PROPOSED GROUNDFISH FMP AMENDMENT LANGUAGE FOR DEFAULT HARVEST CONTROL RULES AND FOR DESIGNATION OF ECOSYSTEM COMPONENT SPECIES UNDER AMENDMENT 24

This document presents proposed Groundfish FMP amendment language being considered as Amendment 24. The 2015-16 and Beyond Biennial Harvest Specifications EIS describes the three alternatives under consideration in addition to the alternative of No Action. Under No Action the FMP is not amended. Amendment language consistent with the objectives of these alternatives is presented below. Separate from the alternatives, designation of Ecosystem Component Species and a number of technical changes and updates to the FMP are proposed under Amendment 24.

- ~~Strikethrough~~ indicates text moved or deleted
- Underline indicates new text

Double underline indicates moved text at its new location

Alternative 1 – Default HCRs Use a P* Value of 0.45

Under this alternative the Groundfish FMP is amended to describe the harvest control rule (HCR) framework and establish new criteria for management measures that may be considered during the biennial process.

Default ACLs would be computed using the HCRs currently in place and used to compute ACLs for the previous biennial period except that, where applicable, a P* value of 0.45 would be used.

Amendment Language

5.1 General Overview of the Harvest Specifications and Management Process

The specifications and management process, in general terms, occurs as follows:

1. The Council will determine the MSY or MSY proxy and OFL for each major stock. Typically, the MSY proxy will be in terms of a fishing mortality rate ($F_{x\%}$,) and OFL will be the $F_{x\%}$ applied to the current biomass estimate. The MSY is the maximum long-term average yield expected from annual application of the MSY (or proxy) harvest policy under prevailing ecological and environmental conditions.
2. The Council and SSC will determine an appropriate scientific uncertainty buffer to set the ABC below the OFL. The ABC accommodates the uncertainty in estimating the OFL and may be determined using either a straight percentage reduction of the OFL as recommended by the SSC or by the P* approach.
3. Every species will either have its own designated ACL or be included in a multispecies ACL. Species which are included in a multispecies ACL may also have individual ACLs, have individual HGs, or be included in a HG for a subgroup of the multispecies ACL.
4. To determine the ACL for each stock, the Council will determine the best estimate of current abundance and its relation to its precautionary and overfished thresholds. If the abundance is above the precautionary threshold, the ACL will be equal to or less than the ABC. If abundance falls below the precautionary threshold, the ACL will be reduced according to the harvest control rule for that stock. If abundance falls below the overfished/rebuilding threshold, the ACL will be

set according to the interim rebuilding rule until the Council develops a formal rebuilding plan for that species.

5. For any stock or stock complex where the Secretary identifies that overfishing is occurring, the Council will take remedial action to end overfishing and prevent the stock or stock complex from falling below the minimum stock size threshold. For any stock the Secretary has declared overfished or approaching the overfished condition, or for any stock the Council determines is in need of rebuilding, the Council will implement such periodic management measures as are necessary to rebuild the stock by controlling harvest mortality, habitat impacts, or other effects of fishing activities that are subject to regulation under this biennial process. These management measures will be consistent with any approved rebuilding plan.
6. The Council may reserve and deduct a portion of the ACL of any stock to provide for compensation for vessels conducting scientific research authorized by NMFS. Prior to the research activities, the Council will authorize amounts to be made available to a research reserve. However, the deduction from the ACL will be made in the year after the "compensation fishing"; the amounts deducted from the ACL will reflect the actual catch during compensation fishing activities.
7. The Council will identify stocks which are likely to be fully harvested (i.e., the ACL or ACT/HG achieved) in the absence of specific management measures and for which allocation between LE and open access sectors of the fishery is appropriate.
8. The groundfish resource is fully utilized by U.S. fishing vessels and seafood processors. The Council may entertain applications for foreign or joint venture fishing or processing at any time, but fishing opportunities may be established only through amendment to this FMP. This section supersedes other provisions of this FMP relating to foreign and joint venture fishing.

