Proposed Protocol for Reviewing Ecosystem Component Species and Identifying Stocks in Need of Conservation and Management

Contents

1. Overview

Purpose

The purpose of this agenda item is to propose a framework to monitor, review, and evaluate ecosystem component (EC) species in the Pacific Coast Groundfish Fishery Management Plan (Groundfish FMP). EC species are defined as *"stocks that a Council or the Secretary [of Commerce] has determined do not require conservation and management, but desire to list in an FMP in order to achieve ecosystem management objectives"* (50 C.F.R §600.305(d)(13)). Per Section 4.4.4 of the Groundfish FMP:

Ecosystem Component (EC) species do not require specification of reference points (i.e., OFLs, ABCs, and ACLs) but are monitored to the extent that any new pertinent scientific information becomes available (e.g., catch trends, vulnerability, etc.) to determine changes in their status or their vulnerability to the fishery. For this classification, such species should:

1. be a non-target species or stock;
2. not be determined to be subject to overfishing, approaching overfished, or overfished;
3. not be likely to become subject to overfishing or overfished, according to the best available information, in the absence of conservation and management measures; and
4. not generally be retained for sale or personal use.

Existing EC Species

EC species include both those species exclusive to the Groundfish FMP (Table 1), and those species shared between all four of the Pacific Fishery Management Council (Council or PFMC hereafter) Council's FMPs (Table 2). EC species were originally specified in Amendment 24 to the Groundfish FMP and EC species shared by all four West Coast FMPs were added under Amendment 25.

*Table 1. Table 3-3 in the Groundfish FMP describes species designated as EC species. Shortbelly rockfish (*Sebastes jordani*) is also designated as an EC species in the groundfish FMP, Section 4.4.4, and is subject to specific monitoring and management measures. Through the 'Phase 2' action, additional species were identified by the Council to be designated as EC species and are proposed to be added to Table 3-3 (Table 3)*

Common Name	**Scientific Name**
ELASMOBRANCHS	
Alaska skate	*Bathyraja parmifera*
Aleutian skate	*B. aleutica*
Broad skate	*Amblyraja badia*
California skate	*Raja inornata*
Bering skate	*B. interrupta*
Deepsea skate	*B. abyssicola*
Fine-spined skate	*B. microtrachys*
Pacific white skate	*B. spinosissima*
Roughtail/black skate	*B. trachura*
Sandpaper skate	*B. kincaidii*
Spotted ratfish	*Hydrolagus colliei*
Soupfin shark	*Galeorhinus zyopterus*
GRENADIERS	
Abbyssal grenadier	*Coryphaenoides armatus*

California greadier	*Nezumia stelgidolepis*
Filamented grenadier	*C. filifer*
Ghostly greadier	*C. leptolepis*
Giant grenadier	*Albatrossia pectoralis*
Pacific grenadier	*C. acrolepis*
Popeye grenadier	*C. cinerus*
Shoulderspot grenadier	*Coelrinchus scaphopsis*
Smooth grenadier	*N. liolepis*
Softhead grenadier	*Malacocephalus laevis*
Yaquina grenadier	*Coryphaenoides yaquinae*
MORIDS	
Finescale codling/Pacific flatnose	*Antimora microlepis*

Table 2. Table 3-4 in the Groundfish FMP describes the EC species shared between all of the Council's FMPs on the West Coast

Common Name	**Scientific Name**
Round herring	*Etrumeus teres*
Thread herring	*Opisthonema libertate, O. medirastre*
Mesopelagic fishes	Families: Mycophidae, Bathylagidae, Paralepididae, and Gonostomatidae
Pacific sand lance	Ammodytes hexapterus
Pacific saury	*Cololabis saira*
Silversides	Atherinopsidae
Smelts	Osmeridae
Pelagic squids	Families: Carnchiidae, Gonatidae, Histioteuthidae, Octopoteuthidae, Ommastrephidae except Humbolt squid (*Dosidicus gigas*), Onychoteuthidae, and Thysanoteuthidae

Additionally, as result of the 'Phase 2' stock definitions action, the Council identified and removed species not in need of conservation and management in the U.S. exclusive economic zone (EEZ) from active management in the FMP, redesignating select species as EC species, to be added to the existing list, above. This amendment is currently in progress. The redesignated species include:

Table 3. EC species designated by the Council under the Phase 2 stock definitions action

Rockfish Species *(coastwide)*	**Flatfish Species *(coastwide)***	**Species off Washington**
Bronzespotted rockfish	Butter sole	Blue rockfish
Flag rockfish	Curlfin sole	Deacon rockfish
Greenblotched rockfish	Rock sole	Cabezon
Mexican rockfish	Sand sole	China rockfish
Rosy rockfish	Starry Flounder	Copper rockfish
Speckled rockfish		Kelp greenling
Tiger rockfish		

The list of EC species in the Groundfish FMP has historically been reviewed and revised on an ad-hoc basis as needed, for instance, re-designating big skate as an actively managed species under Amendment 27 and designating shortbelly rockfish as an EC species under Amendment 29 (both described further in Appendix B). Most recently, the Council's Groundfish Management Team

(GMT) performed a comprehensive review of all current EC species (September 2025 Decision Summary Document, described further in Appendix B). The process has generally followed what is outlined in Section 4.4.4 the FMP, providing the opportunity to review EC species biennially and recategorize EC species as needed via an FMP amendment.[1]

Under Amendment 30, monitoring and limited management measures for shortbelly rockfish were also added to the FMP. The Council adopted a process to track fishery-incurred mortality bycatch of the species, assess impacts on the stock, consider voluntary management measures, and reconsider EC designation (Section 4.4.4 of the FMP).

