

STOCK DEFINITIONS PHASE II: PLANNING

In March 2022, the National Marine Fisheries Service ([Agenda Item E.3.a, NMFS Report 1, March 2022](#)) requested the Pacific Fishery Management Council (Council) initiate a series of actions to define stocks in the Groundfish Fishery Management Plan (FMP), necessary to meet the requirements of the Magnuson–Stevens Fishery Conservation and Management Act (MSA) and its National Standards (NS). In June 2023, the Council adopted Amendment 31 (A31) to the FMP which developed a framework for defining stocks¹ and defined 20 stocks for 14 priority species. That action was commonly referred to as Phase I of the stock definitions process.

Under Phase II, the Council is scheduled to 1) define stocks of the managed groundfish species not defined under A31, scheduled to be defined in 2024², or planned to be addressed in another process and 2) consider revisions to groundfish stock complexes. Also, as part of this action, NMFS is recommending the Council evaluate whether stocks are in need of conservation and management, including consideration identifying ecosystem component species, per the criteria outlined in National Standard 1 (§600.305(c)). For nearshore species (e.g., rockfish and roundfish), such an analysis would also be intended to explore the issues associated with federal management authority, which is limited to the Exclusive Economic Zone (EEZ) defined as 3 nautical miles (nm) to 200 nm.

Council staff (or staff) has developed a draft proposed Phase II schedule for Council consideration (Agenda Item E.8 Attachment 2). The items in Phase II are highly interrelated and the schedule was developed to highlight the critical and sequential decision-making steps necessary to ensure a timely implementation schedule. This action is prioritized on the groundfish prioritization list ([Agenda Item F.8.a, Revised GMT Report 1, March 2023](#) (see Appendix 2, Table A)

The proposed schedule splits this action into three parts, in recognition of the issues noted above. It is expected that this process will require multiple actions to amend the FMP. Staff proposes defining stocks for the remaining species to start in September 2024 with target of June 2025 for final action. As part of this process, NMFS recommends the Council evaluate whether each nearshore stock is in need of conservation and management per the criteria outlined in National Standard 1 (§600.305(c)). If a particular stock is not in need of conservation and management, they would be removed from the FMP (colloquially described as ‘removal’). If a nearshore stock is in need of conservation and management, the Council could consider delegating management to the states given their existing management framework. As will be discussed below, the

¹ Stocks have been identified for only 14 species in the FMP; however, for simplicity, this paper uses the terms species and stocks interchangeably as the term ‘stock’ is more familiar to readers.

² Council Operating Procedure 9, Schedule 1 anticipates defining stocks coincident with the stock assessment prioritization process. Final action for defining stock definitions is scheduled for September in the even years prior to the creation of assessment models.

state/federal management authority is integral to both stock definitions and stock complexes. Staff recognizes this part of the process may take longer than the current timeline proposes as it is an intricate decision-making process. The second piece of the process is to reconsider stock complexes. There are several issues with the current makeup of the Council's groundfish which must be addressed to meet the MSA requirements and NS1 guidelines, as described below. Revisions to stock complexes Phase II will likely require that all the stocks have been defined, which, based on the schedule, would occur just as the 2027-28 harvest specifications and management measures process (hereafter biennial process) is initiated in June 2025. The goal for this part is to incorporate stock complex revisions into to the 2027-28 biennial process. This timeline would front load the biennial process and allow for some development work over the summer. The result would be revisions to stock complexes would be included in the implementing action, likely as an FMP amendment, for the 2027-28 biennial spex.

The schedule considers the current 2025-26 biennial workload and current Council staffing levels. Based on this assessment, the proposed start of Phase II action is the September 2024 Council meeting. Staff will perform investigatory work to prepare for that meeting, which will include a full literature review for remaining groundfish species (per A31 framework) and other related analysis. The Council can recommend departures from the proposed schedule, as appropriate.

Recognizing the intricacies of this overall action, staff provides the following high-level summary of the issues the Council will need to consider in Phase II to spur discussion.

