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Guidance for Considering an Ecosystem Component Designation for NEFMC species

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Glossary

Conservation and management: refers to all of the rules, regulations, conditions, methods, and other measures (A) which are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring, or maintaining, any fishery resource and the marine environment; and (B) which are designed to assure that— (i) a supply of food and other products may be taken, and that recreational benefits may be obtained, on a continuing basis; (ii) irreversible or long-term adverse effects on fishery resources and the marine environment are avoided; and (iii) there will be a multiplicity of options available with respect to future uses of these resources ([16 U.S.C. 1802\(5\)](#)).

Ecosystem Component Species: a stock that a Council or the Secretary has determined do not require conservation and management (as defined above), but desire to list in an FMP in order to achieve ecosystem management objectives ([50 CFR 600.305\(d\)\(13\)](#)).

Fishery: one or more stocks of fish *which can be treated as a unit* for purposes of conservation and management¹

Predominately caught: mainly or for the most part caught²

Target stocks: stocks or stock complexes that fishers seek to catch for sale or personal use, including such fish that are discarded for economic or regulatory reasons as defined under Magnuson-Stevens Act section 3(9) and 3(38)([50 CFR 600.305\(d\)\(11\)](#)).

Non-target species and *non-target stocks*: 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 ([50 CFR 600.305\(d\)\(12\)](#)).

Vulnerability: A stock's vulnerability to fishing pressure is a combination of its productivity, which depends upon its life history characteristics, and its susceptibility to the fishery. Productivity refers to the capacity of the stock to produce MSY and to recover if the population is depleted, and susceptibility is the potential for the stock to be impacted by the fishery, which includes direct captures, as well as indirect impacts of the fishery (e.g., loss of habitat quality; [§ 600.310\(b\)\(4\)](#)).

¹ [NOAA Fisheries | NSA NS Guidelines Final Rule: Response to Comments](#)

² [NOAA Fisheries | NSA NS Guidelines Final Rule: Response to Comments](#)

INTRODUCTION

The New England Fishery Management Council (NEFMC or “the Council”) currently manages 28 marine and one anadromous species across nine different fishery management plans (FMP) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Rapid climate-driven changes in species distribution, abundance, and productivity have made management of those species increasingly challenging. Over the past decade, there has been a desire to integrate ecosystem-based fisheries management (EBFM) approaches and ecosystem information into the fishery management framework to better anticipate and account for these climate-related challenges.

As part of these efforts, in 2024 the Council proposed an initiative under the Inflation Reduction Act (IRA) to operationalize mechanisms of climate impacts within scientific data products and shift towards climate-ready fishery management alternatives. One IRA project establishes strategies for designating and managing species as ecosystem components in the New England region. According to National Standard 1 of MSA, an Ecosystem Component (EC) species 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 CFR 600.305\(d\)\(13\)](#)), and may be designated at the species level, stock level, or grouped into complexes ([50 CFR 600.305\(c\)\(5\)](#)). Hereafter, references to EC species and potential designations are intended to mean management and designation at the stock level, with the acknowledgement that currently unmanaged species are not grouped into stocks, and that some species are managed as unit stocks throughout their range in U.S. waters

Specific “ecosystem management objectives” are not defined in federal regulations but could be identified by the Council when specific EC management actions are developed. An EC designation removes the requirement for annual catch limits (ACLs), other reference points, or accountability measures normally required of FMP species ([50 CFR 600.310\(d\)\(1\)](#)), but at its discretion the Council may adopt other management measures to “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\(c\)\(5\)](#)).

The Council has previously considered whether to classify southern windowpane flounder³, river herring⁴, and shad⁵ as EC Species. In the case of all three stocks, the Council decided against action development following initial investigations. Rationale against the classification for southern windowpane flounder included the need for additional ecological and environmental data before classifying the stock as ecosystem components, while rationale against the classification for river herring and shad fisheries included the existing and adequate management of the fisheries by the states whereby a federal FMP would not elicit any additional improvement of the stocks.

This document establishes a screening process for the NEFMC to 1) analyze factors included in the MSA and National Standard (NS) Guidelines, as well as changes in environmental drivers and fishery data and 2) use criteria and thresholds for designating EC Species in NEFMC FMPs.

³ [NEFMC | Draft Windowpane Flounder Discussion Paper](#)

⁴ [NEFMC | Consideration of Federal Management for River Herring and Shad Stocks](#)

⁵ [NEFMC | Consideration of Federal Management for River Herring and Shad Stocks](#)

Magnuson-Stevens Fishery Conservation and Management Act and National Standard Guidelines

In 2016, the MSA was revised such that an FMP is required “for each fishery under [the Council’s] authority that requires (or in other words, is in need of) conservation and management⁶” and for “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 ([50 CFR 600.305\(c\)\(1\)](#)).” The use of the phrase “conservation and management” in the remainder of this document is thus intended to mean full management under a federal FMP with all associated requirements pursuant to MSA.