Request for Checkpoint

In September 2025, upon designating additional species as EC in the groundfish FMP as a part of the Phase 2 action, the Council requested that Council staff and the Groundfish Management Team (GMT) work to develop a regular checkpoint to prompt re-evaluation of EC species. The Council noted that EC species may be encountered in the fishery, and it is beneficial to understand whether changes in fishery dynamics over time would prompt reconsideration of their conservation and management need. A regular checkpoint would add more structure to the current, broad process for review outlined in the FMP. By establishing a checkpoint framework within the Council Operating Procedures (COPs), the GMT (alongside the Scientific and Statistical Committee [SSC] and Groundfish Advisory Subpanel [GAP]) can regularly track fishery dynamics, mortality, and conservation concerns, and report to the Council when a thorough review of a species' conservation and management need or stock definition is needed. Once species are flagged for further review, the formal process to determine whether a species is in need of conservation and management in the EEZ, via the guidance at 50 CFR 600.305(c)(1) (i.e., the '10 Factors'), may be initiated.

Action Outcome

The intended outcome of this agenda item is a process to review EC species on a biennial basis and provide a checkpoint to perform further analysis, as needed. This may entail additions to the Council Operating Procedures (COPs) as well as guidance to the GMT and Council staff to establish the inaugural checkpoint.

Structure of this Document

Section 2 of this document outlines a proposed framework for biennial reporting. Section 3 outlines a proposed timeline to implement this framework within the existing groundfish management and activity cycles (COP 9). Section 4 includes questions that may guide the Council's consideration of the proposed process and any guidance, as appropriate. The Appendices to this document provide supplemental information, including regulatory guidance (Appendix A), examples of EC

[1] Section 4.4.4 notes: *A productivity and susceptibility assessment (Patrick, et al. 2009) can be done for FMP species in the biennial specifications process to guide a decision on whether stocks are actively managed with harvest specifications (i.e., Category 1, 2, or 3 stocks) or are monitored as EC species …*

The Council may have additional data and analysis requirements for changing the species categorization of EC species that are shared between all four FMPs, beyond those requirements already applying to EC species specific to the Groundfish FMP.

review within PFMC and other Councils (Appendix B) and an example of a mortality report (Appendix C) to help answer these questions.

2. Proposed Report Framework

The following is the framework Council Staff propose should be utilized to monitor and review EC species in the Groundfish FMP.

1. Standardized, biennial reporting from the GMT

The Mid-Atlantic Fishery Management Council (MAFMC) unmanaged landings reports provides an example of standardized reporting that allows for predictable, transparent, and comparable reporting of the review of EC species on a regular schedule (see Appendix B). This consistent format, while setting a standard, can still incorporate new ideas from the GMT, building on previous reports and best available science to refine the statistics provided in each report. While the MAFMC reports on unmanaged species annually, the PFMC biennial groundfish management and activity cycle would better facilitate biennial reporting (see Section 3 below).

In each biennium, the GMT should inform the Council on the status of EC species and indicate (1) whether species are targeted or retained in the fishery and (2) whether species are at risk of overfishing or an overfished condition. The GMT may identify whether there are any species of concern and clearly highlight those species at the top of their report. Within this process, the GMT should determine the appropriate metrics for their analysis, paring down to the essential metrics. The report contents below are proposed based on those that have proven beneficial in past examples from the PFMC and other Council regions (Appendix B). Additionally, the proposed metrics do not include any one-size-fits-all thresholds. Rather, biennial reporting from the GMT can provide initial information and flag concerns as needed without requiring specific management actions. Qualitative context based on the GMT's knowledge as fishery managers and consideration of NS 1 Guidance may be included in reporting alongside quantitative analysis. The GAP may provide additional information in a supplemental report to complement the GMT's biennial report, noting any changes in fishery dynamics. Council Staff will work with the GMT to assist in development and submission of the report to the Council.