Notwithstanding the above, the harvest controls from the previous biennium (referred to as default harvest control rules, or default HCRs) are applied to the best available scientific information to determine the numerical values of the harvest specifications for the next biennial period. The default HCR would establish the harvest specifications based on the F_{MSY} (or proxy value) used in the previous biennium applied to the best current estimate of stock biomass to determine the OFL (as in bullet #1). The ABC is determined by applying the uncertainty buffer (as in bullet #2) used in the previous biennium except that if the P* approach was used, a value of 0.45 is applied. The ACL is determined as described in bullet #4 using the appropriate method for current stock status, if known. Thus, if based on the best available science, it is determined that stock status has changed from healthy to the precautionary zone, the methods outlined in Section 4.6.1 would be applied. If a stock has recovered such that stock size is now above the MSY biomass target, the default harvest control sets the ACL equal to the ABC using a P* value of 0.45, if applicable. If the status is not known, the same method used in the previous cycle is used to compute the default HCR. In the case of a stock managed under a rebuilding plan, the default HCR is the one described in the current rebuilding plan (see Appendix F). The SSC will advise the Council on whether adequate progress toward ending overfishing and rebuilding the affected fish stock is being made.

For any stock (or other management units) the Council may take action to depart from the default harvest control rules described in the previous paragraph, after considering the harvest specifications or other relevant factors as long as such changes are consistent with the framework described in Chapter 4 of this FMP, the MSA, and other applicable law.

Current harvest control rules (and related harvest policies as applicable) will be listed in the SAFE document, which will be presented to the Council and the public (and in Appendix F for stocks managed under rebuilding plans).

6.2 General Procedures for Establishing and Adjustment Management Measures

…

C. Management Measures Rulemaking For Actions Developed Through the Three-Council-Meeting Biennial Specifications Process and Two *Federal Register* Rules

~~These include (1) management action developed through~~ During the biennial specifications process the Council may propose: (~~2~~1) management measures ~~being~~ to be classified as routine the first time these measures are used; or (~~3~~2) adjustments to measures previously classified as routine, such as trip limits that vary by gear type, closed seasons or areas, and in the recreational fishery, bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements ~~the first time these measures are used. These also~~; or (3) new management measures, which are those management measures where the impacts have not been previously analyzed and/or have not been previously implemented in regulations. Examples of new measures that may be proposed during the biennial process include: changes to or imposition of gear regulations; imposition of landings limits, frequency limits, or limits that differ by gear type; closed areas or seasons used for the first time on any species or species group or gear type.

~~The Council will develop and analyze the proposed management actions over the span of at least two Council meetings (usually April and June) and provide the public advance notice and opportunity to comment on both the proposals and the analysis prior to and at the second Council meeting. If a management measure is designated as routine under this procedure, specific adjustments of that measure can subsequently be announced in the *Federal Register* by notice, as described in the previous paragraphs. The Secretary will publish a proposed rule in the *Federal Register* with an appropriate period for public comment followed by publication of a final rule in the *Federal Register*.~~

As described in Section 5.4, the three-Council-meeting biennial specifications process refers to ~~two~~ the following decision-making schedule: ~~meetings.~~

1. The Council will develop proposed harvest specifications during the first meeting (usually November). They will finish drafting harvest specifications and develop the management measures during the second meeting (usually April).

2. The Council will develop and analyze the proposed management actions over the span of at least two Council meetings (usually April and June) and provide the public advance notice and opportunity to comment on both the proposals and the analysis prior to and at the second Council meeting.

3. Finally, at the third meeting, the Council will make final recommendations to the Secretary on the complete harvest specifications and management measures biennial management package (usually June). For the Council to have adequate information to identify proposed management measures for public comment at the first management measures meeting, the identification of issues and the development of proposals normally must begin at a prior Council meeting.

If a management measure is designated as routine under this procedure, specific adjustments of that measure can subsequently be announced in the *Federal Register* by notice, as described in the previous paragraphs. The Secretary will publish a proposed rule in the *Federal Register* with an appropriate period for public comment followed by publication of a final rule in the *Federal Register*.

