require closure of a fishery. Species with HGs are required to be sorted prior to first weighing.

Black Rockfish (OR and CA)

HGs are recommended for the southern component of the black rockfish stock with 58 percent to Oregon and 42 percent to California. This allocation scheme is based on recent year landings, consistent with allocations that have been in place since 2004 (Agenda Item E.9.b, Supplemental Joint ODFW/CDFG Report, November 2011). Both states further allocate black rockfish between commercial and recreational nearshore fisheries; however, those allocations are not implemented in Federal regulations.

Blackgill South of 40°10' N. latitude

Blackgill rockfish is part of the minor slope rockfish complex south of 40°10' N. latitude and subject to an Amendment 21 allocation (63 percent to trawl and 37 percent to nontrawl). To improve inseason tracking of blackgill rockfish south of 40°10' N. latitude, the Council recommended HGs for 2013-2014 of 106 mt and 110 mt, respectively. Further, the Council provided guidance that the commercial nontrawl apportionment of blackgill should be 60 percent to limited entry and 40 percent to open access fixed gears. This apportionment reflects the historical distribution of catch between the limited entry and open access fixed gear sectors from 2005-2010 (Table 3 in Agenda Item E.9.b, GMT Report 2, November 2011).

Table 2-64. Blackgill rockfish within nontrawl allocations for limited entry and open access fixed gears for 2013-2014.

Year	Nontrawl Allocation (mt)	Limited Entry Fixed Gear (mt)	Open Access Fixed Gear (mt)
2013	44	26.4	17.6
2014	45	27	18

Blue Rockfish South of 42° N. latitude

Since 2009, blue rockfish south of 42° N. latitude has been managed with an HG to prevent overfishing blue rockfish, which is in the precautionary zone (below B_{MSY}). Table 2-65 shows the OFL contribution, ABC contribution, and 40-10 adjusted values for both the assessed and unassessed portions of the blue rockfish stock both north and south of 40°10' N. latitude within California. For development of the integrated alternatives, the Council recommended specifying a 2013-2014 blue rockfish HG of 236 mt for California fisheries. This HG was calculated from the 2007 assessment (Key, *et al.* 2008), which was conducted for the portion of the stock in waters off California north of Point Conception at 34°27' N. latitude. The OFLs were derived from the assessment. The ABCs were derived using a P^* of 0.45 for category 2 stocks, which was then adjusted using the 40-10 default harvest policy, as specified in the FMP for species in the precautionary zone. The HG contribution for the unassessed portion of the stock south of Point Conception was calculated by first estimating an OFL using the DCAC methodology and then applying an ABC adjustment (using a P^* of 0.45 for a category 3 stock). The HG contribution for the unassessed area was set equal to the ABC since the stock is assumed to be above B_{MSY} . The 2013 and 2014 blue rockfish HG contributions for the assessed and unassessed areas are then summed to determine the HG.

Table 2-65. Blue rockfish harvest guideline calculations for both the assessed and unassessed areas within California for 2013-2014.

Area	OFL contribution by area		ABC contribution by area		40-10 adjusted HG contribution by area	
	2013	2014	2013	2014	2013	2014
North of 34°27' N. lat. (assessed area)	215	215	196	196	175	175
South of 34°27' N. lat. (unassessed area)	73	73	61	61	61	61
Total for California	288	288	257	257	236	236

2.3 New Accountability Measures

Several new accountability measures, designed to meet the goals and objectives specified in the FMP, were analyzed for use in 2013-2014. The following section provides an overview of the measures considered within the integrated alternatives. Section 2.4 describes the integrated alternatives and discusses the performance of these new measures in relation to the objectives of the proposed action. A focused evaluation of the performance and effects of the new accountability measures and range of options considered can be found in Appendix C.

Implementation of these new measures is considered under all of the integrated alternatives described in Section 2.4, except under No Action. The new measures would not be implemented under the No Action Alternative.

In April 2012, the Council adopted a preferred suite of management measures for 2013-2014 fisheries, including some of the new measures described below. At the June 2012 Council meeting, the Council is scheduled to take final action on management measures for 2013-2014; the Council will confirm or modify the decisions made at their April 2012 meeting.

2.3.1 Modifications to the Boundaries Defining RCAs

RCAs are large area closures intended to protect a complex of species, such as the overfished shelf rockfish species. The boundaries for RCAs are defined by straight lines connecting a series of latitude and longitude coordinates that approximate depth contours. A set of coordinates are defined for each depth contour and the RCA structures are implemented by gear and/or fishery (e.g., trawl RCA, a nontrawl RCA, and a recreational RCAs). For the 2013-2014 cycle, changes to selected coordinates are proposed that more closely approximate the boundaries with depth contours based on the best available data (Table 2-66). These modifications should provide improved and more efficient access to target species while minimizing interactions with overfished species. The analysis of the integrated alternatives examines the impacts of the proposed changes.

Table 2-66. Summary of boundary adjustments proposed for 2013-2014 and included in the analysis of the integrated alternatives.

Area	Proposed Modifications
Washington and Oregon	150 and 200 fm lines
Oregon	200 fm lines
California – Usal and Noyo Canyons	150 fm lines

2.3.2 Management of ACL Set-Asides

The Council considered a range of options for reapportioning the ACL set-asides used to account for groundfish mortality from scientific research, incidental open access fisheries, and EFPs (see Section 2.3 for details on the ACL set-asides proposed for 2013-2014). The Council considered whether to release the ACL set-asides for reapportioning based on real time catch accounting (i.e., final estimates) or projected catch accounting (see Appendix C for detailed analysis). Projected catch accounting was adopted as the preferred methodology since it is consistent with the best available data approach used by the Council for inseason management of the fisheries. The Council also considered whether the reallocation of set-asides should be done based on the original allocations prescribed at the start of the

year or whether modifications could be made to account for fishery progress to date. The Council chose the latter approach as the preferred option to provide maximum flexibility to attain the OY.

2.3.3 Catch Accounting between Limited Entry and Open Access

This Council-proposed FMP amendment would reinstate a provision that was inadvertently deleted when Amendment 21 was implemented, and clarifies the application of that provision with respect to catch accounting⁹ for set-asides. The provision that was inadvertently deleted specified the decision rules for determining the allocation against which a vessel's catch would count, i.e. whether it would count against the limited entry or the open access allocation. As it was specified, the provision also set up the situation in which catch might be deducted from both the ACL before sector allocations are made and deducted from an open access or limited entry sector allocation. In this regard, this amendment would add a clarification to eliminate the possibility of a duplicate deduction.

2.3.4 Related Regulatory and FMP Language Clarifications

Complete Offloading (Regulatory Clarification)

As part of the trawl rationalization program, regulations were adjusted for the trawl sector to clarify that once the transfer of fish begins all fish on board a vessel count toward a landing and that the offload must be completed prior to the start of a subsequent trip. The purpose of this measure is to ensure all fish harvested on a trip are clearly associated with the landings receipts and permit status. A similar clarification is needed for other segments of the fishery for accurate catch accounting between sector allocations.