Stock Definitions

The Council is required to identify stocks in need of conservation and management per the MSA and the NS. A non-exhaustive list of factors that can be used to determine/define stocks is well described at [§600.305\(c\)\(1\)](#). FMPs must describe status determination criteria, or the measurable and objective factors (e.g., OFL, MSST, etc.), for each managed stock to determine if a stock is overfished or whether overfishing is occurring ([§600.310\(e\)\(2\)\(i\)\(A\)](#)). NMFS makes stock status determinations based on the condition of a stock relative to the status determination criteria. Stock status determination is a NMFS decision whether a stock of fish is in an overfished condition, approaching an overfished condition, and/or is subject to overfishing. NMFS makes these determinations based on best scientific information available and the status determination criteria described in the FMP and reports them to Congress quarterly.

The FMP currently lists the species managed under the FMP (see Chapter 3, Table 3-1), but until Amendment 31 (A31) did not define and delineate groundfish stocks in the fishery management unit (FMU). Under Amendment 31 (A31), the Council defined stocks for 14 species; leaving 75 species to be defined. At the September 2024 meeting, the Council would prioritize the list of species to be defined under Phase II, based on the background materials provided which is expected to include a literature review, updated productivity and susceptibility analysis, analysis of catch data.

The Council has a process, via A31, to define stocks of its managed groundfish species; therefore, a process will not have to be developed as it was during A31, which should create a more efficient process. Briefly, the first step in that process, is to capture relevant scientific information data for each species, through a detailed literature review, to determine population structure. Multiple factors of population structure are investigated (e.g., genetics, larval dispersal, etc.) as well as

perspectives garnered from the Council’s Scientific and Statistical Committee (SSC) recommendations of best scientific information available (BSIA); the geographic scale of assessments, historic NMFS stock status determinations areas; and the geographic scale of annual catch limits (ACL) for the species or “stock” complex in which the species is managed. The second step is to examine the tradeoffs between three types of metrics: biological risks to the species, socioeconomic risks to communities, and management burden. Biological risks may be in the form of localized depletion or the fishery not achieving OY. Socioeconomic risk may be in the form of a lack of fairness and equity of the allocation of harvest privileges or rebuilding.

The Productivity and Susceptibility Analysis (PSA) conducted in 2011 is a risk assessment approach consisting of 10 productivity and 12 susceptibility attributes, each scored on a three-point scale of high (3.0), medium (2.0), or low (1.0), that are summarized to provide an indicator of the vulnerability of a species or stock. A table with the current productivity, susceptibility, and vulnerability scores for all species and details on the methodology can be found in the annual Stock Assessment and Fishery Evaluation document and in Cope et al. (2011). The productivity attributes consist of life history characteristics that are thought to correlate with the stock’s potential population growth rate. The susceptibility attributes measure a stock’s current and potential exposure to a fishery by considering the overlap between the stock and fishing activity, market desirability, degree of management focus, impact to habitat, etc. The attributes were assigned different weights depending on the scorers’ view of how important each is to the species and circumstances in the fishery. The PSA analysis would be updated to support Phase II considerations.

As discussed below, commercial, recreational, and survey catch data can be a proxy for species distribution in Federal and state waters. Such data would be analyzed to inform Phase II considerations.

Federal Jurisdiction and State Management

NMFS is asking the Council to consider reviewing all species in the FMP to consider whether each stock is in need of conservation and management. Determination of these principles for a given stock would address the issue of whether a stock should be removed from the FMP (i.e., removal) or if management, or portions thereof, should be delegated to a state. An exploration of this question would also be intended to address issues associated with federal management authority, which is limited to the EEZ, taking into consideration of guidance in the National standards and the MSA (e.g., the ten factors of fishery management described at [50 CFR 600.305\(c\)³](#)). Further, an analysis could reveal if a stock is more appropriately defined as an ecosystem component species, which would remove them from active management but also retain them in the FMP.