D. Full Rulemaking For Actions Normally Requiring at Least Two Council Meetings and Two *Federal Register* Rules (Regulatory Amendment)

These include any proposed new management measures to be classified as routine, including those considered ~~that is~~ highly controversial, or any measure that directly allocates the resource. ~~These also include management measures that are intended to have permanent effect and are discretionary, and for which the impacts have not been previously analyzed.~~ These ~~Full~~ full rulemakings will normally use a two-Council-meeting process, although additional meetings may be required to fully develop the Council's recommendations on a full rulemaking issue. Regulatory measures to implement an FMP amendment will be developed through the full rulemaking process. The Secretary will publish a proposed rule in the *Federal Register* with an appropriate period for public comment followed by publication of a final rule in the *Federal Register*.

Alternative 2 – Default HCRs Use a P* Value of 0.25

Under this alternative the Groundfish FMP is amended to describe the HCR framework and establish new criteria for management measures that may be considered during the biennial process.

Default ACLs would be computed using the HCRs currently in place and used to compute ACLs for the previous biennial period except that, where applicable, a P* value of 0.25 would be used.

The same revisions to Section 6.2 (General Procedures for Establishing and Adjusting Management Measures) described above for Alternative 1 would be made under Alternative 2.

Amendment Language

5.1 General Overview of the Harvest Specifications and Management Process

The specifications and management process, in general terms, occurs as follows:

1. The Council will determine the MSY or MSY proxy and OFL for each major stock. Typically, the MSY proxy will be in terms of a fishing mortality rate ($F_{x\%}$,) and OFL will be the $F_{x\%}$ applied to the current biomass estimate. The MSY is the maximum long-term average yield expected from annual application of the MSY (or proxy) harvest policy under prevailing ecological and environmental conditions.
2. The Council and SSC will determine an appropriate scientific uncertainty buffer to set the ABC below the OFL. The ABC accommodates the uncertainty in estimating the OFL and may be determined using either a straight percentage reduction of the OFL as recommended by the SSC or by the P* approach.
3. Every species will either have its own designated ACL or be included in a multispecies ACL. Species which are included in a multispecies ACL may also have individual ACLs, have individual HGs, or be included in a HG for a subgroup of the multispecies ACL.
4. To determine the ACL for each stock, the Council will determine the best estimate of current abundance and its relation to its precautionary and overfished thresholds. If the abundance is above the precautionary threshold, the ACL will be equal to or less than the ABC. If abundance falls below the precautionary threshold, the ACL will be reduced according to the harvest control rule for that stock. If abundance falls below the overfished/rebuilding threshold, the ACL will be set according to the interim rebuilding rule until the Council develops a formal rebuilding plan for that species.
5. For any stock or stock complex where the Secretary identifies that overfishing is occurring, the Council will take remedial action to end overfishing and prevent the stock or stock complex from falling below the minimum stock size threshold. For any stock the Secretary has declared overfished or approaching the overfished condition, or for any stock the Council determines is in

need of rebuilding, the Council will implement such periodic management measures as are necessary to rebuild the stock by controlling harvest mortality, habitat impacts, or other effects of fishing activities that are subject to regulation under this biennial process. These management measures will be consistent with any approved rebuilding plan.

6. The Council may reserve and deduct a portion of the ACL of any stock to provide for compensation for vessels conducting scientific research authorized by NMFS. Prior to the research activities, the Council will authorize amounts to be made available to a research reserve. However, the deduction from the ACL will be made in the year after the "compensation fishing"; the amounts deducted from the ACL will reflect the actual catch during compensation fishing activities.
7. The Council will identify stocks which are likely to be fully harvested (i.e., the ACL or ACT/HG achieved) in the absence of specific management measures and for which allocation between LE and open access sectors of the fishery is appropriate.
8. The groundfish resource is fully utilized by U.S. fishing vessels and seafood processors. The Council may entertain applications for foreign or joint venture fishing or processing at any time, but fishing opportunities may be established only through amendment to this FMP. This section supersedes other provisions of this FMP relating to foreign and joint venture fishing.