Beyond that, the NS Guidelines include a non-exhaustive list of factors ([50 CFR 600.305\(c\)\(1\)](#)) that a Council should consider when deciding whether to add or remove stocks from an FMP or when there is a desire to designate stocks as ecosystem component species. This list along with the requirements to manage stocks that are in need of conservation and management form the basis of the **Screening Process**, which is described in detail below, that can be used in considering an ecosystem component designation for NEFMC stocks.

Ecosystem components are listed in an FMP to achieve ecosystem management objectives but do not require conservation and management ([50 CFR 600.305\(d\)\(13\)](#)). Once listed in an FMP, management measures consistent with National Standard Guideline 9 and other applicable MSA sections could also be included for those designated stocks.

Regional Fishery Management Council Examples

Most regional fishery management councils have designated EC Species within their management system, including the Mid-Atlantic Fishery Management Council, the Pacific Fishery Management Council, the North Pacific Fishery Management Council, the Western Pacific Fishery Management Council and the South Atlantic Fishery Management Council.

In general, many of these actions were pursued from 2010 to 2020 across the various NS Guideline revisions and used various analytical approaches such as catch history, food web and diet analyses, and methods from a vulnerability assessment developed by a Vulnerability Evaluation Work Group coordinated by the National Marine Fisheries Service (NMFS)⁷.

Mid-Atlantic Fishery Management Council (MAFMC)

The MAFMC designated and added 16 previously unmanaged forage species and species groups as ecosystem components through an Unmanaged Forage Omnibus Amendment⁸ in 2015. These ecosystem components were added to all the FMPs under the MAFMC purview and included two main

⁶ The MSA further defines “conservation and management” as all of the rules, regulations, conditions, methods, and other measures (A) which are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring, or maintaining, any fishery resource and the marine environment; and (B) which are designed to assure that— (i) a supply of food and other products may be taken, and that recreational benefits may be obtained, on a continuing basis; (ii) irreversible or long-term adverse effects on fishery resources and the marine environment are avoided; and (iii) there will be a multiplicity of options available with respect to future uses of these resources ([16 U.S.C. 1802\(5\)](#)).

⁷ Patrick, W. S., P. Spencer, O. Ormseth, J. Cope, J. Field, D. Kobayashi, T. Gedamke, E. Cortés, K. Bigelow, W. Overholtz, J. Link, and P. Lawson. 2009. Use of productivity and susceptibility indices to determine stock vulnerability, with example applications to six U.S. fisheries. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-F/SPO-101, 90 p.

⁸ [MAFMC | Unmanaged Forage Omnibus Amendment](#)

management measures: 1) an incidental possession limit of 1,700 pounds per trip for all EC species caught within the Mid-Atlantic Forage Species Management Unit, and 2) transiting provisions through the management area if EC species are caught and landed outside the management unit. In addition to the amendment, the Council also requested that NOAA Fisheries provide [annual reports](#) on commercial landings of unmanaged species⁹ within the Mid-Atlantic region to monitor signs for new or growing fisheries.

Pacific Fishery Management Council (PFMC)

Since 2010, the PFMC has developed four amendments and designated over 30 species or species groups as EC species specific to FMPs or shared across all FMPs under its purview. For example, Amendment 2 to the Highly Migratory Species FMP removed bigeye and pelagic thresher sharks from their list of species that needed conservation and management and re-classified them as EC Species in 2010¹⁰. By 2015, they had added 7 previously unmanaged forage species and species groups as “Shared EC Species” across their four FMPs to support initiatives within their Fishery Ecosystem Plan (FEP)¹¹. Also in 2015, they removed six species or species groups, including California skate, soupfin shark, Pacific grenadier, spotted ratfish, finescale codling, and all other endemic skates and other grenadier species, from the managed “Other fish” complex in the Pacific Coast Groundfish FMP and designated them as EC Species¹². In addition to these species, the PFMC added Aleutian skate, Bering skate, rougtail skate, giant grenadier, and all other skates and grenadiers which were not previously managed under a federal FMP to the Groundfish FMP as EC species due to incidental catch during fishing activities managed by the FMP¹³. Lastly, in 2020, the PFMC changed the designation of shortbelly rockfish from a stock in need of conservation and management to an ecosystem component to preserve its role as a forage fish¹⁴. As of March 2026, the PFMC is actively working towards designating another 13 species across two species groups as EC species within their Groundfish FMP^{15,16}. Management measures for their EC species include requiring an annual Stock Assessment and Fishery Evaluation (SAFE) report to monitor catches and landings¹⁷, incidental retention limits, conditions for exempted fishing permits to collect scientific information^{18,19}, and triggers to establish reclassification or additional management measures²⁰.