Proposed contents of the biennial report:

i. GMT will establish the standard for reporting in their inaugural report (*tentatively 2028*) and going forward all reports will be posted in a single location on the Council website
ii. Consistent metrics reported
    a. Total and average annual mortality and landings. Separation by sector may be informative. Separation by State and Federal waters may be informative.
    b. Change in total and average mortality and landings over time (including percent change, average over a selected time series, comparison before and after EC designation, and any other statistics deemed relevant)
    c. Discard mortality (to understand targeting and retention)
    d. Risk of overfishing and approaching an overfished condition (via vulnerability score [see Patrick et al. 2010, Cope et al. 2011] or other criteria)
    e. Ex-vessel revenue over time (to understand emerging markets and/or developing fisheries)
iii. No one-size-fits-all thresholds
iv. Consideration of NS 1 guidance
    a. Confirm species reviewed are non-target species

b. Characterize ecosystem management objectives
c. Note if mortality has shifted from principally state to Federal waters

v. GMT will flag species of concern for the Council based on their analyses (may implement MAFMC 'watchlist' or similar), recommend whether any species require full 10 Factor analysis in that bienniumAdditional statistics and analyses can be added by the GMT over time as deemed necessary, incorporating BSIA

2. Involvement of SSC, GAP, and others during the checkpoint

The SSC and GAP can also provide insights during the biennial checkpoint to add supplemental information on the stock definition and the dynamics of the fishery, respectively.

a. **SSC** to follow the process already established in COP 9 to consider whether new biological information requires a change in stock definition. The SSC may provide updated information on species vulnerability. SSC may provide a supplemental report, as needed.
b. **GAP** to consider whether changes in fishery dynamics (i.e., targeting or retention) would necessitate redesignation of an EC species. Council staff may provide the GAP with a standardized form (such as the form utilized to collect industry input in the Phase 2 process) to collect this information. The GAP should confirm species reviewed are non-target species. The GAP should provide a supplemental report, as needed.

States and Tribes may also provide supplemental reports at the Council meeting at which the checkpoint is scheduled, as appropriate. A Tribal report may identify whether an EC species should be further reviewed due to increased importance in Tribal fisheries (commercial or subsistence).

3. Council will determine whether species require full evaluation via the 10 Factors and/or limited management measures

This process will be a checkpoint to facilitate further review of the 10 Factors at Section 50 CFR 600.305(c), as determined necessary by the Council. This process is not meant to replace the guidance outlined at Section 50 CFR 600.305(c), but to initiate that formal process when necessitated.

The GMT and Council may also utilize the report to inform whether new management measures should be prioritized for analysis for any EC species.

4. Checkpoint to occur in March of even years, with additional review of species in June and September, as needed

The proposed timing, outlined below, will align with the current timeline for the groundfish harvest specifications process. The additions are summarized as follows:

a. *March* – GMT provides report (produced over-winter), GAP and SSC bring any additional information to the Council's attention. Council scopes revisions to EC species designation, as needed.

b. *June* – If EC species have been scoped for revisions, a 10 Factor evaluation is produced and presented to the Council to determine whether species considered are in need of conservation and management in the EEZ. Council adopts a PPA for EC species revisions, as appropriate.
c. *September* – Council considers the PPA analysis and adopts an FPA for EC species revisions, as appropriate.

The Groundfish Expanded Mortality Multi-year (GEMM) data product required for the GMT's reporting would be available in approximately September prior to the GMT's scheduled report. Therefore, while the report would be presented to the Council in March of even years, the GMT may work with Council staff to coordinate completion of the report in the Fall and/or winter[2] of odd years to balance the additional workload with their existing workload.

5. Process is defined in COP 9 – Management and Activity Cycles

The general process will be defined in COP 9 (see below), within the current structure of the biennial groundfish management and activity cycle and alongside the existing process for the SSC, GMT, and GAP to review information and provide recommendations on stock definitions. The GMT will prepare their first report for March 2028, with the inaugural report setting the standard going forward.