Notwithstanding the above, the harvest controls from the previous biennium (referred to as default harvest control rules, or default HCRs) are applied to the best available scientific information to determine the numerical values of the harvest specifications for the next biennial period. The default HCR would establish the harvest specifications based on the F_{MSY} (or proxy value) used in the previous biennium applied to the best current estimate of stock biomass to determine the OFL (as in bullet #1). The ABC is determined by applying the uncertainty buffer (as in bullet #2) used in the previous biennium except that if the P* approach was used, a value of 0.25 is applied. The ACL is determined as described in bullet #4 using the appropriate method for current stock status, if known. Thus, if based on the best available science, it is determined that stock status has changed from healthy to the precautionary zone, the methods outlined in Section 4.6.1 would be applied. If a stock has recovered such that stock size is now above the MSY biomass target, the default harvest control sets the ACL equal to the ABC using a P* value of 0.25, if applicable. If the status is not known, the same method used in the previous cycle is used to compute the default HCR. In the case of a stock managed under a rebuilding plan, the default HCR is the one described in the current rebuilding plan (see Appendix F). The SSC will advise the Council on whether adequate progress toward ending overfishing and rebuilding the affected fish stock is being made.

For any stock (or other management units) the Council may take action to depart from the default harvest control rules described in the previous paragraph, after considering the harvest specifications or other relevant factors as long as such changes are consistent with the framework described in Chapter 4 of this FMP, the MSA, and other applicable law.

Current harvest control rules (and related harvest policies as applicable) will be listed in the SAFE document, which will be presented to the Council and the public (and Appendix F for stocks managed under rebuilding plans).

Alternative 3 – Use the HCRs in Place in the Previous Period as the Defaults

Section 5.1 of the FMP would be amended in the same way as under Alternative 1, except that P* values in place during the previous biennium would be substituted for the references to a P* value of 0.45 in the first paragraph

The same revisions to Section 6.2 (General Procedures for Establishing and Adjusting Management Measures) described above for Alternative 1 would be made under Alternative 3.

Amendment Language

5.1 General Overview of the Harvest Specifications and Management Process

The specifications and management process, in general terms, occurs as follows:

1. The Council will determine the MSY or MSY proxy and OFL for each major stock. Typically, the MSY proxy will be in terms of a fishing mortality rate ($F_{x\%}$,) and OFL will be the $F_{x\%}$ applied to the current biomass estimate. The MSY is the maximum long-term average yield expected from annual application of the MSY (or proxy) harvest policy under prevailing ecological and environmental conditions.
2. The Council and SSC will determine an appropriate scientific uncertainty buffer to set the ABC below the OFL. The ABC accommodates the uncertainty in estimating the OFL and may be determined using either a straight percentage reduction of the OFL as recommended by the SSC or by the P* approach.
3. Every species will either have its own designated ACL or be included in a multispecies ACL. Species which are included in a multispecies ACL may also have individual ACLs, have individual HGs, or be included in a HG for a subgroup of the multispecies ACL.
4. To determine the ACL for each stock, the Council will determine the best estimate of current abundance and its relation to its precautionary and overfished thresholds. If the abundance is above the precautionary threshold, the ACL will be equal to or less than the ABC. If abundance falls below the precautionary threshold, the ACL will be reduced according to the harvest control rule for that stock. If abundance falls below the overfished/rebuilding threshold, the ACL will be set according to the interim rebuilding rule until the Council develops a formal rebuilding plan for that species.
5. For any stock or stock complex where the Secretary identifies that overfishing is occurring, the Council will take remedial action to end overfishing and prevent the stock or stock complex from falling below the minimum stock size threshold. For any stock the Secretary has declared overfished or approaching the overfished condition, or for any stock the Council determines is in need of rebuilding, the Council will implement such periodic management measures as are necessary to rebuild the stock by controlling harvest mortality, habitat impacts, or other effects of fishing activities that are subject to regulation under this biennial process. These management measures will be consistent with any approved rebuilding plan.
6. The Council may reserve and deduct a portion of the ACL of any stock to provide for compensation for vessels conducting scientific research authorized by NMFS. Prior to the research activities, the Council will authorize amounts to be made available to a research reserve. However, the deduction from the ACL will be made in the year after the "compensation fishing"; the amounts deducted from the ACL will reflect the actual catch during compensation fishing activities.
7. The Council will identify stocks which are likely to be fully harvested (i.e., the ACL or ACT/HG achieved) in the absence of specific management measures and for which allocation between LE and open access sectors of the fishery is appropriate.
8. The groundfish resource is fully utilized by U.S. fishing vessels and seafood processors. The Council may entertain applications for foreign or joint venture fishing or processing at any time, but fishing opportunities may be established only through amendment to this FMP. This section supersedes other provisions of this FMP relating to foreign and joint venture fishing.