North Pacific Fishery Management Council (NPFMC)

In 2015, The NPFMC added previously unmanaged grenadier species to the Bering Strait and Aleutian Islands (BSAI)²¹ and Gulf of Alaska (GOA)²² Groundfish FMPs as ecosystem components. Management measures within the Groundfish FMPs included prohibitions on directed fishing, retention limits, and limits on sale and processing. In 2017, squid species were reclassified from target species in need of conservation and management to non-target ecosystem component species, not in need of conservation

⁹ [MAFMC | Unmanaged Landings Reports](#)

¹⁰ [PFMC | Amendment 2 to the Highly Migratory Species FMP](#)

¹¹ [PFMC | Initiative 1: Protecting Unfished and Unmanaged Forage Fish Species](#)

¹² [PFMC | Amendment 24 to the Pacific Coast Groundfish FMP](#)

¹³ [PFMC | Amendment 24 to the Pacific Coast Groundfish FMP](#)

¹⁴ [PFMC | Amendment 29 to the Pacific Coast Groundfish FMP](#)

¹⁵ [PFMC | Draft Proposed Stock Definitions](#)

¹⁶ [PFMC | Draft Pacific Coast Groundfish FMP Language](#)

¹⁷ [PFMC | Amendment 13 to the Coastal Pelagic Species FMP](#)

¹⁸ [PFMC | Initiative 1: Protecting Unfished and Unmanaged Forage Fish Species](#)

¹⁹ [PFMC | Amendment 29 to the Pacific Coast Groundfish FMP](#)

²⁰ [PFMC | Amendment 24 to the Pacific Coast Groundfish FMP](#)

²¹ [NPFMC | BSAI Groundfish FMP Action Summaries - Action #91](#)

²² [NPFMC | GOA Groundfish FMP Action Summaries - Action #100](#)

and management²³. Amendment 13 to the Scallop FMP created an ecosystem component category for non-targeted scallop species thereby adding and designating them as EC Species²⁴.

Western Pacific Fishery Management Council (WPFMC)

The WPFMC has designated over 150 species (sometimes grouped at higher taxonomic levels), many coral reef species as EC species within their Hawaii Fishery Ecosystem Plan (FEP), Marianas FEP, and American Samoa FEP. These species were previously listed in the WPFMC's FEPs as species in need of federal conservation and management but were reclassified to improve efficiency of fishery management for NMFS and WPFMC, and because fishing activity for the reclassified species occurs mostly in state or territory waters²⁵. Management measures included maintaining federal permit, gear restrictions, and monitoring requirements for the corals and crustaceans designated as EC Species in the American Samoa and Mariana Archipelago FEP.

South Atlantic Fishery Management Council (SAFMC)

The SAFMC designated eight species as ecosystem components between their Snapper Grouper FMP and Dolphin Wahoo FMP. Within the Snapper Grouper FMP, six species (cottonwick, longspine porgy, bank sea bass, rock sea bass, ocean triggerfish, and schoolmaster) were designated as EC Species based on a scoring analysis that found they did not require federal conservation and management according to the considerations within NS guidelines²⁶. Within the Dolphin Wahoo FMP, bullet mackerel and frigate mackerel were added to the FMP as EC Species, which were previously unmanaged, to acknowledge their role as forage fish²⁷. Beyond the designation, the SAFMC decided not to implement any additional management measures²⁸.

²³ [NPFMC | GOA Groundfish FMP Action Summaries - Action #106](#)

²⁴ [NPFMC | Scallop FMP](#)

²⁵ [WPFMC | Press Release - Ecosystem Component Species Reclassification](#)

²⁶ [SAFMC | Comprehensive ACL Amendment](#)

²⁷ [SAFMC | Dolphin Wahoo Amendment 12](#)

²⁸ [SAFMC | Dolphin Wahoo Amendment 12](#)

COUNCIL DESIGNATION PROCESS

This guidance document provides a starting point of how the Council might go about designating an ecosystem component within an FMP. The designation process is described briefly and illustrated in a flow chart below (Figure 1). At a minimum, the Council should follow three main steps:

1. Set Council Priorities
2. Conduct the Screening Process
3. Develop an FMP Amendment

The Council has discretion to adjust the details and tailor them to meet the purpose and needs of its priorities. The screening process, however, is intended to be standardized and consistent across potential stocks and should be conducted in accordance with the steps described within this document.

Set Council Priorities

The Council must first set a priority to task the relevant PDT(s) with screening stocks that it wants to consider for ecosystem component designation. This screening process could be completed in one year, and the results are intended to inform whether the Council pursues EC designation of one or more screened stocks.

Conduct the Screening Process

The screening process is conducted according to the guidance in the next section and should be completed prior to any action initiation. Should the results of the screening signal the eligibility of a stock for EC designation, the Council could consider setting a priority to develop an amendment to the relevant FMP with alternatives that designate the screened stock as an ecosystem component and that include any additional management measures related to the candidate EC species (see Step 3, Develop an FMP Amendment).