The Council’s primary responsibility is developing and recommending fishery management measures for fisheries under its jurisdiction, which is defined in MSA as fishery resources in the EEZ, identifying the inner boundary of that zone as a line coterminous with the seaward boundary of each coastal state. On the West Coast of the United States, the inner boundary is coterminous with the coastal states’ boundary at 3 nautical miles (nm). The outer boundary of 200 nm is established by Proclamation 5030. NMFS generally does not have jurisdiction in state waters outside of the narrow provisions in § 306(b) which allows the Secretary to take action to regulate

³ For list, please see Appendix 1

a fishery within the state boundaries (called preemption). Simply put, federal waters are 3 to 200 nm and state waters are from 3 nm shoreward.

The West Coast states have generally adopted state regulations that are consistent with federal regulations for their state water marine fisheries. Unfortunately, this terminology has been interpreted as if the FMP and implementing regulations apply to state waters. The MSA limits management authority of NMFS and the Council's actions to the EEZ only. For example, a federal fishery closure, such as no retention of a certain species, only applies to the EEZ and the notion that it applies also to state waters is incorrect. Further, species within 3 nm are often thought of as nearshore⁴ "stocks" and the default is to equate nearshore stocks with rockfish. However, nearshore stocks could be in federal waters in one part of its range and within state waters at another part of its range.

Analyzing the commercial, recreational, and survey catch of nearshore species by area (state vs. federal waters) could be a proxy for the species distribution (see [Preliminary estimation of nearshore groundfish catch distribution](#) for commercial). Such data could then be used to evaluate the portion of the stock that is subject to Federal management authority. NMFS has developed and the SSC has reviewed a methodology for commercial data ([Preliminary estimation of nearshore groundfish catch distribution](#)). Similar methodologies would need to be prepared and reviewed for recreational and survey data. The Council, ABs, and MTs may have suggestions for additional information on species distribution between state and federal waters.

Removal and delegation consideration is not limited to just where the stock is caught or its population biology. A primary question for the Council to consider for each stock centers on the management of the species. That is, is the species better suited for state or federal management-based guidance in the MSA, National Standards, the FMP goals and objectives? The Council will need to examine multiple aspects of a stock to understand if it should be federally managed, removed from the FMP, or if management of the stock (or part thereof) should be delegated to a state or states.

Removal from FMP

Removal is a policy decision where the stock would be removed from the FMP because the Council has determined that stock is no longer in need of federal conservation and management. If a stock is removed from the FMP, the Council and NMFS would no longer establish harvest specifications and management measures nor track catch of the stock. NMFS has indicated that they would not conduct stock assessments for stocks that are not in the FMP.

Delegation of Management

Delegation is a policy decision (see § 306(a)(3)(B) of the MSA⁵) where the stock would remain in the FMP, but the states would manage the minor portion of select species' range in federal waters in addition to the state water portion they already manage. Delegation of management tasks can be considered for any stock or fishery in need of conservation and management, regardless of where in the EEZ it occurs. Delegation was considered by the Council in 2014 ([Agenda Item D.5.b, Supplemental WDFW/ODFW/CDFW Report, March 2014](#) -see page 328) for nearshore rockfish.

⁴ Nearshore stocks encompass a wide variety of species, from flatfish to rockfish to sharks.

⁵ See Appendix 1 for text.

Delegation has been considered and implemented by other Councils, for example, the North Pacific Council delegated most of the management to Alaska for scallop (Table 1); and king and tanner crab (Table 2). Delegation may be an especially appropriate outcome for those species whose range straddle state waters and in federal waters, but, for clarity, this factor is not the only one that should be considered when determining delegation of management. The FMP would specify which management measures in the EEZ are the purview of the Council and NMFS and which management measures in the EEZ are the purview of the states. An important aspect is management measures set by the state would not be in the FMP or in federal regulations – they would be strictly promulgated according to the state’s law and regulation. If management was delegated to a state, federal linkage would likely remain.