Notwithstanding the above, the harvest controls from the previous biennium (referred to as default harvest control rules, or default HCRs) are applied to the best available scientific information to determine the numerical values of the harvest specifications for the next biennial period. The default HCR would establish the harvest specifications based on the F_{MSY} (or proxy value) used in the previous biennium applied to the best current estimate of stock biomass to determine the OFL (as in bullet #1). The ABC is determined by applying the uncertainty buffer (as in bullet #2) used in the previous biennium. The ACL is determined as described in bullet #4 using the appropriate method for current stock status, if known. Thus, if based on the best available science, it is determined that stock status has changed from healthy to the precautionary zone, the methods outlined in Section 4.6.1 would be applied. If a stock has recovered such that stock size is now above the MSY biomass target, the default harvest control sets the ACL equal to the ABC using the P* value used in the previous biennium, if applicable. If the status is not known, the same method used in the previous cycle is used to compute the default HCR. In the case of a stock managed under a rebuilding plan, the default HCR is the one described in the current rebuilding plan (see Appendix F). The SSC will advise the Council on whether adequate progress toward ending overfishing and rebuilding the affected fish stock is being made.

For any stock (or other management units) the Council may take action to depart from the default harvest control rules described in the previous paragraph, after considering the harvest specifications or other relevant factors as long as such changes are consistent with the framework described in Chapter 4 of this FMP, the MSA, and other applicable law.

Current harvest control rules (and related harvest policies as applicable) will be listed in the SAFE document, which will be presented to the Council and the public (and in Appendix F for stocks managed under rebuilding plans).

Other Technical Changes and Updates Proposed to be Included in Amendment 24

1.1 History of the FMP

…

Amendment 24 was approved in [insert date] to describe the use of default harvest control rules in the biennial harvest specifications process and to clarify the descriptions of new and routine management measures that may be implemented during the biennial process. Amendment 24 also designated some species as Ecosystem Component Species and incorporated a variety of technical changes to the FMP.

2.2 Operational Definition of Terms

…

Ecosystem Component Species are FMP species that are not actively managed in the fishery (i.e., no harvest specifications are specified for these species). Ecosystem component species are not targeted, are not generally retained for sale or personal use, are not subject to overfishing, and are not overfished or approaching an overfished condition (see section 4.4.4 for more detail).

$F_{SPR\ x\%}$ is the fishing mortality rate that will produce a given spawning potential ratio. The SPR is the average fecundity of a recruit over its lifetime when the stock is fished divided by the average fecundity of a recruit over its lifetime when the stock is unfished. The SPR is based on the principle that a certain biomass of fish has to survive in order to spawn and replenish the stock at a sustainable level.

Set-aside is the amount of yield of an actively managed stock or stock complex that is deducted from an ACL or sector allocation. A set-aside deducted from an ACL is designed to accommodate catch in Tribal fisheries, research fisheries, exempted fishing permit activities, and bycatch in non-groundfish fisheries. A set-aside deducted from a sector allocation is designed to accommodate catch for a portion of the sector where within-sector allocations are not specified (e.g., set-asides for the at-sea whiting sectors for many stocks are deducted from formal trawl allocations to accommodate expected bycatch).