Develop an FMP Amendment

An amendment is required to add an ecosystem component to an FMP or change the designation from requiring conservation and management to managing as an ecosystem component. An ecosystem component species or stocks may be grouped into species groups or complexes according to [50 CFR 600.305\(c\)\(5\)](#) and would not require annual catch limits (ACLs), biological reference points, or accountability measures ([50 CFR 600.310\(d\)\(1\)](#)).

The amendment should include alternatives that consider maintaining the stock as one in need of conservation and management (if it is currently being managed in an FMP) and/or adding the stock to an FMP as an ecosystem component species (regardless of its current management status). Additionally, the Council should identify specific ecosystem management objectives that are achieved by designating the stock as an ecosystem component.

The PDT may conduct additional stock-specific or FMP-specific analyses as they see fit that supplement the screening analyses and should consult APs to validate the findings. The results of the screening process should not be used in lieu of more detailed analyses required to designate EC species. Rather, in documenting rationale for designation, the factors as outlined in NS Guideline Factor Evaluation should

be considered such that **Factors (i) – (iii)** are considered first, followed by **Factors (iv) – (ix)**, which set forth key economic, social, or other reasons, and finally **Factor (x)** should be considered last, according to NS Guidelines ([50 CFR 600.305\(c\)\(4\)](#)). While the stock(s) would not require ACLs, reference points or accountability measures, the Council may adopt management measures consistent with National Standard 9 and other sections of the MSA. These management measures could include, but are not limited to, incidental retention limits, seasonal or spatial closures, data collection and monitoring requirements, and protections for its role in the ecosystem and/or address other ecosystem issues ([50 CFR 600.305\(c\)\(5\)](#)). For example, periodic data collection and monitoring requirements could be useful to evaluate whether the EC designation continues to achieve the Council’s specific ecosystem management objectives (as identified during EC designation). The Council could consider identifying specific monitoring thresholds related to those ecosystem management objectives or the NS guidelines that would trigger a re-evaluation of the need for conservation and management. Alternatively, the Council could include provisions to re-evaluate the EC species periodically (e.g., yearly, every two years, etc.).