Table 1. Management measures used to managed king and Tanner crabs in the BS/AI management unit by category. (source [NPFMC Bering Sea/Aleutian Islands King and Tanner Crab FMP](#))

Category 1 (Fixed in FMP)	Category 2 (Frameworked in FMP)	Category 3 (Discretion of State)
Legal Gear	Minimum Size Limits	Reporting Requirements
Permit Requirements	Guideline Harvest Levels	Gear Placement and Removal
Federal Observer Requirements	In-season Adjustments	Gear Storage
Limited Access	Districts, Subdistricts and Sections	Vessel Tank Inspections
Norton Sound Superexclusive Registration	Fishing Seasons	Gear Modifications
Essential Fish Habitat	Sex Restrictions	Bycatch Limits (in crab fisheries)
Habitat Areas of Particular Concern	Pot Limits	State Observer Requirements
	Registration Areas	Other
	Closed Waters	

Table 2. Delegation of management of Alaska weathervane scallop (source [NPFMC Scallop FMP](#))

CATEGORY 1 (Delegated to the State)	CATEGORY 2 (Fixed in FMP, Implemented by Federal Regulation)
Guideline Harvest Levels	License limitation program
Registration Areas, Districts, Subdistricts and Sections	Optimum Yield specification
Gear Limitations	Overfishing specification
Crew and Efficiency Limits	EFH/HAPC designation
Fishing Seasons	
Observer Requirements	
Prohibited Species and Bycatch Limits	
Recordkeeping and Reporting Requirements	
In-season Adjustments	
Closed Areas	
Other	

Additionally, the species mortality (or mortality of a stock complex) would still be tracked by the Council and count towards the federal annual catch limit. The MSA has specific voting

requirements for Council recommendations to delegate management authorities to states (three-quarters majority vote) as well as procedures for situations when state delegated management may be determined inconsistent with the FMP and a corrective process undertaken.

Timeline Considerations

The proposed schedule for this aspect of Phase II starts in conjunction with stock definitions. This issue is intricate, therefore, initiating discussions on this part of Phase II should start early. Staff recognizes this part may not be completed by June of 2025 and notes that this part of Phase II is not critical to defining stocks or stock complexes. There would be an expected efficiency gained if the set of managed species was known before defining stocks or revising stock complexes, however, if completed on a different timeline, the Council could revise the managed species/stock list in the same action. Additionally, if stocks of all currently managed species were defined before this decision point, the FMP would be aligned with the MSA and National Standards, which is a primary goal of Phase II.

Further, staff notes the questions surrounding Federal jurisdiction and state management authority, as outlined above, are complicated and involve questions of law and policy. It is our recommendation that the Council consider developing an Ad hoc committee comprised of Council members to develop recommendations for developing recommendations related to removal and delegation, as well as other topics germane to the action.

Stock Complexes

Stock complexes were most recently reviewed by the GMT as part of the 2023-24 harvest specifications and management measures process in [Agenda Item E.3.a GMT Report 2, November 2021](#) and [Agenda Item E.3.a, Supplemental Report 3, November 2023](#). In brief, the GMT recommended there are valid reasons to reconsider multiple aspects of the current makeup of stock complexes. The GMT noted several important aspects of current stock complex issues that should be addressed, such as the susceptibility scores indices may not reflect current science and certain stocks may need to be removed and managed separately to meet conservation and management goals. The differences in the information available for each stock currently in a complex also varies greatly and it is likely that those characteristics will factor into further review and revision of the complexes. The Council did not opt to move forward with that process as part of the 2023-2024 process. Under Phase II, the PSA analysis would be updated to inform revisions to the stock complexes.