3.1 Species Managed by this Fishery Management Plan

Table 3-1 in the FMP is proposed to be modified to remove those species designated as Ecosystem Component species and to include more of the actively managed rockfish explicitly in the table (e.g., blackspotted rockfish). Inclusion of text (see below) and a new Table 3-2 is added to list the Ecosystem Component species, including the endemic skates in the family *Arhynchobatidae* and the endemic grenadiers in the family *Macrouridae* as FMP species.

…

Table 3-1 is the listing of species actively managed under this FMP.

Table 3-1. Common and scientific names of species ~~included~~ actively managed in this FMP.

Common Name	Scientific Name
SHARKS	
~~Big skate~~	~~*Raja binoculata*~~
~~California skate~~	~~*R. inornata*~~
Leopard shark	*Triakis semifasciata*
Longnose skate	~~*R.*~~ *Raja rhina*
~~Soupfin shark~~	~~*Galeorhinus zyopterus*~~
Spiny dogfish	*Squalus ~~acanthias~~suckleyi*
~~RATFISH~~	
~~Ratfish~~	~~*Hydrolagus colliei*~~
~~MORIDS~~	
~~Finescale codling (Pacific flatnose)~~	~~*Antimora microlepis*~~
~~GRENADIERS~~	
~~Pacific rattail (Pacific grenadier)~~	~~*Coryphaenoides acrolepis*~~
ROUNDFISH	
Cabezon	*Scorpaenichthys marmoratus*
Kelp greenling	*Hexagrammos decagrammus*
Lingcod	*Ophiodon elongatus*
Pacific cod	*Gadus macrocephalus*
Pacific whiting (hake)	*Merluccius productus*
Sablefish	*Anoplopoma fimbria*
ROCKFISH[a/]	
Aurora rockfish	*Sebastes aurora*
Bank rockfish	*S. rufus*
Black rockfish	*S. melanops*
Black and yellow rockfish	*S. chrysomelas*
Blackgill rockfish	*S. melanostomus*
Blackspotted rockfish	*S. melanostictus*
Blue rockfish	*S. mystinus*
Bocaccio	*S. paucispinis*
Bronzespotted rockfish	*S. gilli*
Brown rockfish	*S. auriculatus*
Calico rockfish	*S. dallii*
California scorpionfish	*Scorpaena gutatta*
Canary rockfish	*Sebastes pinniger*
Chameleon rockfish	*S. phillipsi*

Common Name	Scientific Name
Chilipepper rockfish	*S. goodei*
China rockfish	*S. nebulosus*
Copper rockfish	*S. caurinus*
Cowcod	*S. levis*
Darkblotched rockfish	*S. crameri*
Dusky rockfish	*S. ciliatus*
Dwarf-red rockfish	*S. rufinanus*
Flag rockfish	*S. rubrivinctus*
Freckled rockfish	*S lentiginosus*
Gopher rockfish	*S. carnatus*
Grass rockfish	*S. rastrelliger*
Greenblotched rockfish	*S. rosenblatti*
Greenspotted rockfish	*S. chlorostictus*
Greenstriped rockfish	*S. elongatus*
Halfbanded rockfish	*S. semicinctus*
Harlequin rockfish	*S. variegatus*
Honeycomb rockfish	*S. umbrosus*
Kelp rockfish	*S. atrovirens*
Longspine thornyhead	*Sebastolobus altivelis*
Mexican rockfish	*Sebastes macdonaldi*
Olive rockfish	*S. serranoides*
Pink rockfish	*S. eos*
Pinkrose rockfish	*S. simulator*
Pygmy rockfish	*S. wilsoni*
Pacific ocean perch	*S. alutus*
Quillback rockfish	*S. maliger*
Redbanded rockfish	*S. babcocki*
Redstripe rockfish	*S. proriger*
Rosethorn rockfish	*S. helvomaculatus*
Rosy rockfish	*S. rosaceus*
Rougheye rockfish	*S. aleutianus*
Sharpchin rockfish	*S. zacentrus*
Shortbelly rockfish	*S. jordani*
Shortraker rockfish	*S. borealis*
Shortspine thornyhead	*Sebastolobus alascanus*
Silvergray rockfish	*Sebastes brevispinis*
Speckled rockfish	*S. ovalis*
Splitnose rockfish	*S. diploproa*
Squarespot rockfish	*S. hopkinsi*
Sunset rockfish	*S. crocotulus*
Starry rockfish	*S. constellatus*
Stripetail rockfish	*S. saxicola*
Swordspine rockfish	*S. ensifer*
Tiger rockfish	*S. nigrocinctus*
Treefish	*S. serriceps*
Vermilion rockfish	*S. miniatus*
Widow rockfish	*S. entomelas*
Yelloweye rockfish	*S. ruberrimus*
Yellowmouth rockfish	*S. reedi*
Yellowtail rockfish	*S. flavidus*
FLATFISH	
Arrowtooth flounder (turbot)	*Atheresthes stomias*
Butter sole	*Isopsetta isolepis*
Curlfin sole	*Pleuronichthys decurrens*
Dover sole	*Microstomus pacificus*
English sole	*Parophrys vetulus*
Flathead sole	*Hippoglossoides elassodon*
Pacific sanddab	*Citharichthys sordidus*
Petrale sole	*Eopsetta jordani*
Rex sole	*Glyptocephalus zachirus*
Rock sole	*Lepidopsetta bilineata*