In April 2012, the Council did not adopt this regulatory adjustment; therefore the regulations under No Action would apply for the 2013-2014 fisheries. The Council could adopt this measure in June 2012 under final action, if desired.

Clarification in how the Open Access Sector Regulations Apply to IFQ Participants (FMP Clarification)

As part of the trawl rationalization program Section 11.2.5 paragraphs a and b of the FMP were expanded to specify the regulations which would apply when vessels with trawl endorsed limited entry permits use longline or fishpot gear with (paragraph a) or without (paragraph b) endorsements for those gears. Paragraph b states that when LE trawl vessels are using longline or fishpot gear without an endorsement for the gear being used, landings must be covered with trawl IFQ and that the vessel must comply with the provisions of the trawl IFQ program. A sentence at the end of the section states that under such circumstances open access regulations would not apply, i.e., even though a trawl vessel is using open access gear (using longline or fishpot gear without an LE permit) the open access sector regulations will not apply. This sentence needs to be modified to clarify that it is only the open access trip limits which will not apply, unless explicitly stated elsewhere (e.g. the catch accounting rules for limited entry trawl vessels using an open access gear are different than for an open access sector vessel using open access gear).

⁹ The terms "catch accounting" and "catch," as used in this section, cover the application of a vessel's harvest against a sector allocation. Depending on how the allocations and management measures are specified, harvest may be measured as landings (catch minus discards), catch (including discards), or total mortality (catch minus discard survival). Regardless of the measure used in a particular situation, the management objective is to maintain total mortality within the ACLs.

2.3.5 *Sorting Requirements for Aurora, Shortraker, and Rougheye Rockfish north of 40°10 N. latitude*

Sorting requirements for aurora, shortraker, and rougheye rockfish north of 40°10 N. latitude and are considered for 2013-2014. The measures would require processors to sort and report these species from the slope rockfish complex prior to the first weighing after offload. The purpose of a sorting requirement would be to improve the accuracy of total mortality estimates for these stocks and the frequency with which they are reported. Improved monitoring would improve the ability to evaluate the need for inseason management action to keep catch within the complex harvest specifications.

The Council did not select the sorting requirement for aurora, shortraker, and rougheye rockfish north of 40°10 N. latitude as part the preferred alternative because it was unclear if the measure would meet the objective of improving the accuracy of total mortality estimates for these stocks or whether minor modifications to the No Action procedures (e.g., increased frequency of sampling and reporting by either state port biologist or shorebased IFQ catch monitors) are more appropriate. The Council could adopt sorting requirement for all or none of these species (No Action) in June 2012 under final action, if desired.

2.3.6 *Widow Rockfish Within-Trawl Allocation*

The Council considered but rejected a change to the widow rockfish allocation to the trawl sectors specified in the FMP which would have provided more widow to the shoreside sector to allow greater opportunity to target widow and yellowtail rockfish. The needs of the shoreside trawl sector would best be met by allocating as much of the trawl allocation of widow rockfish as possible since a healthy widow rockfish stock is a valuable target for that sector. The needs of the at-sea sectors would best be met by allocating enough widow rockfish to prevent impeding the ability of these sectors to target Pacific whiting. While widow rockfish are not a target species in the at-sea whiting fisheries, the amount of widow rockfish allocated to the at-sea sectors has the potential to limit their ability to attain whiting allocations. If the total catch of widow rockfish hits the allocation for an at-sea sector, the season ends for that sector even if they have not attained their allocation of whiting. The analysis of sector needs for widow therefore compared the recent historical catches and catch rates of widow with respect to whiting by the at-sea sectors to understand whether the widow allocation options meet the needs of the at-sea sectors (see Appendix C). The Council rejected the option to reallocate widow rockfish because historical data and public testimony from the at-sea sectors indicated that a lower allocation could reduce the sector's ability to efficiently access Pacific whiting. Final action on the widow rockfish within-trawl allocation is scheduled for June 2012.

2.3.7 *Shorebased IFQ Accumulation Limits*

The maximum number of quota shares (QSs) and quota pounds (QPs) an entity may control in the shorebased IFQ fishery is limited by accumulation limits (defined in regulation at 50 CFR 660.111). These limits vary according to the management unit for the stock or stock complex and are intended to restrict the consolidation of quota holdings by just a few entities. The QS limits restrict the amount an individual or entity may control through ownership or other means. The annual QP limits refer to the maximum amount that may be assigned to any one vessel during a given year to cover catch. The annual QP vessel limits are larger than control limits to allow several QS holders to work together on a single vessel. Additionally, there are daily vessel limits that regulate the unused QP in vessel accounts for Pacific halibut and overfished species.

Performance of the accumulation limits was evaluated based on fishery performance in 2011 (see Appendix C); however, in April 2012 the Council chose not to modify the limits for the 2013-2014 cycles since the limits appeared to be meeting the Council's objective to prevent consolidation of quota holdings by just a few entities. The Council could modify accumulation limits in June 2012 under final action, if desired.

2.3.8 Shorebased IFQ Surplus Carry-Over

Current regulations provide for a carry-over provision that allows a limited amount of surplus QP or IBQ pounds in a vessel account to be carried over from one year to the next or allows a deficit in a vessel account in one year to be covered with QP or IBQ pounds from a subsequent year, up to a carryover limit (50 CFR 660.140(e)(5)). The carry-over provision is anticipated to increase individual flexibility for harvesters, improve economic efficiency, and achieve optimum yield (OY) while preserving the conservation of stocks. This measure seeks to clarify regulations with regard to current accountability measures, which include modifications (reductions or suspension) to the eligible surplus carry-over percentages, in the event it is necessary to address MSA conservation requirements. The measure seeks to implement such accountability measures through routine¹⁰ inseason adjustments recommended at a Council meeting. Lastly, the current list of automatic actions that may be implemented by NMFS would be revised to include closing the nonwhiting shorebased IFQ fisheries, in addition to the IFQ shorebased whiting fishery (see regulations at 660.60 (d)).

In April 2012, the Council rejected the modifications to the surplus carry-over program because the fleet will likely attempt to maximize harvest of QPs and revenue annually (i.e., fish every last pound for maximum economic benefit) since the QP may not be available in the following year (i.e., there is no guarantee that surplus carry-over in one year would be available for harvest in the following year). Attempting to harvest all QPs may increase the risk of fishing into deficit, which results in a negative socioeconomic impact, since it is a multispecies fishery and there is limited precision in the harvesting activities. The Council requested further analysis and development of options to ensure the surplus carry-over program is consistent with the MSA conservation requirements and consistent with the Council's objectives for the program.