[2] The GMT often meets in October of odd years

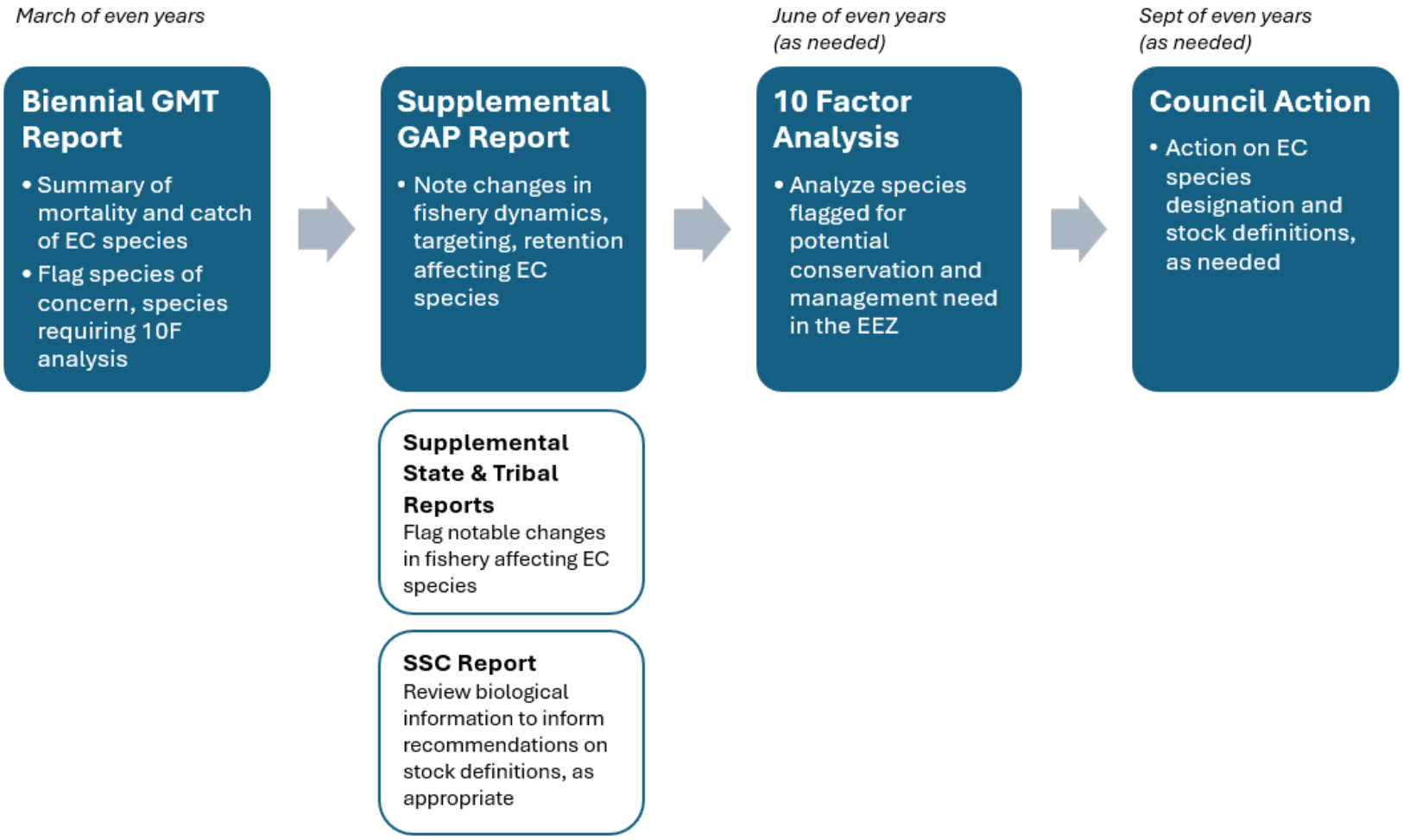

Figure 1. Proposed process to review EC species

3. Proposed Timing in Management and Activity Cycle

Timing for this process would be outlined in COP 9, which establishes management and activity cycles for the Council. Timing would accommodate the current schedule for the biennial harvest specifications process and inputs to this process, including stock assessments and adoption of new and/or revised stock definitions. The inaugural checkpoint would begin in March 2028.

The timeline below includes current text in the COPs, with potential revisions in red to incorporate the review of EC species. This text is subject to change based on the process that the Council recommends be adopted into the COPs. The council may adopt exact COP text at a future meeting.

March of Even Years

- The Council adopts, for public review, 1) a preliminary list and schedule of stocks for assessment in next two groundfish biennial harvest specifications and management measure cycles and 2) groundfish stock assessment Terms of Reference for assessments, methodology reviews, and rebuilding analyses
- The GMT provides a report on mortality and catch of ecosystem component (EC) species. The SSC, GMT, and GAP meet to consider/review new information related to defining groundfish stocks and EC species and provide recommendations to inform Council action on stock definitions and EC species designation, as appropriate. The Council scopes revisions to groundfish EC species and groundfish stock definitions as appropriate. The Council scopes revisions to groundfish EC species and groundfish stock definitions and adopts, for public review, a range of alternatives (ROA) for defining and/or revising EC species designations and groundfish stock(s) definitions for the next biennial period, as applicable. Species flagged for further review by the Council will undergo a full 10 Factor Analysis.
- The GMT and GAP meet to review proposed management measures and recommend prioritization of new management measures for analysis, as appropriate. The Council adopts a list of proposed new management measures4 and may prioritize measure(s) from the list for analysis, as appropriate. This process occurs annually.

June of Even Years

- The Council adopts 1) FPA list and schedule of stocks for assessment in the next two groundfish biennial harvest specification and management measure cycles and 2) groundfish stock assessment TOR for assessments, methodology reviews, and rebuilding analyses
- The SSC, GMT, and GAP meet to consider/review scoping material, including a review of the 10 Factors to identify whether species are in need of conservation and management in the E.E.Z., if flagged for review in March of the same year, to define groundfish stocks, designate EC species and provide recommendations to inform the Council PPA decisions for stock definitions and EC designations, as appropriate. Council adopts a PPA for revisions to groundfish stock definitions and EC designations, as appropriate

September of Even Years

- The SSC, GMT, and GAP meet to consider/review the Council's groundfish stock definition and/or EC species PPA and provide recommendations to inform the Council FPA decisions for stock definitions and EC designations, as appropriate. Council adopts a FPA for revisions to groundfish stock definitions, as appropriate.