National Standard 1 and regulations at [§ 600.310\(d\)\(2\)](#) direct the Council to include a full and explicit description of the proportional composition of each stock in the stock complex in the FMP. Further, per NS 1 [§600.310\(d\)](#)⁶, stock complexes should include one or more indicator stocks ([§600.310\(d\)\(2\)](#)), where practicable, with measurable and objective status determination criteria that can be used to help manage and evaluate more poorly known stocks in the complex. Indicator stocks are used to evaluate the status of the complex, i.e., overfished, not overfished, etc. Indicator stocks should be representative of the typical vulnerability of stocks within the complex. Additionally, Section 5.2 of the FMP states MSST will be determined for stock complexes and overfished or not overfished status determinations made accordingly, which has not occurred. At present, there are no indicator stocks identified in the groundfish stock complexes nor is the

⁶ Text of §600.310(d), including §600.310(d)(2), is shown in Appendix I

proportional composition of each stock in the stock complex noted in the FMP. Phase II would seek to address these issues. Additionally, stock complexes do not have standard internal accountability measures. A key issue with stock complexes is status is determined at the complex level, but not for the individual component stocks. In brief, the annual catch limit (ACL) or even the overfishing limit (OFL) of a component stock could be exceeded without the stock complex ACL being exceeded. This is the case for multiple component stocks in several of the rockfish complexes at present. Thus, from a status determination point of view, until the ACL of the complex is exceeded, the complex would not be overfished regardless of if a components stock's ACL has. This structure has allowed many years of fishing in exceedance of individual stock's OFL contributions to the complex. Repeated years of overfishing are expected to lead to the possibility of a stock falling below the minimum stock size threshold.

Stock complexes may need to be revised based on the outcomes of the stock definition and the delegation/removal processes (e.g., removed all together or moved to a different complex). It is a reasonable expectation that for stocks in a complex, their definition may necessitate revisions to complexes. Secondly, should management of any of the species within the stock complexes be delegated or deferred, those complexes may need to be revised. Therefore, the proposed schedule places reconsideration of stock complex last in the process, initiating in June 2025 under the umbrella of the 2027-28 biennial process.

Synthesis and Analysis

The overarching timeline for Phase II is September 2024 to June 2026. It is likely Phase II will require several FMP amendments. The proposed schedule recommends the stock definitions and removal/delegation items be combined and are scoped in September 2024 with final action scheduled for June 2025. This timeline should accommodate an FMP amendment with the definitions and final list of stocks managed to be implemented by early 2026. The stock complexes item should come second as the revisions are likely to be heavily influenced by the outcomes of stock definitions and the removal/delegation decisions. Phase II has many interrelated decision points; however, in examining the goals and objectives in conjunction with other scheduled groundfish actions a pathway that could appropriately address all the issues in a sequential order was revealed.

Starting with stock definitions seems a logical first step in Phase II. The Council has a process, via A31, to define stocks of its managed groundfish species, which should create a more efficient process. The schedule staff proposes is to initiate scoping in September 2024 with final action in June 2025. Defining stocks for all remaining groundfish species is critical to draw the FMP into better alignment with the MSA and National Standard 1. Additionally, stock complex revisions will likely be influenced by the stock definitions. Stock definitions will provide a foundation for subsequent actions.

The next issue relates to the question of removal or delegation, which is a crucial issue to Phase II. This item could be addressed as a stand-alone agenda item; however, there is efficiency in moving it with the stock definitions item. The question of management authority is important to the process as it could change the number of species (or stocks) the Council manages. It is, however, an intricate decision point. Given that the Council does not have a process to accomplish this action, it is reasonable to expect it could take longer than the proposed timeline. Therefore, starting this item early in the Phase II sequence would take into account the complexity of the item.

Noting removal and delegation would consider a wide variety of measures, such as removal or delegation of any stock, what management measures would be delegated, how stock complexes would be affected, etc.

Revisions to stock complexes will, at minimum, require that stocks of the managed groundfish species have been defined. Their definitions are necessary as they will inform adjustments to complexes. Another point, as noted above, reconsideration of stock complexes will require the productivity and susceptibility analysis (PSA) to be revised and/or updated. Given the timeline in the proposed schedule, it appears as if the stock complex portion of Phase II will overlap the 27-28 biennial process. Therefore, to increase efficiency, staff recommend the Council consider adding the revision of stock complexes to the 2027-28 biennial process. The inclusion of this item in the biennial process would likely ensure its completion by June 2026.