2.3.9 Remove or Reduce the Minimum Lingcod Length Limit in the Shorebased IFQ Fishery

Lingcod length limits have been in place since the late 1990's and were implemented to minimize harvest of immature fish while maintaining the reproductive potential of the stock. Current commercial length limits vary north and south of 42° N. latitude, and are 22 inches and 24 inches, respectively. In 2011, the limited entry trawl fishery was rationalized with total catch IFQ issued for many species, including lingcod. Since the IFQ program monitors total catch, the existing length limit induces regulatory discards for some fish that may be marketable. The purpose of the proposed management measures would be to remove the lingcod length limit or reduce it to 20 inches coastwide while still maintaining the reproductive potential of the stock.

The analysis indicated that removing the minimum lingcod length limit was unlikely to cause a biological impact; therefore, the Council selected it as the preferred alternative in April 2012, rejecting the option to

¹⁰ Regulations at 660.60(c) outline routine management measures. Modifications and/or issuance of surplus carry-over does not require changes to regulations; therefore classifying this measure as routine may not be appropriate. As such, a Council recommendation may be more appropriate.

reduce or maintain the limit. In June 2012, the Council will finalize this decision, reduce the limit to 20 inches, or maintain the existing 22 and 24 inch limits north and south of 42° N. latitude, respectively.

2.3.10 Threshold for Switching from the Primary to Daily Trip Limit Fishery for Sablefish North of 36° N. Latitude

The purpose of the proposed action is to remedy unforeseen complications to the limited entry fixed gear sablefish primary fishery north of 36° N. latitude, which resulted from the 2009 elimination of the daily trip limit (DTL) in the sablefish DTL fishery in this area. Elimination of the daily limit inadvertently impacted the amount of sablefish that primary fishery participants are allowed land, as they conclude fishing on their tier limits. The Council-proposed action would implement a 300 pound threshold, in the absence of a daily limit established in regulation, to facilitate the transition of a vessel from the sablefish primary fishery to the sablefish DTL fishery. The 300 pound threshold was the most common DTL in this fishery over the past seven years, and would give maximum access of a fisher to their tier pounds.

2.3.11 Recreational Shelf Rockfish Retention in the Cowcod Conservation Area

In 2001, CCAs were implemented as part of the cowcod rebuilding strategy. As specified in the FMP Appendix F (see Cowcod Rebuilding Strategy), as new information becomes available on cowcod behavior and fisheries interactions with cowcod, the boundaries or related regulations concerning the current CCAs may change, and additional CCAs may be established by regulation. Some recreational fishing is currently permitted within the CCA (see regulations at 660.360(3)(B)). During these fishing operations, shelf rockfish, including bocaccio, are encountered but are required to be discarded, resulting in bycatch. Modifications to the retention allowances for shelf rockfish in the CCA are proposed by the Council to reduce bycatch (i.e., regulatory discards) by recreational fisheries operating in the CCAs, while still rebuilding cowcod and bocaccio.

2.3.12 Remove the California Recreational Bocaccio Size Limit

Federal regulations for the California recreational fisheries implement a 10 inch minimum size limit for bocaccio. The size limit was implemented in 2001 to protect juveniles from pier and jetty anglers during years of heavy recruitment. At that time, managers believed that bocaccio below that size would have a high survival rate when caught in shallow water. Recent data suggest that there have been very few encounters of small bocaccio during good recruitment years (e.g., 2003, 2005, and 2009), and even fewer discards, suggesting the size limit is ineffective. The Council-proposed management measure would remove the recreational bocaccio size limit for 2013-2014, while still rebuilding the bocaccio stock consistent with Council objectives.

2.4 Integrated Alternatives

This section contains a description of the integrated alternatives which link the ACL alternatives described in Section 2.1 to the management measures necessary to meet the goals and objectives outlined in the FMP and MSA. Prior to the 2011-2012 cycle, the integrated alternatives were referred to as the strategic rebuilding alternatives or the holistic approach to rebuilding. The integrated alternatives contain the preferred nonoverfished species ACLs along with a strategically arrayed range of overfished species ACLs (including the preferred). The results of the integrated analysis demonstrate how rebuilding overfished species within the complex structure of a fishery constrains fishing opportunities by sector (or

gear type) and region and how those constraints affect communities along the west coast. Constraining fishing opportunity, in this context, refers the number and degree of management controls necessary to keep overfished species mortality within the ACLs. Previous analyses conducted for biennial cycle management have generally demonstrated that as overfished species ACLs are reduced, more management measures are required to keep overfished species mortality within the harvest specifications, which, in turn, limits access to healthy stocks. At some level, when access to healthy stocks is limited, communities are impacted.

Under the preferred alternative, harvest rates, or in the case of petrale sole, the harvest control rule, specified in the current rebuilding plans is recommended to rebuild all overfished species. As discussed in Section 2.1, the target years for canary and POP must be modified because new scientific information shows that T_{TARGET} is less than $T_{F=0}$ for both these stocks (in other words, even if no fishing mortality were to occur, the new information tells us these stocks could not be rebuilt by the T_{TARGET} specified in the current rebuilding plans). Therefore, the integrated alternatives in 2013-2014 explore a range of canary and POP ACLs, while maintaining the current rebuilding plans for the other overfished species showing steady progress towards rebuilding. The results inform whether the preferred alternative rebuilds these stocks as quickly as possible, while taking into account the needs of the fishing communities and other MSA requirements. As such, the canary and POP ACLs and allocations vary between the alternatives while all other variables remain constant. Table 2-67 and Table 2-68 outline the overfished species ACLs used in the integrated alternatives analysis, detailed descriptions of each alternative follow.

Management measures under the action alternatives (i.e., Alternatives 1-8) include adjustments to routine measures as well as the new measures described in Section 2.3. Further, suboptions are explored for various management measures (e.g., ranges of allocations, depth closures, bag limits, trip limits, etc.). Appendix B contains detailed analysis of the integrated alternatives and Appendix C contains detailed analysis of the management measures included in the integrated alternatives.

Table 2-67. 2013 Integrated Alternatives for Overfished Species (in mt).

Species	No Action	Alt. 1 Preferred	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Bocaccio	274	320							
Canary	107	116	101	116	48	216	101	147	147
Cowcod	3	3							
Darkblotched	296	317							
POP a/	183	150	150	74	247	74	222	222	150
Petrale	1,160	2,592							
Yelloweye	17	18							

a/ Under No Action, a 157 mt ACT is implemented.

Table 2-68. 2014 Integrated Alternatives for Overfished Species (in mt).

Species	No Action	Alt. 1 Preferred	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Bocaccio	274	337							
Canary	107	119	104	119	49	220	104	151	151
Cowcod	3	3							
Darkblotched	296	330							
POP a/	183	153	153	76	251	76	226	226	153
Petrale	1,160	2,652							
Yelloweye	17	18							

a/ Under No Action, a 157 mt ACT is implemented.