Common Name	Scientific Name
Sand sole	*Psettichthys melanostictus*
Starry flounder	*Platichthys stellatus*

The species in Table 3-2 are designated Ecosystem Component Species (see section 4.4.4 for more details). The inclusion of all endemic skates and all endemic grenadiers will allow more precise catch monitoring without the need for a sorting requirement for these species since skates and grenadiers are generally landed in unidentified species market categories (e.g., Unidentified Skates).

Table 3-2. Groundfish species designated as Ecosystem Component Species.

Common Name	Scientific Name
Aleutian skate	*Bathyraja aleutica*
Bering/sandpaper skate	*B. interrupta*
Big skate	*Raja binoculata*
California skate	*R. inornata*
Roughtail/black skate	*Bathyraja trachura*
All other skates	Endemic species in the family *Arhynchobatidae*
Pacific grenadier	*Coryphaenoides acrolepis*
Giant grenadier	*Albatrossia pectoralis*
All other grenadiers	Endemic species in the family *Macrouridae*
Finescale codling (aka Pacific flatnose)	*Antimora microlepis*
Ratfish	*Hydrolagus colliei*
Soupfin shark	*Galeorhinus zyopterus*

4.3 Determination of MSY, or MSY Proxy and B_{MSY}

As a description of the current proxy F_{MSY} harvest rates by taxa used to calculate OFLs, the following language responsive to the SSC's and Council's decision to change the proxy F_{MSY} harvest rate for elasmobranchs is recommended in the second paragraph in section 4.3:

…

The problem with an F_{MSY} control rule is that it is tightly linked to an assumed level of density-dependence in recruitment, and there is insufficient information to determine the level of density-dependence in recruitment for many west coast groundfish stocks. Therefore, the use of approximations or proxies is necessary. Absent a more accurate determination of F_{MSY}, the Council will apply default MSY proxies. The 2015 ~~current (2011)~~ default F_{MSY} proxies are: $F_{30\%}$ for flatfish, $F_{40\%}$ for whiting, $F_{50\%}$ for rockfish (including thornyheads), $F_{50\%}$ for elasmobranchs, and $F_{45\%}$ for all species such as sablefish and lingcod. ~~However,~~ The default F_{MSY} proxies ~~values~~ ($F_{30\%}$, $F_{40\%}$, $F_{45\%}$, and $F_{50\%}$) are science-based values that are ~~provided here as examples only and are~~ expected to be modified from time to time as scientific knowledge improves. The default F_{MSY} proxies in use for the current biennial harvest specifications period can be found in the Groundfish Stock Assessment and Fishery Evaluation (SAFE) document. If available information is sufficient, values of F_{MSY}, B_{MSY}, and more appropriate harvest control rules may be developed for any species or species group.