March of Odd Years

- The GMT and GAP meet to review proposed management measures and recommend prioritization of new management measures for analysis, as appropriate. Council adopts a list of proposed new management measures and may prioritize measure(s) from the list for analysis, as appropriate. This process occurs annually.

4. Key Questions

The GMT, GAP, and Council may provide input on the proposed process to be incorporated into the COP language that outlines this process, as well as set expectations for what the GMT may produce as a standardized report, (tentatively) beginning in March of 2028. Reporting would include all EC species present in the Groundfish FMP at the time of reporting. The Council may provide written guidance to support the GMP in their inaugural report. The Appendices to this document provide supplemental information, including regulatory guidance (Appendix A), examples of EC review within PFMC and other Councils (Appendix B) and an example of a mortality report (Appendix C) to help answer these questions.

Key questions that may be considered include:

- How should mortality and landings be analyzed? For instance, time series used, absolute numbers and/or change over time reported, statistics reported, comparison to reference points reported, specific statistics to analyze (as in MAFMC reporting)
- Are there any aspects of previous examples within the PFMC or other regions that were particularly useful to carry on going forward?
- Are there any thresholds that should automatically trigger further evaluations or other action? For instance, should any species undergo a similar threshold to shortbelly rockfish?
- Should any data points other than landings, mortality, ex-vessel revenue, vulnerability scores be reported to understand, targeting, retention, vulnerability to overfishing/overfished condition?
- How does the timing, as currently proposed, fit within the biennial harvest specifications process and the GMT workload? Are there any adjustments that should be made?

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APPENDIX A: Regulatory Guidance

The National Standard 1 Guidelines provide guidance for defining stocks in need of conservation and management and EC species in FMPs. Criteria are provided to review stocks for their need for conservation and management in the EEZ (via a '10 Factor' evaluation at Section 305(c)(1)(i)-(x)). Ecosystem component species are also defined at Sections 305(c)(5) and 305(d)(13). Below is the regulatory text that must be considered in a proposed process to review EC species.

50 CFR 600.305(c)(1):
Magnuson-Stevens Act section 302(h)(1) requires a Council to prepare an FMP for each fishery under its authority that requires (or in other words, is in need of) conservation and management. 16 U.S.C. 1852(h)(1). Not every fishery requires Federal management. Any stocks that are predominately caught in Federal waters and are overfished or subject to overfishing, or likely to become overfished or subject to overfishing, are considered to require conservation and management. Beyond such stocks, Councils may determine that additional stocks require "conservation and management." (See Magnuson-Stevens Act definition at 16 U.S.C. 1802(5)). Based on this definition of conservation and management, and other relevant provisions of the Magnuson-Stevens Act, a Council should consider the following non-exhaustive list of factors when deciding whether additional stocks require conservation and management:

(i) The stock is an important component of the marine environment.
(ii) The stock is caught by the fishery.
(iii) Whether an FMP can improve or maintain the condition of the stock.
(iv) The stock is a target of a fishery.
(v) The stock is important to commercial, recreational, or subsistence users.
(vi) The fishery is important to the Nation or to the regional economy.
(vii) The need to resolve competing interests and conflicts among user groups and whether an FMP can further that resolution.
(viii) The economic condition of a fishery and whether an FMP can produce more efficient utilization.
(ix) The needs of a developing fishery, and whether an FMP can foster orderly growth.
(x) The extent to which the fishery is already adequately managed by states, by state/Federal programs, or by Federal regulations pursuant to other FMPs or international commissions, or by industry self-regulation, consistent with the requirements of the Magnuson-Stevens Act and other applicable law.

50 CFR 600.305(c)(4):
When considering removing a stock from, or continuing to include a stock in, an FMP, Councils should prepare a thorough analysis of factors in paragraphs (c)(1)(i) through (x) of this section, and any additional considerations that may be relevant to the particular stock. As mentioned in paragraph (c)(3) of this section, if the amount and/or type of catch that occurs in Federal waters is a significant contributing factor to the stock's status, such information would weigh heavily in favor of continuing to include a stock in an FMP. Councils should consider weighting the factors as follows. Factors in paragraphs (c)(1)(i) through (iii) of this section should be considered first, as they address maintaining a fishery resource and the marine environment. See 16 U.S.C. 1802(5)(A). These factors weigh in favor of continuing to include a stock in an FMP. Councils

should next consider factors in paragraphs (c)(1)(iv) through (ix) of this section, which set forth key economic, social, and other reasons contained within the MSA for an FMP action. See 16 U.S.C. 1802(5)(B). Finally, a Council should consider the factor in paragraph (c)(1)(x) of this section before deciding to remove a stock from, or continue to include a stock in, an FMP. In many circumstances, adequate management of a fishery by states, state/Federal programs, or another Federal FMP would weigh in favor of removing a stock from an FMP. See e.g., 16 U.S.C. 1851(a)(7) and 1856(a)(3).