2.4.1 No Action Alternative

The No Action Alternative represents the 2012 harvest specifications and management measures specified in regulation as of January 1, 2012 (76 FR 77415). The No Action Alternative does not incorporate the best available scientific information represented by new stock assessments, projections from previous stock assessments, and new rebuilding analyses (where applicable) adopted by the Council in 2011 for use in 2013-14. Therefore, for some species the ACLs and other stock reference points (e.g., OFL, ABC) may not be consistent with the harvest management framework outlined in the FMP. That is, for some species, carrying the 2012 harvest specifications forward to 2013-2014 would result in unsustainable harvest levels.

CEQ regulations at 40 CFR 1502.14 require an EIS to include the No Action Alternative. While in this case this alternative is inconsistent with the purpose and need for the proposed action, it is used to compare the effects of continuing to manage the fishery using current measures versus implementing new harvest specifications and any adjustments to management measures associated with those specifications (for example, to prevent ACLs from being exceeded).

Other constructs of a No Action Alternative were explored, including incorporating the best available science developed since 2009 (when the previous round of stock assessments was completed) and applying the results to status quo harvest policies. However, this construct would not reflect current conditions in the fishery to which the action alternatives could be compared. In fact, as discussed below, the Council's preferred alternative, Alternative 1, represents new science applied to status quo policies for overfished species. The current conditions in the fishery are best reflected by the regulations in place on January 1, 2012 and the associated estimates of landings, revenue, and community impacts.

2.4.1.1 No Action Allocation Scheme

Section 2.1 describes the harvest specifications considerations and the OFLs and ABCs under the No Action Alternative. The ACLs and associated allocations under the integrated alternatives analysis of No Action are summarized Table 2-69. Table 2-70 through Table 2-75 detail the allocation of sablefish north of 40°10 N. latitude among sectors. (Because sablefish is the most valuable commercial groundfish species and is caught in a number of different groundfish fisheries, its allocation scheme is complex.) Table 2-76 summarizes the allocations of overfished species under the No Action Alternative.

Table 2-69. No Action Alternative: 2012 ACLs, Fishery Harvest Guidelines, and Allocations. All areas are north latitude.

Species	Area	ACL	Fishery HG	Trawl		Nontrawl	
				% of HG	Mt	% of HG	Mt
Arrowtooth flounder	Coastwide	12,049	9,971.0	95%	9,472	5%	499
Black	N of 46°16'	415	401.0				
Black	S of 46°16'	1,000	1,000.0				
Bocaccio	S of 40°10'	274	260.6	N/A	60.0	N/A	189.6
Cabezon	46°16' to 42°	48	48.0				
Cabezon	S of 42°	168	168.0				
California scorpionfish	S of 34°27'	126	124.0				
Canary rockfish	Coastwide	107	87.0	N/A	34.8	N/A	29.8
Chilipepper	S of 40°10'	1,789	1,775.0	75%	1,331	25%	444
Cowcod	S of 40°10'	3	2.7	N/A	1.8	N/A	1
Darkblotched rockfish	Coastwide	296	277.3	95%	263	5%	14
Dover sole	Coastwide	25,000	23,410.0	95%	22,240	5%	1,171
English sole	Coastwide	10,150	10,050.0	95%	9,548	5%	503
Lingcod	N of 40°10°	2,151	1,880.0	45%	846	55%	1,034
Lingcod	S of 40°10°	2,164	2,157.0	45%	971	55%	1,186
Longnose skate	Coastwide	1,349	1,220.0	95%	1,159	5%	61
Longspine thornyhead	N of 34°27'	2,064	2,020.0	95%	1,919	5%	101
Longspine thornyhead	S of 34°27'	366	363.0				
Nearshore rockfish north	N of 40°10'	99	99.0				
Nearshore rockfish south	S of 40°10'	990	990.0				
Minor shelf rockfish north	N of 40°10'	968	925.0	60.2%	557	39.8%	368
Minor shelf rockfish south	S of 40°10'	714	701.0	12.2%	86	87.8%	615
Minor slope rockfish north	N of 40°10'	1,160	1,092.0	81%	885	19%	207
Minor slope rockfish south	S of 40°10'	626	599.0	63%	377	37%	222
Other fish	Coastwide	5,575	5,575.0		5,575		0
Other flatfish	Coastwide	4,884	4,686.0	90%	4,217	10%	469
Pacific cod	Coastwide	1,600	1,200.0	95%	1,140	5%	60
Pacific whiting	Coastwide	0	0.0	100%	0	0%	0
Petrable sole	Coastwide	1,160	1,094.6	N/A	1,060	N/A	35
POP	Coastwide	157	144.1	95%	137	5%	7
Sablefish	N of 36°	5,347	See Table 2-70 to Table 2-75				
Sablefish	S of 36°	1,258	1,224.0	42%		58%	710
Shortbelly	Coastwide	50	49.0		49		0
Shortspine thornyhead	N of 34°27'	1,556	1,511.0	95%	1,435	5%	76
Shortspine thornyhead	S of 34°27'	401	359.0	NA	50	NA	309
Splitnose	S of 40°10'	1,538	1,531.0	95%	1,454	5%	77
Starry flounder	Coastwide	1,360	1,353.0	50%	677	50%	677

Species	Area	ACL	Fishery HG	Trawl		Nontrawl	
				% of HG	Mt	% of HG	Mt
Widow	Coastwide	600	539.1	91%	491	9%	49
Yelloweye rockfish	Coastwide	17	11.1	N/A	0.6	N/A	10.5
Yellowtail	N of 40°10'	4,371	3,872.0	88%	3,407	12%	465

Table 2-70. No Action: Allocations, in metric tons, of the sablefish north of 36° N. latitude commercial harvest guideline, between limited entry and open access for 2012.

Year	Commercial HG (MT)	Limited Entry Harvest Guideline		Open Access Harvest Guideline	
		% Comm. HG	MT	% Comm. HG	MT
2012	4,790	90.6%	4,340	9.4%	450

Table 2-71. No Action. Sablefish north of 36° N. latitude allocations, in metric tons, between limited entry fixed gear and limited entry trawl for 2012.

Year	Limited Entry HG	Limited Entry Fixed Gear		Limited Entry Trawl	
	MT	% of LE HG	MT	% of LE HG	MT
2012	4,340	42%	1,823	58%	2,517

Table 2-72. No Action. Sablefish north of 36° N. latitude allocations, in metric tons, within the limited entry fixed gear sector for 2012. The total catch share is reduced by approximately 16 percent to account for discard mortality, a value calculated from WCGOP observations.

Year	Limited Entry Fixed Gear			
	Total Catch Share (mt)	Landed Catch Share (mt)	Primary Season Share (mt)	LEFG DTL Share (mt)
2012	1,823	1,764	1,500	265

Table 2-73. No Action. Tier limits in pounds for the primary season for sablefish north of 36° N. latitude in 2012.