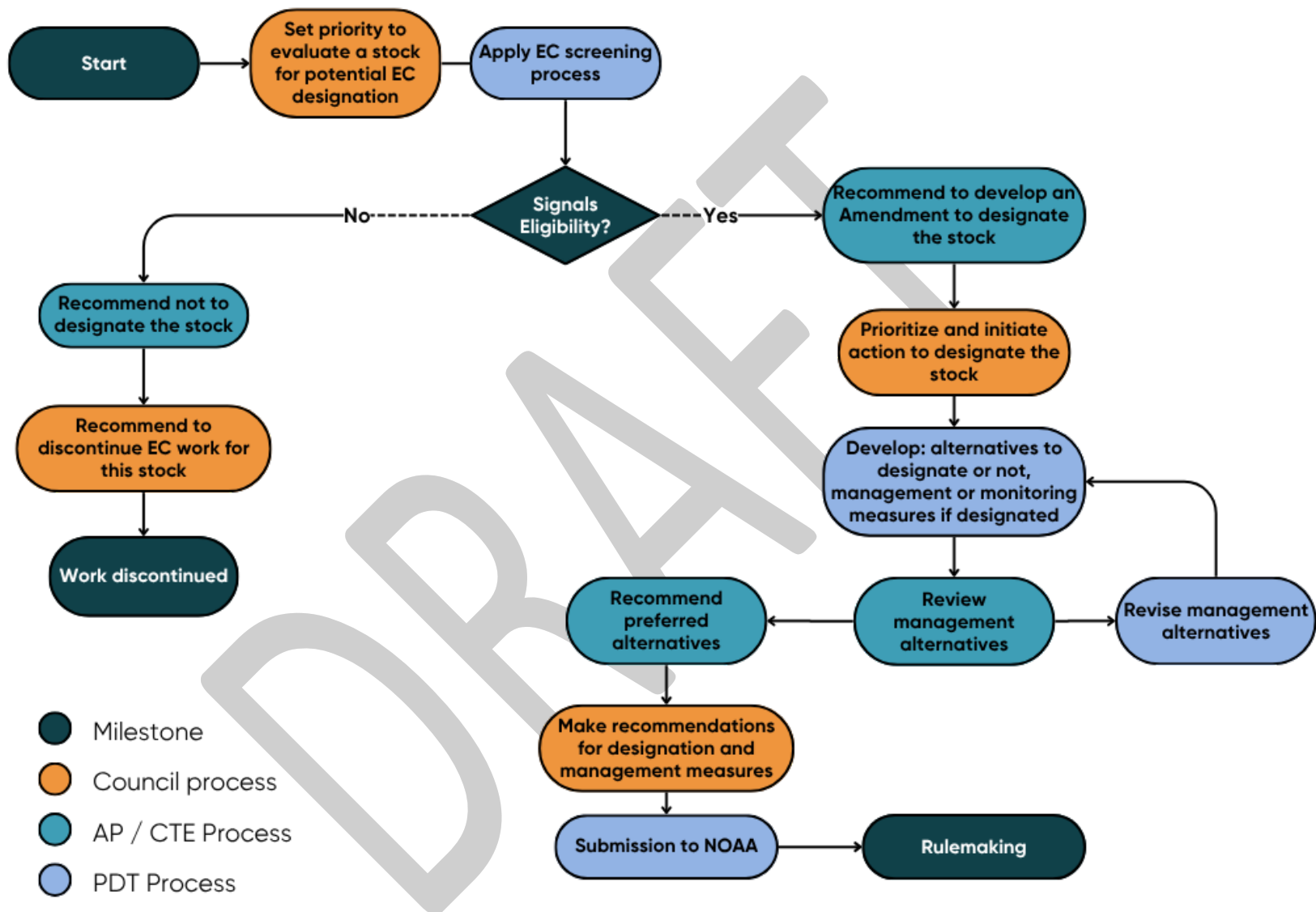


Figure 1. Flow chart of the NEFMC's process for designating an ecosystem component

SCREENING PROCESS

The screening is conducted in three parts based on the MSA NS Guidelines to determine if stocks do not require conservation and management and would therefore be eligible for designation as an ecosystem component. The first two parts of the screening include: I.) MSA Criteria and II.) NS Guideline Factors and focus on the criteria and factors listed in [50 CFR 600.305\(c\)\(1\)](#). Councils must use the criteria in the Guidelines when evaluating whether to add, maintain, or remove a species or stock from an FMP.

Table 1. A list of criteria and factors that should be used throughout the screening process.

MSA Criteria	
- Is the stock overfished, subject to overfishing, or likely to be? - Is the stock predominantly caught in federal waters?	
NS Guideline Factors	
i.	Is the stock an important component of the marine environment?
ii.	Is the stock caught by the fishery?
iii.	Will an FMP improve or maintain the condition of the stock?
iv.	Is the stock a target of a fishery?
v.	Is the stock important to commercial, recreational, or subsistence users?
vi.	Is the fishery important to the Nation or to the regional economy?
vii.	Is there a need to resolve competing interests and conflicts among user groups and would an FMP further that resolution?
viii.	What is the economic condition of a fishery, and would an FMP produce more efficient utilization?
ix.	Are there needs of a developing fishery, and would an FMP foster orderly growth?
x.	What is 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?

The NS Guidelines provide guidance for Councils evaluating these factors ([50 CFR 600.305\(c\)\(2\)-\(7\)](#)) to determine whether a stock requires conservation and management. Notably, “when considering adding a stock to an FMP, no single factor [under the NS Guideline Factor Evaluation] is dispositive or required”, and “[o]ne or more of the above factors, and any additional considerations that may be relevant to the particular stock, may provide the basis for determining that a stock requires conservation and management ([50 CFR 600.305\(c\)\(3\)](#))”. Councils should “prepare a thorough analysis of factors and any additional considerations that may be relevant to the particular stock ([50 CFR 600.305\(c\)\(4\)](#))” using the best scientific information available to “consider the specific circumstances of a fishery” and “determine whether there are biological, economic, social, and/or operational concerns that can and should be addressed by Federal management” ([50 CFR 600.305\(c\)\(2\)](#)).

This screening process reframes each of the above MSA criteria (questions 1-2) and NS factors (questions 3-12) into questions scored with either a 0 or 1. A score of 0 would support eligibility for an ecosystem component designation and suggests that a stock may be considered for removal from conservation and management under an FMP and designated as an EC. A score of 1 does not support eligibility for an ecosystem component designation and suggests that a stock should continue to be included in an FMP or be added to an FMP for conservation and management purposes. A total of twelve questions is scored

and summed across the two parts where a total score below a threshold to be defined by the Council indicates that designating the species as an EC may be appropriate. The third part of the screening considers additional information as necessary to supplement the evaluation and final score, as per the NS guidance to include additional considerations that may be relevant to the particular stock and/or specific circumstances of the fishery.

The language in the NS Guidelines and the analytical process used for scoring each factor required some interpretation on the part of Council staff and contract analysts. The resulting framework was informed by consultation with the Council's Climate and Ecosystem Steering Committee (CESC) and based on EC evaluations conducted at other Councils. Specifically, the 0/1 scoring rubric for each factor was adapted from the SAFMC's approach²⁹ and ensures "no single factor is dispositive", since each contributes equally to the screening process. The intent was to create a process that is robust across a diversity of species and fisheries with varying levels of data, and pilot screenings informed the approach to scoring and the proposed thresholds. This screening tool would be used prior to a Council action to designate one or more EC species. If a species evaluated using this process receives a very high score, that means it would likely not be appropriate for EC designation, and the time and resources spent on a Council amendment could thus be avoided.