50 CFR 600.305(c)(5):
Councils may choose to identify stocks within their FMPs as ecosystem component (EC) species (see § § 600.305(d)(13) and 600.310(d)(1)) if a Council determines that the stocks do not require conservation and management based on the considerations and factors in paragraph (c)(1) of this section. EC species may be identified at the species or stock level, and may be grouped into complexes. Consistent with National Standard 9, MSA section 303(b)(12), and other applicable MSA sections, management measures can be adopted in order to, for example, collect data on the EC species, minimize bycatch or bycatch mortality of EC species, protect the associated role of EC species in the ecosystem, and/or to address other ecosystem issues.

50 CFR 600.305(d):

(12) ***Non-target species*** *and non-target stocks are fish caught incidentally during the pursuit of target stocks in a fishery. Non-target stocks may require conservation and management and, if so, must be included in a FMP and be identified at the stock or stock complex level. If non-target species are not in need of conservation and management, they may be identified in an FMP as ecosystem component species.*

(13) ***Ecosystem Component Species*** *(see §§ 600.305(c)(5) and 600.310(d)(1)) are stocks that a Council or the Secretary has determined do not require conservation and management, but desire to list in an FMP in order to achieve ecosystem management objectives.*

50 C.F.R §600.305(c)(5))
Consistent with National Standard 1 , MSA section 303(b)(12)2, and other applicable MSA sections, management measures can be adopted in order to, for example, collect data on the EC species, minimize bycatch or bycatch mortality of EC species, protect the associated role of EC species in the ecosystem, and/or to address other ecosystem issues”

APPENDIX B: Examples of EC Review

While this specific checkpoint process would be new within the Council's COPs, review of EC species' mortality and consideration of EC designation has previously occurred within the PFMC process and for Councils in other regions. These examples provide insight into designing a recurring process going forward.

PFMC

The GMT and the Council have examples within their own history of how to review EC species and determine whether any action is necessary to evaluate their need for conservation and management in the EEZ. The GMT and Council may consider aspects of these previous examples that were particularly useful to carry on going forward.

1. Big Skate

A historical example of the Council moving an EC species to active management in the Groundfish FMP is Amendment 27, which moved big skate (*Beringraja binoculata*) into active management, reclassifying the species as "in the fishery." Big skate was originally designated as an EC species because the best available scientific information indicated that it was not in need of conservation and management in the EEZ and that it generally met many of the criteria for EC species designation outlined in the National Standard (NS) 1 Guidelines. In 2015, action was needed to respond to new scientific information about big skate mortality and the needs of fishing communities. A review of information on estimated catch and total mortality indicated that large landings and targeting of big skate were occurring. Part of this review included a closer inspection of Pacific Fishery Information Network (PacFIN) and West Coast Region Observer Program (WCGOP) mortality reports, and new information showed that landings of 'unspecified' skate were comprised of more than 90 percent big skate. Prior to this time, big skate had also often been retained in the fishery when caught, but the review of catch and mortality data showed a shift from retention to targeting. The vulnerability score (Cope et al. 2011) for the stock also showed a 'medium' concern for overfishing. The GMT reported on this new information to the Council at their April 2015 meeting (Agenda Item E.8.a GMT Report 2, April 2015).

Following this finding for big skate, in November 2015 the GMT reported a review of mortality estimates of all EC species in the Groundfish FMP to determine whether significant increases in mortality would necessitate re-classification for any other EC species (Agenda Item I.9.a Supplemental GMT Report 2, November 2015). The review of mortality included a review of the prior year's (2014) mortality estimates and a comparison to the same year's ABC. Based on the GMT's findings, they determined that no significant increases in mortality necessitated changes to EC species, except for big skate.

The Council took final action on Amendment 27 in June 2016 (Agenda Item G.4 Attachment 2, June 2016; Decision Summary Document).

2. GMT EC Species Review

In 2025, the GMT performed another review of EC species amidst the Phase 2 stock definitions process. In this more recent example, the GMT summarized trends in total mortality for each species to look at changes in mortality across the time series (they utilized a 21-year time series of 2002-2023) (Agenda Item E.6.a GMT Report 1, June 2025). The summary included a look at total mortality, average annual mortality, and change in mortality in the periods before and after EC designation. Additionally, a look at sector-level contributions to annual total mortality and sector-level discard proportions if mortality exceeded 1 mt.

Based on this review, the GMT determined that no EC species required a further evaluation for conservation and management need. In particular, examining the average annual mean discard proportions across sectors revealed that the majority of EC species' mortality is discarded, not retained or targeted. Additionally, reviewing mortality before and after EC designation helped provide context for any particular trends in mortality.

Other Regions

Councils in other regions have utilized similar reviews and checkpoints for EC species and may provide an example to learn from.