Year	Limited Entry Fixed Gear			
	Primary Season Share (mt)	Tier 1 (lbs)	Tier 2 (lbs)	Tier 3 (lbs)
2012	1,500	46,237	21,017	12,010

Table 2-74. No Action. Sablefish north of 36° N. latitude allocations, in metric tons within the limited entry trawl sector for 2012.

Year	Limited Entry Trawl		
	All Trawl (mt)	At-sea Whiting (mt)	Shorebased IFQ (mt)
2012	2,517	50	2,467

Table 2-75. No Action. Open access allocations in metric tons for sablefish north of 36° N. latitude allocations. Sablefish mortality in nongroundfish fisheries is accounted for in the incidental OA column. The total catch share is reduced by approximately 16 percent to account for discard mortality, a value calculated from WCGOP observations.

Year	Open Share (OA) (mt)	Incidental OA Mortality (mt)	Directed OA Total Catch Share (mt)	Directed OA Landed Catch Share (mt)
2012	450	17	433	419

Table 2-76. No Action Allocation of Overfished Species.

No Action - 2012							
Sector	Bocaccio	Canary	Cowcod	DKB	POP a/	Petrale	Yelloweye
ACL	274	107	3	296	157	1160	17
Total Set-Asides	13.4	20	0.3	18.7	12.9	65.4	5.9
Fishery Harvest Guideline	260.6	87	2.7	277.3	144.1	1094.6	11.1
Trawl Allocation							
Shorebased IFQ	60	26.2	1.8	248.9	119.5	1054.6	0.6
At-Sea Whiting	N/A	8.2	N/A	14.5	17.4	5	N/A
Catcher Processor	N/A	4.8	N/A	8.5	10.2		N/A
Mothership	N/A	3.4	N/A	6	7.2		N/A
Nontrawl Allocation			0.9	14	7	35	
Non-Nearshore Fixed Gear	57.9	2.3					1.3
Nearshore Fixed Gear	0.7	4					1.1
Washington Recreational ^{b/}	N/A	2					2.6
Oregon Recreational ^{b/}	N/A	7					2.4
California Recreational ^{b/}	131	14.5					3.1
a/ The POP ACL is 183 and the ACT is 157 mt. The set-asides are subtracted from the ACT.							
b/ Values represent HGs.							

2.4.2 Alternative 1 (Preferred) – 116 mt Canary Rockfish ACL and 150 mt POP ACL

Alternative 1, the Council’s preferred alternative, (and all of the action alternatives) incorporates the best available scientific information for stock assessment projections described in Section 2.1.

Alternative 1 represents the continuation of status quo harvest management policies for overfished species while contemplating several new management measures, as described in Section 2.3. New stock assessments and rebuilding analyses show that the current target rebuilding years for canary rockfish and POP are less than the re-estimated minimum feasible rebuilding time ($T_{F=0}$, or prohibiting all harvest).¹¹

¹¹ Put another way, even if all harvest of these two species were to be prohibited (likely requiring closure of many fisheries) the likelihood of canary rebuilding by 2027 is 48 percent and POP rebuilding by 2020 is 25 percent.

Under Alternative 1, the target year for canary rockfish would be changed by three years (from 2027 to 2030), which is two years longer than the re-estimated $T_{F=0}$. The target year for POP would be changed by 31 years (from 2020 to 2051), which is 8 years longer than $T_{F=0}$. Overfished species ACLs are derived using a constant SPR harvest rate for rockfish that is specified in the current rebuilding plans and the harvest control rule for petrale sole, applied to the latest stock assessment and rebuilding analyses.

Alternative 1 is consistent with the FMP and SSC recommendations. Maintaining the current rebuilding plans for species other than canary and POP is consistent with FMP section 4.6.3.4. That is, the new rebuilding analyses for the species other than canary and POP are showing steady progress to rebuilding and changes are not required. The SSC recommended the canary and POP rebuilding plans be revised since current target rebuilding years are less than the re-estimated minimum feasible rebuilding time ($T_{F=0}$). The target years and associated harvest rates for canary and POP under this alternative result in ACLs that are intended to rebuild the stocks in a time period that is as short as possible, taking into account the status and biology of overfished stocks and the needs of the fishing communities.

2.4.2.1 Alternative 1 Allocation Scheme

The ACLs and allocations under Alternative 1 are detailed in 2.4.2. A summary of the overfished species ACLs and allocations that influence the projected amount of target species attained and the recommended management measures under this alternative is presented in Table 2-82. The No Action trawl and nontrawl allocation percentages for cowcod south of 40°10 N. latitude (66 percent to trawl, 34 percent to nontrawl) were identified as the preferred allocation for 2013-2014 (Table 2-82). Additionally, an option is analyzed that would allocate 34 percent of the cowcod HG to the trawl sector and 66 percent to the nontrawl sector (see Appendix C).

Table 2-82. Alternative 1. Overfished species ACLs and allocations for 2013-2014.

Alternative 1. 2013							
Sector	Bocaccio	Canary	Cowcod	DKB	POP	Petrale	Yelloweye
ACL	320	116	3	317	150	2,592	18
Total Set-Asides	5	16.8	0.12	19.7	12.9	74.8	5.82
Fishery Harvest Guideline	315.0	99.2	2.9	297.3	137.1	2,517.2	12.2
Trawl Allocation	76.9	53.1	1.9	282.7	130.4	2482	1
Shorebased IFQ	76.9	40.3	1.9	268	113	2,477	1
At-Sea Whiting	N/A	12.8	N/A	14.7	17.4	5	--
Catcher Processor	N/A	7.5	N/A	8.6	10.2		--
Mothership	N/A	5.3	N/A	6.1	7.2		--
Nontrawl Allocations	243.0	46.4	1.0	15.0	7.0	35.0	11.2
Non-Nearshore	74.2	3.6					1.1
Nearshore Fixed Gear	0.9	6.2					1.2
Washington Recreational ^{a/}	N/A	3.1					2.9
Oregon Recreational ^{a/}	N/A	10.9					2.6
California Recreational ^{a/}	167.9	22.6					3.4

a/ Values represent HGs.

Alternative 1. 2014							
Sector	Bocaccio	Canary	Cowcod	DKB	POP	Petrale	Yelloweye
ACL	337	119	3	330	153	2,652	18
Total Set-Asides	5	16.8	0.12	19.7	12.9	74.8	5.8
Fishery Harvest Guideline	332.0	102.2	2.9	310.3	140.1	2,577.2	12.2
Trawl Allocation	79.8	54.70	1.9	294.4	133.4	2542	1
Shorebased IFQ	79.8	41.5	1.9	279	116	2,537	1
At-Sea Whiting	N/A	13.2	N/A	15.4	17.4	5	--
Catcher Processor	N/A	7.7	N/A	9	10.2		--
Mothership	N/A	5.5	N/A	6.4	7.2		--
Nontrawl Allocations	252.1	47.8	1	16	7	35	11.2
Non-Nearshore	77	3.7					1.1
Nearshore Fixed Gear	0.9	6.4					1.2
Washington Recreational ^{a/}	N/A	3.2					2.9
Oregon Recreational ^{a/}	N/A	11.2					2.6
California Recreational	174.2	23.3					3.4

a/ Values represent HGs.