I. MSA Criteria

The first part of the screening determines if a stock requires conservation and management based on the preamble in [50 CFR 600.305\(c\)\(1\)](#):

- Is the stock overfished, subject to overfishing, or likely to be?
- Is the stock predominantly caught in federal waters?

Is the stock overfished, subject to overfishing or likely to be?

If a stock is currently managed within a federal FMP, NOAA's determination of stock status according to the best available science should be used to evaluate this question. In cases where NOAA determines that a stock is overfished or experiencing overfishing, this question receives a score of 1. Otherwise, a score of 0 is given if NOAA determines the stock is not overfished and not experiencing overfishing, or if there is no assessment.

For stocks that are not currently in an FMP, that are in an FMP but do not have a formal empirical or analytical assessment according to NS Guidelines, or that have an unknown stock status as deemed by NOAA Fisheries, a Productivity and Susceptibility Analysis (PSA) should be conducted to assess the vulnerability of the stock to becoming overfished or experiencing overfishing. Details on conducting a PSA are explained under **Considerations for Additional Information**.

Is the stock predominantly caught in federal waters?

NOAA Fisheries has defined the term "predominately" to mean "mainly or for the most part" caught in federal waters³⁰. To determine if a stock is predominately caught in federal waters, the analysis uses time series data of commercial catch sourced from NOAA Fisheries Catch Accounting and Monitoring System

²⁹ [SAFMC | Comprehensive Annual Catch Limit Amendment for the South Atlantic Region](#)

³⁰ [NOAA Fisheries | Responses to CCC NS1 Questions](#)

(CAMS)³¹ and recreational catch from NOAA Fisheries Marine Recreational Information Program (MRIP)³².

The total commercial catch from federal waters is aggregated over the most recent five fishing years and compared to the commercial catch over the same time series that occurs in state waters. Similarly, the total recreational catch is aggregated over the most recent five years and compared to the total recreational catch over the same time series that occurs in state waters (including inland waters). Values across commercial and recreational fisheries are then summed to represent total harvest across both modes of fishing.

The factor is then scored based on a threshold level of 25% of total catch occurring in Federal waters, which has been adopted from the PFMC's approach³³. A score of 1 (does not support eligibility for EC designation) is given if the catch in federal waters across commercial and recreational fisheries is greater than 25 percent of total catch of the stock over the most recent five years. A score of 0 (supports eligibility for EC designation) is given if the catch in federal waters across commercial and recreational fisheries is less than 25 percent over the most recent five years.

II. NS Guideline Factors

The second part of the screening answers the remaining questions based on the list of ten (10) factors included in the NS Guidelines ([50 CFR 600.305\(c\)\(1\)](#)):

i. Is the stock an important component of the marine environment?

The role of each species in the broader marine ecosystem is a primary consideration and the stock's importance to the broader ecosystem weighs in favor of including a stock in an FMP, either as a species that requires full conservation and management or as an ecosystem component. Analysis of this factor uses at a minimum food and diet data, essential fish habitat source documents, and species distribution models to assess whether fishing on a stock could create deleterious impacts on the overall marine environment.

A score of 0 is given if, xxxx, indicating that the stock is an important component of the marine environment.

A score of 1 is given if, xxx, indicating that the stock is not an important component of the marine environment.

ii. Is the stock caught by the fishery?

Per NOAA Fisheries, "Fishery" refers to "one or more stocks of fish which can be treated as a unit for purposes of conservation and management"³⁴. For stocks that are currently being managed within an FMP as a stock in need of conservation and management, "fishery" is further defined and considered here as the FMP fishery in which the stock is managed.

Stocks that are currently managed and are principally caught by the federal FMP fishery should continue to be managed according to all requirements within MSA as a stock in need of conservation and

³¹ Hocking D, Lanning J, Galuardi B, Smith L, Winiarski K, McAfee B (2026). *MAPS: Production system for matching and monitoring catch at the Greater Atlantic Regional Fisheries Office*. R package version 2.2.2, <https://apps-garfo.fisheries.noaa.gov/cams>.

³² [NOAA Fisheries | Marine Recreational Information Program](#)

³³ [PFMC | 10 Factor Analysis of 40 Groundfish Species](#)

³⁴ [NOAA Fisheries | NSA NS Guidelines Final Rule: Response to Comments](#)

management. If managed stocks are found to be minimally or incidentally caught by the federal FMP fishery, then this may warrant designating the stock as an ecosystem component.

Stocks that are not currently managed and are principally caught by a federal fishery (considering all federal fisheries in aggregate) would weigh in favor of requiring conservation and management, thereby full MSA-required management in an FMP. If stocks are minimally or incidentally caught by federal fisheries, in aggregate, then this may warrant designating the stock as an ecosystem component.