1. MAFMC

The Mid-Atlantic Fishery Management Council (MAFMC) designated EC species within the Unmanaged Forage Omnibus Amendment in 2017. Since then, the MAFMC has reviewed annual updates on commercial landings of EC species, reported annually through their Unmanaged Landings Reports. The primary goal of these reports is to monitor for developing fisheries, which could emerge in response to changing species distributions, changing markets, changing abundances, or other reasons. The reports summarize commercial landings data from the NOAA Catch Accounting and Monitoring System (CAMS), in a time series starting from 2006. Analyses within the report include an aggregate trend of total landings, rankings of species and their relative position over time, change in landings over time (via z-scores and permutation tests), and a final "watchlist" composite score (added in 2026) intended to flag species that might require Council attention.

In 2024, the MAFMC asked its Ecosystem and Ocean Planning Committee (EOP) and Advisory Panel (AP) to consider development of landings thresholds to trigger further consideration of managing EC species. The Committee and AP met in April 2024, and reviewed prior years' unmanaged landings reports and associated data. As a result of this process and meeting, the AP and Committee did not recommend use of specific quantitative thresholds to trigger further evaluation of EC species. Instead, they proposed that contextual information and input from the Committee, AP, and stakeholders can add to the annual unmanaged landings reports and help guide considerations on a case-by-case basis. In 2026, the "watchlist" score was added to the report, with a staff example proposed and the opportunity for Council input on the calculation.

2. SAFMC

The South Atlantic Fishery Management Council (SAFMC) has also gone through multiple processes to identify species in need of conservation and management in the EEZ and designate EC species. Currently, the SAFMC is considering Amendment 61 to the Snapper Grouper Fishery Management Plan, which, like the PFMC's Phase 2 process, evaluates 17 species to determine whether they should remain, be removed from the fishery management unit (FMU), or be designated as EC species.

The SAFMC has previously taken action to alter the composition of the Snapper Grouper FMU several times by removing species from the FMP or designating species as ECs through Amendment 25 (Comprehensive ACL Amendment), Amendment 27, and Amendment 35 to the Snapper Grouper FMP.

Under Amendment 25, six species were designated as EC species. When considering which species would qualify as EC species, the SAFMC considered two approaches. First, they considered various thresholds of annual landings (less than or equal to 1,000, 2,500, 5,000, or 10,000 lbs). Second, they considered whether a species met three of the four National Standard (NS) 1 criteria for EC species at the time. The previous version of the NS 1 guidelines included the following provisions pertaining to EC species: 74 FR 3178; Section 50 CFR 600.310 (d) (5) (i)) indicate a species should meet four criteria to be considered for possible classification as an EC species: (1) Be a non-target species or non-target stock; (2) not be determined to be subject to overfishing, approaching overfished, or overfished; (3) not be likely to become subject to overfishing or overfished, according to the best available information, in the absence of conservation and management measures; and (4) not generally be retained for sale or personal use. In the end, the species designated as EC species under Amendment 25 were those that met three of the four NS 1 criteria for EC species.

The NS 1 guidelines have since been revised and the current version does not include the four criteria above for the classification of an EC species. These criteria have effectively been replaced by considering the '10 Factor' test to determine whether a species is in need of conservation and management in the EEZ. Further, the current NS 1 Guidelines still stress the ability to designate non-target species as EC species ("*If non-target species are not in need of conservation and management, they may be identified in an FMP as ecosystem component species.")* and ecosystem management objectives in the definition of EC species ("*stocks that a Council or the Secretary has determined do not require conservation and management, but desire to list in an FMP in order to achieve ecosystem management objectives").*

APPENDIX C: Example of Mortality Report

Reporting may include summaries of EC mortality, landings, and ex-vessel revenue may reported from the GEMM data product and the PacFIN and RecFIN databases. For instance, summary tables below show total and sector-specific mortality of current EC species over time.