2.4.2.2 Alternative 1 Management Measures

The following bullet points summarize management measure changes by sector under Alternative 1 compared to No Action. The No Action management measures are those specified in regulation as of January 1, 2012 (76 FR 77415). A more detailed discussion of management measures by sector follows. Selected new measures, discussed under Section 2.3 and analyzed in Appendix C, would be implemented. Overarching changes include modifications to the boundaries defining the RCAs, inseason reapportionments of unused ACL set-asides to the trawl and nontrawl sectors, and modifications to catch accounting language between the limited entry and open access sectors. New management measures that are specific to a sector are described below.

- The shorebased IFQ fishery would operate under the same management measures as No Action,¹² except that the minimum lingcod length limit would be removed which would reduce regulatory discards.
- At-sea whiting co-ops would continue to be managed under the co-op program and the same management measures as No Action.
- Tribal fisheries would operate under the same management measures as No Action (Table 2-80) except the changes to set-asides and a trip limit would be implemented. Increases to widow rockfish (45 mt to 60 mt), petrale sole (45.4 to 70 mt), minor shelf rockfish (9 to 30 mt), and shortspine thornyhead (38 to 50 mt) set-asides are proposed under Alternative 1 (and all action alternatives). Further, an 800 pound per trip limit for redstripe rockfish would be established in addition to the 300 pound per trip limit for all other minor shelf rockfish.
- The non-nearshore fixed gear fishery would operate under the same management measures as the No Action Alternative. The No Action nontrawl RCA configuration would be maintained. Routine adjustments to sablefish and blackgill south of 40°10 N. latitude bimonthly trip limits are proposed to keep mortality within the harvest specifications.
- There are two sub-alternatives for the nearshore fixed gear fishery analyzed under Alternative 1 (Alternative 1a and 1b). The Council's preferred alternative is Alternative 1b. In the area north of 42° N. latitude under Alternative 1b, the nontrawl RCA would be moved from 20 fm to 30 fm in the area 42° N. latitude to 43° N. latitude, and landings would increase 8 percent compared to No Action to stay within the overfished species allocations. South of 42° N. latitude, the No Action nontrawl RCA configuration could be maintained, and landings are projected to be the same as No Action, except for increases to greenling and lingcod under Alternatives 1a and 1b.
- Washington and Oregon recreational fisheries would operate under the same management measures as No Action.
- For California recreational fisheries, the season length in the Mendocino Management Area would be increased relative to No Action (from 104 days to 111 days). The Council's preferred management measures include increases to the bocaccio and greenling bag limits, removing the bocaccio length limit, and providing for shelf rockfish retention (including bocaccio rockfish) in the CCA. A range of depth closures are analyzed for the Southern Management Area to reduce cowcod bycatch – from 60 fm to 40 fm; the Council's preferred depth closure is 50 fm.

¹² A variety of program changes are planned for the shorebased IFQ fishery during 2013-14 under separate regulatory actions. For the purposes of this evaluation "No Action" assumes these changes are external actions contributing to cumulative effects.

Shorebased IFQ Fishery

The minimum lingcod length limit in the shorebased IFQ fishery would be removed in 2013-2014 (see analysis in Appendix C). Further, detailed analysis of routine adjustments to longnose skate and spiny dogfish trip limits and/or RCAs is provided in Appendix C, in the event adjustments are needed to keep mortality within the harvest specifications.

Limited Entry and Open Access Fixed Gear

Non-nearshore

Under Alternative 1, the non-nearshore fishery would operate under the management measures described under No Action. Routine adjustments to sablefish and blackgill south of 40°10' N. latitude trip limits are proposed and detailed below. Further, selected new measures discussed under Section 2.3 and analyzed in Appendix C, would be implemented.

Under this alternative, the sablefish north of 36° N. latitude ACL decreases substantially, from 5,347 mt in 2012 to 3,569 mt and 3,872 mt in 2013 and 2014, respectively (Table 2-18). These amounts represent a 19-25 percent decrease relative to the No Action Alternative. Landings for other species encountered in the non-nearshore fishery are anticipated to be the same as in 2011, except blackgill south of 40°10' N. latitude.

The decrease in the sablefish landings translates directly into lower expected catch of the rebuilding stocks for the non-nearshore sector that are within the proposed allocations (Table 2-82). Since the projected mortality of overfished species is within the allocations, the No Action nontrawl RCA structure is proposed (Table 2-77). The expected decrease in yelloweye and canary bycatch are not substantial enough to consider modifying the seaward boundary of the nontrawl RCA to provide greater access to fishing grounds since such action would be expected to increase encounters with canary, yelloweye, and other shelf rockfish stocks like bocaccio. The nontrawl RCA was established at 100 fm because the 100 fm depth contour marks the transition between shelf and slope habitats. If fishing areas are reopened on the shelf, catch of shelf rockfish stocks like canary and yelloweye could increase. In addition, estimates of yelloweye catch in these sectors have shown variability in recent years with estimates of actual catch differing by more than 50 percent higher and lower than the bycatch projections from the non-nearshore model. Such volatility requires some caution when interpreting and planning based on projected mortality.

Adjustments to sablefish trip limits to coincide with the lower sablefish ACLs are proposed for the both the limited entry and open access fixed gear sectors (Table 2-83 and Table 2-84). These trip limits are estimated to attain approximately 91 percent of the allocations and may be adjusted inseason as necessary. The proposed trip limits apply under all of the integrated alternatives.

A range of blackgill rockfish trip limits south of 40°10' N. latitude were explored to keep landings within the blackgill HG (see Appendix C). The Council recommended trip limits of 1,375/2 months for the limited entry and 475 lb/2 months for open access fixed gears. These trip limits are projected to attain 100 percent of the nontrawl blackgill allocation.

Further, detailed analysis of routine adjustments to longnose skate and spiny dogfish trip limits and/or RCAs is provided in Appendix C, in the event adjustments are needed to keep mortality within the harvest specifications.

Table 2-83. 2013 Sablefish trip limits for all alternatives other than No Action.

Area	Fishery	Jan-Feb	Mar-Apr	May-Jun	July-Aug	Sept-Oct	Nov-Dec
North of 36° N. lat. (U.S./Canada Border to 36° N. lat.)	LE N.	1,100 lb. per week, not to exceed 4,200 lb. per 2 mo.					
	OA N.	300 lb. per day, or 1 landing per week of up to 610 lb., not to exceed 1,220 lb. per 2 mo.					
South of 36° N. lat.	LE S.	1,880 lb. per week					
	OA S.	300 lb. per day, or 1 landing per week of up to 1,460 lb., not to exceed 2,920 lb. per 2 mo.					