Analysis of this factor uses aggregated commercial catch sourced from CAMS³⁵ and recreational catch from MRIP³⁶ over the most recent five years. For managed stocks, year is defined as the fishing year (e.g. May 1-April 30, or January 1-December 31) for its FMP. If a stock is not currently managed, the year is defined as the calendar year.

A score of 1 is given if the stock is caught by the fishery where landings or harvest make up XX% or more of the stock's total catch. A score of 0 is given if the stock is caught by the fishery where landings or harvest make up less than XX% of the stock's total catch.

iii. Will an FMP improve or maintain the condition of the stock?

This factor considers whether the FMP can improve or maintain the condition of the species and addresses maintaining both the fishery resource and the marine environment on which it depends, as FMPs include both stock and habitat conservation requirements. This factor weighs in favor of including a stock in an FMP, but improvement or maintenance of stock conditions could potentially be achieved either through full conservation and management or if the stock is defined as an ecosystem component.

Analysis of this factor should at a minimum use the most recent stock assessments to evaluate trends in assessment quantities (e.g. recruitment, spawning stock biomass, etc.). Species distribution models (SDMs) and habitat suitability models could provide another source of information by evaluating changes in a species' distributional footprint, suitable habitat, or abundance in response to environmental drivers. These findings are considered in the context of how long the stock has been managed under an FMP, and what management measures have been used over this period. For species not currently managed in an FMP, these findings are considered in light of possible management measures that might be enacted through an FMP.

If there is evidence that an FMP has been unable to maintain or improve the condition of the stock over time, this may warrant the removal of the stock from an FMP or designating the stock as an ecosystem component within an FMP. In this case, a score of 0 would be given. Otherwise, if there is evidence that an FMP has maintained, improved, or rebuilt the condition of a stock over time, a score of 1 is given.

iv. Is the stock a target of the fishery?

Stocks that are direct targets in Federal commercial and recreational fisheries may be considered important species and would support identifying stocks as needing conservation and management within an FMP. Stocks that are incidentally caught could provide support for an ecosystem component designation.

³⁵ Hocking D, Lanning J, Galuardi B, Smith L, Winiarski K, McAfee B (2026). *MAPS: Production system for matching and monitoring catch at the Greater Atlantic Regional Fisheries Office*. R package version 2.2.2, <https://apps-garfo.fisheries.noaa.gov/cams>.

³⁶ [NOAA Fisheries | Marine Recreational Information Program](#)

To determine if a stock is a target of the fishery, analyses will use time series data of commercial catch sourced from CAMS³⁷ and recreational catch from MRIP³⁸ at the trip level to differentiate between targeted catch and bycatch where possible. A target stock is identified as such if it makes up the largest proportion of a single trip, which has been adopted by the PFM³⁹. For recreational trips, a targeted trip is where an angler indicates that the stock is a primary or secondary target.

A score of 1 is given if targeted trips constitute more than XX% of the total trips that generated the total catch of a stock, which suggests full conservation and management is needed. A score of 0 is given if targeted trips constitute less than XX% of the total trips that generated the total catch of a stock, suggesting eligibility for EC designation.

v. Is the stock important to commercial, recreational, and subsistence users?

Stocks are considered important to users if they are direct targets in Federal fisheries and are generating local or regional revenues, if they are targeted stocks in recreational fisheries, or kept for at home consumption by subsistence users. A stock with direct substantial economic or social importance would be suitable for including in an FMP as one in need of conservation and management. A stock with an indirect economic or social importance, whereby its ecological role supports the persecution of important fisheries, might suggest eligibility for designation as an ecosystem component but would be based on other factors specific to the stock and the types of management measures that would likely be needed to achieve conservation objectives.

If the stock is currently managed under an FMP, importance is defined as a stock generating greater than XX% of the total revenue and engagement within the commercial FMP fishery (the latter of which is defined under **Factor ii**) or greater than XX% of the total trips taken within the recreational fishery. To determine a stock's relative commercial importance, the analysis summarizes time series data of commercial catch and revenues sourced from CAMS⁴⁰. The annual (inflation-adjusted) revenue is summarized over the most recent five years (as defined in **Factor ii**) and aggregated across all stocks within the FMP to constitute the commercial fisheries' total revenue. The fishery's total revenue is then compared to the revenue that was generated by the stock. This approach is then applied to the total number of trips, vessels, and dealers to evaluate the level of commercial fishery engagement. Recreational and subsistence revenue data are generally limited; however, the analysis uses recreational catch and effort data from MRIP⁴¹ as a proxy to determine the stock's relative importance to recreational or subsistence users.