Table 4. Total annual mortality of groundfish EC species in mt, 2002-2023, across all directed groundfish and non-groundfish fisheries. Dashes indicate that there was no mortality recorded in the GEMM for that sector in any of the years 2015-24. Cells with "0" indicate that some mortality was recorded but the value is less than 1 mt. (source: Agenda Item G.1.b, NWFSC Rpt 2 aka GEMM Tables)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Mean	Medi
Abyssal grenadier	-	-	-	-	-	-	-	-	-	-	-	-
Aleutian skate	10.3	1.6	0.9	1.9	0.8	0.6	0.6	0.5	1.2	0.2	1.9	0.9
Bering skate	0.0	-	-	-	-	-	-	-	-	-	0.0	0.0
Roughtail/black skate	30.7	11.2	17.1	14.0	19.6	8.9	14.6	16.0	7.1	2.1	14.1	14.3
California grenadier	0.4	0.6	0.3	1.3	1.1	1.4	7.4	6.9	0.3	1.0	2.1	1.1
Deepsea skate	1.1	0.3	0.1	0.6	0.6	1.1	0.1	0.9	0.5	0.1	0.5	0.6
Filamented grenadier	0.0	-	-	-	-	-	-	-	-	-	0.0	0.0
Ghostly grenadier	-	-	-	0.0	-	-	-	-	-	-	0.0	0.0
Giant grenadier	46.8	40.4	56.1	48.9	64.8	28.1	19.9	32.1	28.3	13.2	37.9	36.3
Grenadier unidentified	72.3	62.1	35.9	14.3	16.4	20.6	19.2	33.8	32.2	30.9	33.8	31.6
Finescale codling/ Pacific flatnose	8.0	2.0	0.9	0.6	0.6	0.3	0.2	0.2	0.7	0.3	1.4	0.6
Pacific grenadier	190.8	122.6	33.4	35.1	13.0	24.3	5.6	6.5	12.7	12.2	45.6	18.7
Popeye grenadier	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sandpaper skate	53.1	55.0	55.8	53.0	41.1	30.2	38.5	28.4	27.3	25.4	40.8	39.8
Shortbelly rockfish	9.3	30.0	320.2	507.7	666.7	582.8	333.7	442.0	201.5	168.4	326.2	327.0
Shoulderspot grenadier	0.0	0.0	0.0	0.0	0.0	-	0.0	-	-	-	0.0	0.0
Smooth grenadier	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Softhead grenadier	0.0	0.0	-	0.0	0.0	-	-	-	-	0.0	0.0	0.0
Soupfin Shark	20.3	14.7	11.7	15.3	16.1	23.3	24.9	17.3	14.3	10.5	16.8	15.7
Spotted Ratfish	94.9	103.5	88.8	83.8	96.2	100.6	100.2	118.6	111.6	104.7	100.3	100.4
White Skate	0.0	0.0	-	0.3	-	-	-	-	-	-	0.1	0.0
Yaquina Grenadier	-	-	-	-	-	-	-	-	-	-	-	-

Table 5. Ten-year average annual sector-specific total mortality of current EC species in directed groundfish sectors and incidental open access (IOA) and research, 2015-24. Dashes indicate that there was no mortality recorded in the GEMM for that sector in any of the years 2015-24. Cells with "0.0" indicate that some mortality was recorded but the annual average is less than 0.1 mt. (source: Agenda Item G.1.b, NWFSC Rpt 2 aka GEMM Tables)

[a/]	At-Sea CP &MS	IFQ Bottom Trawl	IFQ Midwater Rockfish	IFQ Midwater Hake	IFQ Fixed Gear	LE	OA	Nearshore	Rec.	IOA	Res
Abyssal grenadier	-	-	-	-	-	-	-	-	-	-	-
Aleutian skate	0.0	1.7	0.0	-	0.0	0.0	-	-	-	-	0.0

[a/]	At-Sea CP &MS	IFQ Bottom Trawl	IFQ Midwater Rockfish	IFQ Midwater Hake	IFQ Fixed Gear	LE	OA	Nearshore	Rec.	IOA	Res
Bering skate	-	0.0	-	-	-	-	-	-	-	-	-
Roughtail/black skate		6.5	0.0	-	0.1	6.7	0.3		-	0.0	0.5
California grenadier	-	0.4	-	-	-	1.0	0.7	0.0	-	-	0.1
California skate	0.0	1.4	-	-	-	0.2	0.0	0.0	0.0	0.0	0.3
Deepsea skate	0.0	0.2	-	-	0.0	0.3	0.1	-	-	22.8	0.0
Filamented grenadier	-	0.0	-	-	-	-	-	-	-	-	0.0
Ghostly grenadier	-	0.0	-	-	-	-	-	-	-	-	-
Giant grenadier	-	29.7	0.0	-	0.7	5.3	0.5	-	-	-	1.7
Grenadier unidentified	6.3	3.7	-	0.0	0.7	15.8	7.5	0.0		0.0	0.0
Finescale codling	0.0	0.2	-	-	0.1	0.7	0.3	-	-	0.0	0.1
Pacific grenadier	-	9.4	0.0	-	1.8	18.6	12.3	0.0		0.0	3.5
Popeye grenadier	-	0.0	-	-	-	0.0	-	-	-	-	0.0
Sandpaper skate	0.2	38.5	0.0	0.0	0.1	1.2	0.2	0.0		0.0	0.7
Shortbelly rockfish[b/]	100.1	7.5	46.3	167.0	-	0.0	0.0	0.0		0.1	2.0
Shoulderspot grenadier	-	0.0	-	-	-	-	-	-	-	-	0.0
Smooth grenadier	-	0.0	-	-	-	0.0	-	-	-	-	0.0
Softhead grenadier	-	0.0	-	-	-	0.0	-	-	-	-	0.0
Soupfin shark	1.0	2.6	0.1	5.7	0.0	2.1	0.5	1.3	0.2	0.0	1.0
Spotted ratfish	0.0	92.5	0.0	0.0	0.0	2.9	0.6	0.0	0.0	7.6	3.0
White skate	-	0.0	-	-	-	0.0	-	-	-	-	-
Yaquina grenadier	-	-	-	-	-	-	-	-	-	-	-

a/ Note that as Tribal discards are not available for all Tribal fisheries, Tribal discard values are not included in the GEMM, except for Tribal at-sea hake.

PFMC
08/19/2026