Table 2-84. 2014 Sablefish trip limits for all alternatives other than No Action.

Area	Fishery	Jan-Feb	Mar-Apr	May-Jun	July-Aug	Sept-Oct	Nov-Dec
North of 36° N. lat. (U.S./Canada Border to 36° N. lat.)	LE N	1,100 lb. per week, not to exceed 4,400 lb. per 2 mo.					
	OA N	300 lb. per day, or 1 landing per week of up to 675 lb., not to exceed 1,350 lb. per 2 mo.					
South of 36° N. lat.	LE S	1,930 lb. per week					
	OA S	300 lb. per day, or 1 landing per week of up to 1,525 lb., not to exceed 3,050 lb. per 2 mo.					

Nearshore

Under Alternative 1, the nearshore fishery would operate under the management measures described under No Action. The same trip limit adjustments for sablefish as presented in Table 2-83 and Table 2-84 would apply (some are caught shoreward of the nontrawl RCA).

Under Alternative 1, the allocations of canary and yelloweye rockfish to the nearshore fishery are higher (Table 2-82) than the No Action Alternative (Table 2-76). Although both California and Oregon would have some increased opportunity compared to the No Action Alternative, management measures and projected landings are lower than years prior to 2009 (PFMC 2008a).

Similar to the No Action Alternative, the preferred alternative is modeled assuming the bycatch rates, weather, and market conditions experienced in 2011 would be the same in 2013 and 2014, and assumes no variation in landings. If catches are higher than projected, few management measures are available to further reduce yelloweye catch in this fishery (if needed). Further reductions in yelloweye catch would require substantial reductions to landed catch or total fishery closure between 43° N. latitude and 40° 10' N. latitude, the area with the highest yelloweye bycatch rates. Depth restrictions shallower than 10 fm are not advised because of vessel safety concerns.

Alternative 1 was analyzed with status quo catch sharing between Oregon and California for canary (OR = 26.7 percent; CA = 73.3 percent) and yelloweye rockfish (OR = 72.7 percent; CA = 27.3 percent). Under this alternative, the tradeoffs between more restrictive depth restrictions and higher reductions in landed catch were explored (Alternatives 1a and 1b). In Oregon, mortality of overfished species is modeled assuming the same nontrawl RCA under No Action (20 fm depth restriction between 42° N.

latitude to 43° N. latitude, 30 fm from 43° to 46°16 N. latitude) (Alternative 1a) and a 30 fm depth restriction statewide (Alternative 1b). The Council's preferred option is Alternative 1b.

In California, mortality of overfished species is modeled assuming the same nontrawl RCA under No Action for both Alternative 1a and 1b (20 fm between 42° N. latitude and 40° 10' N. latitude; 30 fm between 40° 10' N latitude and 34° 27' N. latitude; 60 fm south of 34° 27' N. latitude).

North of 42° N. latitude – under Alternative 1a, the nontrawl RCA configuration would be the same as No Action, and landings would be increased 12 to 33 percent (species-specific) relative to No Action to reflect state landing caps. Lingcod would also be increased by 40 percent relative to the No Action. The overall increase in landings under Alternative 1a would be 25 percent compared to No Action. Under Alternative 1b, the preferred option, a 30 fm nontrawl RCA configuration would be implemented statewide and landings increased 8 percent (overall) relative to No Action.

Under Alternative 1a, current state landing caps could be reached, assuming bycatch rates, weather, and other unforeseen circumstances are similar to 2011. However, the shoreward nontrawl RCA in southern Oregon would still be restricted to 20 fm in the area between 42° N. latitude to 43° N. latitude; the same configuration as under No Action.

Pre-2009 fishing grounds would be reopened under Alternative 1b, where the nontrawl RCA would be returned to 30 fm statewide. However, under Alternative 1b, landings would be restricted to levels well below historical landing caps for the state of Oregon.

South of 42° N. latitude – under Alternatives 1a and 1b, the nontrawl RCA configuration and landings would be the same as No Action, except for greenling and lingcod. Landings of greenling would be increased statewide to maintain consistency with state regulations, and are within the greenling contribution to the Other Fish complex. A small increase in lingcod landings could also be afforded statewide while staying within overfished species allocations.

Alternative Allocation Options for the Nearshore Fixed Gear Fishery

In addition to the status quo allocation percentages for yelloweye and canary, two alternate catch sharing options between Oregon and California were analyzed to demonstrate the tradeoffs (Table 2-85). The allocation options include an equal catch sharing (50:50) and a reverse status quo (i.e., reverse the percentages to each state for both species) to bracket the upper and lower ranges of landings and corresponding management measures. Table 2-86 details the proposed management measures under each scenario, which is summarized below.

Under the equal sharing scenario, Oregon would receive more canary and less yelloweye compared to the status quo catch sharing (Table 2-85). Since less catch has historically originated from depths deeper than 20 fm, few reductions to yelloweye rockfish mortality is afforded by changing the RCA from 30 fm to 20 fm from 43° to 46°16 N. latitude. As a result, landed catch would need to be reduced by 14 percent relative to No Action Alternative to stay within overfished species allocations under this scenario. Under this same scenario, California would be allocated less canary rockfish compared to status quo, but more yelloweye rockfish. The current 20 fm RCA between 42° N. latitude and 40° 10' N. latitude could be changed to 30 fm, yet a 35 percent reduction in landed catch of nearshore species would be needed to stay within overfished species allocations. Changing the shoreward nontrawl RCA from 20 to 30 fm would reduce gear conflicts, reduce the potential for localized depletion, and increase opportunities to fish in productive areas that have been closed for four years. It would also reduce competition for space when the recreational fishery is open. For the area south of 40° 10' N. latitude, the nontrawl RCA configuration

and landings under No Action could be afforded (including an increase for lingcod and greenling) and stay within overfished species allocations.

Under the reverse status quo, Oregon would be allocated more canary rockfish, yet substantially less yelloweye rockfish, compared to status quo (Table 2-85). As described above, few reductions to yelloweye rockfish mortality is afforded by restricting the fishery to 20 fm statewide in Oregon, therefore, reductions in landed catch of up to 53 percent would be necessary to stay within the yelloweye allocation. Under this scenario, mortality of canary rockfish is well within the allocation and not the limiting factor that restricts access to target species.

Under the reverse status quo, California would receive substantially more yelloweye rockfish and less canary rockfish compared to status quo. The small allocation of canary rockfish under this scenario would require substantial reductions to target species. Generally, canary bycatch is common in all areas of the state, except for south of 34° 27' N. latitude. As a result, a 20 fm depth restriction would need to be implemented for all areas, except south of 34° 27' N. latitude to stay within the canary allocation in addition to a 10 percent reduction in landed catch.