Appendix 1

Text at 50 CFR 600.305(c)

(c) Stocks that require conservation and management.

(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.

Text at MSA § 306(a)(3)(B)

(B) The fishery management plan for the fishery in which the fishing vessel is operating delegates management of the fishery to a State and the State's laws and regulations are consistent with such fishery management plan. If at any time the Secretary determines that a State law or regulation applicable to a fishing vessel under this circumstance is not consistent with the fishery management plan, the Secretary shall promptly notify the State and the appropriate Council of such determination and provide an opportunity for the State to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the State does

not correct the inconsistencies identified by the Secretary, the authority granted to the State under this subparagraph shall not apply until the Secretary and the appropriate Council find that the State has corrected the inconsistencies. **For a fishery for which there was a fishery management plan in place on August 1, 1996 that did not delegate management of the fishery to a State as of that date, the authority provided by this subparagraph applies only if the Council approves the delegation of management of the fishery to the State by a three-quarters majority vote of the voting members of the Council.**

Text at 50 CFR §600.310(d)

(d) Stocks and stock complexes —

- (1) ***Introduction.*** As described in [§ 600.305\(c\)](#), Councils should identify in their FMPs the stocks that require conservation and management. Such stocks must have ACLs, other reference points, and accountability measures. Other stocks that are identified in an FMP (*i.e.*, EC species or stocks that the fishery interacts with but are managed primarily under another FMP, *see* [§ 600.305\(c\)\(5\)](#) through [\(6\)](#)) do not require ACLs, other reference points, or accountability measures.
- 2) ***Stock complex.*** Stocks that require conservation and management can be grouped into stock complexes. A “stock complex” is a tool to manage a group of stocks within a FMP.
 - (i) At the time a stock complex is established, the FMP should provide, to the extent practicable, a full and explicit description of the proportional composition of each stock in the stock complex. Stocks may be grouped into complexes for various reasons, including where stocks in a multispecies fishery cannot be targeted independent of one another; where there is insufficient data to measure a stock's status relative to SDC; or when it is not feasible for fishermen to distinguish individual stocks among their catch. Where practicable, the group of stocks should have a similar geographic distribution, life history characteristics, and vulnerabilities to fishing pressure such that the impact of management actions on the stocks is similar. The vulnerability of individual stocks should be considered when determining if a particular stock complex should be established or reorganized, or if a particular stock should be included in a complex.
 - (ii) ***Indicator stocks.***
 - (A) An indicator stock is a stock with measurable and objective SDC that can be used to help manage and evaluate more poorly known stocks that are in a stock complex.
 - (B) Where practicable, stock complexes should include one or more indicator stocks (each of which has SDC and ACLs). Otherwise, stock complexes may be comprised of: Several stocks without an indicator stock (with SDC and an ACL for the complex as a whole), or one or more indicator stocks (each of which has SDC and management objectives) with an ACL for the complex as a whole (this situation might be applicable to some salmon species). Councils should review the available quantitative or qualitative information (*e.g.*, catch trends, changes in vulnerability, fish health indices, etc.) of stocks within a complex on a regular basis to determine if they are being sustainably managed.

- (C) If an indicator stock is used to evaluate the status of a complex, it should be representative of the typical vulnerability of stocks within the complex. If the stocks within a stock complex have a wide range of vulnerability, they should be reorganized into different stock complexes that have similar vulnerabilities; otherwise the indicator stock should be chosen to represent the more vulnerable stocks within the complex. In instances where an indicator stock is less vulnerable than other members of the complex, management measures should be more conservative so that the more vulnerable members of the complex are not at risk from the fishery.
- (D) More than one indicator stock can be selected to provide more information about the status of the complex.
- (E) When indicator stocks are used, the stock complex's MSY could be listed as "unknown," while noting that the complex is managed on the basis of one or more indicator stocks that do have known stock-specific MSYs, or suitable proxies, as described in paragraph (e)(1)(v) of this section.