In summary, access to target species in the nearshore fishery is primarily limited by yelloweye rockfish. An additional increase in the yelloweye rockfish allocation to the nearshore fishery may allow for a modification of the nontrawl RCA back to 30 fm for the area between 42° N. latitude and 40° 10' N. latitude, and may allow landings that are closer or equal to historic state landing caps.

Table 2-85. Alternative 1: Allocations of canary and yelloweye rockfish for 2013-14 under alternate nearshore catch sharing options.

		Status Quo	Equal Sharing	Reverse Status Quo
OR	Canary	1.7	3.1/3.2	4.5/4.7
	Yelloweye	0.87	0.6	0.33
CA	Canary	4.5/4.7	3.1/3.2	1.7
	Yelloweye	0.33	0.6	0.87

Table 2-86. Alternative 1: Description of management measures under alternate nearshore catch sharing options.

	AREA	Catch Sharing		
		Status Quo	Equal Sharing	Reverse Status Quo
OR	north of 43°	(Alt a): RCA=30 fm; Landings=12%-40% increase (Alt b): RCA = 30 fm; Landings=8% increase	RCA=30fm; Landings=14% reduction	RCA=30 fm; Landings=53% reduction
	42°-43°	(Alt a): RCA=20 fm; Landings=12%-40% increase (Alt b): RCA = 30 fm; Landings=8% increase	RCA=20 fm; Landings=14% reduction	RCA=20 fm; Landings=53% reduction
CA	42° - 40°10'	(Alt a): RCA=20 fm; Landings=status quo with higher greenling and lingcod (Alt b): same as Alt a	RCA=30 fm; Landings=35% reduction	RCA=20 fm; Landings=10% reduction
	40°10' to 34°27'	(Alt a): RCA=30 fm; Landings=status quo with higher greenling and lingcod (Alt b): same as Alt a	RCA=30 fm; Landings=status quo with higher greenling and lingcod	RCA=20 fm; Landings=10% reduction
	south of 34°27'	(Alt a) RCA=60 fm; Landings=status quo with higher greenling and lingcod (Alt b) same as Alt a	RCA=60 fm; Landings=status quo with higher greenling and lingcod	RCA=60 fm; Landings=10% reduction

Tribal Fisheries

Tribal fisheries would operate under the same management measures as No Action (Table 2-80) except the changes to set-asides and a trip limit would be implemented based on a request from the Makah (Agenda Item I.3.b, Supplemental Tribal Report, April 2012). The tribes requested increases to widow rockfish (45 mt to 60 mt), petrale sole (45.4 to 70 mt), minor shelf rockfish (9 to 30 mt), and shortspine thornyhead (38 to 50 mt) set-asides under all action alternatives (i.e., Alternatives 1-8). Further, an 800 pound per trip limit for redstripe rockfish would be established, in addition to the 300 pound per trip limit for all other minor shelf rockfish.

Recreational

California

The California recreational fishery would operate under the management measures described below. Additionally, new measures described below and in Section 2.3 and analyzed in Appendix C would be implemented. The Alternative 1 allocations to the California recreational fishery are higher (Table 2-82) than the No Action Alternative (Table 2-76). Although there would be some increased opportunity compared to No Action, management measures would still have to be more restrictive than previous years (PFMC 2002).

Groundfish Seasons and Area Restrictions:

Under Alternative 1, the season structure would be similar to the No Action Alternative except for an increase in the season length for the Mendocino Management Area and a change in the depth restriction from 60 to 50 fm in the Southern Management Area (Figure 2-12). A range of depth closures (60 fm to 40 fm) for the Southern Management Area was analyzed in Appendices B and C. All divers and shore-based anglers are exempt from the seasonal closures for rockfish, cabezon, greenlings, lingcod, and California scorpionfish.

Similar to No Action, YRCAs would be available under this alternative and could be implemented inseason if catches are projected to exceed HGs.

Management Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Northern	Closed				May 15 – Oct 31 <20fm						Closed	
Mendocino	Closed				May 15 – Sept 2 <20fm				Closed			
San Francisco	Closed				Jun 1 – Dec 31 <30fm							
Central	Closed				May 1 – Dec 31 <40fm							
Southern	Closed		Mar 1 – Dec 31 <50fm									

Figure 2-12. Alternative 1: California recreational groundfish season structure and depth constraints for 2013-2014.

Groundfish Bag Limits and Size Limits

The Alternative 1 groundfish bag limits and size limits are the same as No Action, except for the following:

Bocaccio – The No Action sub-bag limit for bocaccio is two fish, with a minimum size limit of 10 inches. The proposed action would increase the sub-bag limit from two fish to three fish. The increase in the sub-bag limit is expected to increase total California recreational mortality of bocaccio by 11.5 percent. The proposed action also removes the minimum size limit of ten inches. Removing the size limit is expected to increase total bocaccio mortality by 1.0 percent. The proposed changes are not mutually exclusive, and the projections are additive. Currently bocaccio is the only rockfish species in the recreational sector that has a size limit. Removing the size limit would reduce regulatory complexity. Catch of other overfished species, as a result of these management measures, is not expected to increase.

Greenlings – The No Action status quo sub-bag limit for greenlings is two fish. The proposed action would increase the sub-bag limit to 10 fish to maintain consistency with state regulations and stay within the greenling contribution to the Other Fish complex. By increasing the sub-bag limit, the estimated take would be approximately 23.8 mt. The Council is not proposing any changes to the minimum size restriction for greenling. There are no expected changes to catch of overfished species as a result of this increase.

Additional Management Measures Analyzed

Shelf Rockfish Retention in CCA

Under the Alternative 1, the Council proposes to modify existing regulations governing recreational groundfish fishing within the CCA to allow retention of shelf rockfish taken during the open season for groundfish within the existing depth constraint of 20 fm. No changes to nongroundfish recreational fisheries or corresponding management measures are being proposed. Under this proposal, if the season for groundfish is open, anglers could retain shelf rockfish, including bocaccio. Removing the prohibition on shelf rockfish retention, including bocaccio, in depths of 20 fm or less in the CCA when fishing for rockfish is open, is intended to reduce bycatch that currently occurs when shelf rockfish are caught while in pursuit of other species within the 10 fish rockfish, cabezon, and greenling (RCG) bag limit. Under the proposed action, recreational anglers would be expected to meet their RCG bag limit sooner, which would reduce bycatch of shelf rockfish and may reduce encounters with overfished species. Also, this change would make regulations more consistent with retention regulations outside the CCA.

Increased mortality of shelf rockfish is expected to be minimal and can be accommodated within the recreational HG with a minimal risk of exceeding the ACLs. No ACLs for target or overfished species are expected to be exceeded as a result of this action.

Inseason Management Response

Similar to the No Action Alternative, inseason management response would include closing one or more recreational groundfish management areas for boat-based anglers, restricting recreational fishery seasons, and/or modifying depth restrictions.