If the stock is currently managed under an FMP, a score of 1 is given if the total revenue and engagement for that stock are more than XX% of the total that constitutes the commercial FMP fishery, and if the total number of targeted recreational trips is greater than XX% of the total number of trips taken by recreational anglers. This score suggests that full conservation and management would be required. A score of 0 is given if the total revenue and engagement that constitutes a commercial fishery for that stock are less than XX% of the total that constitutes the commercial FMP fishery, and if the total number

³⁷ Hocking D, Lanning J, Galuardi B, Smith L, Winiarski K, McAfee B (2026). *MAPS: Production system for matching and monitoring catch at the Greater Atlantic Regional Fisheries Office*. R package version 2.2.2, <https://apps-garfo.fisheries.noaa.gov/cams>.

³⁸ [NOAA Fisheries | Marine Recreational Information Program](#)

³⁹ [PFMC | 10 Factor Analysis of 40 Groundfish Species](#)

⁴⁰ Hocking D, Lanning J, Galuardi B, Smith L, Winiarski K, McAfee B (2026). *MAPS: Production system for matching and monitoring catch at the Greater Atlantic Regional Fisheries Office*. R package version 2.2.2, <https://apps-garfo.fisheries.noaa.gov/cams>.

⁴¹ [NOAA Fisheries | Marine Recreational Information Program](#)

of targeted recreational trips is less than XX% of the total number of trips taken by recreational anglers. This suggests that ecosystem component status may be appropriate. Stocks that are currently managed as zero-possession or prohibited species within the FMP should be excluded from this factor analysis and are thus given a score of 0 by default.

vi. Is the fishery important to the Nation or regional economy?

Similarly, stocks are considered important to the economy if they are direct targets in Federal fisheries and are generating substantial local or regional revenues. Stocks that generate substantial local or regional revenues, either individually or within a complex, could be identified as stocks in need of conservation and management or as an ecosystem component. An ecosystem component designation could be supported under circumstances where stocks generate minimal local or regional revenue and/or there is a desire to implement additional monitoring.

“Substantial importance” is evaluated based on the total revenue for a stock’s fishery (as defined by NOAA fisheries⁴²) compared to the total revenue for the FMP fishery in which it is managed under and/or the total revenue for all the FMPs in the New England region. If the stock is currently managed under an FMP, importance to the FMP fishery is defined based on the proportion of total landings and revenue generated at the primary ports for the fishery, as defined by the Council, i.e., the total revenue aggregated across all the stocks in the FMP fishery. The analysis summarizes time series data of commercial landings and revenues sourced from CAMS⁴³. Commercial revenue is aggregated over the most recent five years for the stock at each of the ports in which it is landed. Those ports are then filtered based on whether they are one of the five ports for the FMP fishery. The same approach is applied across FMPs to determine the importance of the stock’s fishery to the overall regional New England economy. Recreational revenue data is limited; however, the analysis uses recreational catch and effort data from MRIP⁴⁴ to evaluate the level of recreational harvest and number of targeted trips (as defined in **Factor iv**) as a proxy to determine the stock’s relative importance to the economy.

If the stock generates XX% of the landings or revenue at three or more top ports for the FMP, a score of 1 is given (indicating possible need for conservation and management), whereas if the stock generates XX% landings or revenue at less than three of the top ports for the FMP, a score of 0 is given (indicating possible suitability of EC designation). Stocks that are currently managed as zero-possession or prohibited species within the FMP should be excluded from this factor analysis and are thus given a score of 0 by default.

vii. Is there a need to resolve competing interests and conflicts among user groups and would an FMP further that resolution?

Fishery management plans have the potential to mitigate or resolve conflicts or competing interests among user groups. Such conflicts could arise between individuals participating in the fishery, between participants in competing federal fisheries, or with other marine use sectors (e.g. offshore wind development, aquaculture, etc.).

While fishery dependent data could support evaluation of this factor, for example by investigating the multiple different fisheries that catch or otherwise interact with stock, an analysis based only on these data would provide an incomplete picture of these conflicts, which are likely nuanced. Thus, the main

⁴² [NOAA Fisheries | NSA NS Guidelines Final Rule: Response to Comments](#)

⁴³ Hocking D, Lanning J, Galuardi B, Smith L, Winiarski K, McAfee B (2026). *MAPS: Production system for matching and monitoring catch at the Greater Atlantic Regional Fisheries Office*. R package version 2.2.2, <https://apps-garfo.fisheries.noaa.gov/cams>.

⁴⁴ [NOAA Fisheries | Marine Recreational Information Program](#)

data source for this factor is expert opinion and qualitative information from FMP Plan Coordinators and Plan Development Teams (PDTs). Information should also be sought out from the Council's Advisory Panels (AP).

A score of 1 is given if there are existing and persistent conflicts or multiple user interests. This would suggest that a stock should continue to be included in an FMP or be added to an FMP for conservation and management purposes. A score of 0 is given if conflicts are not apparent or have been previously resolved, and if continued management measures within an FMP are not deemed necessary to minimize future conflicts. A score of 0 could also be given if conflicts exist but are minimal. A score of 0 would suggest that a stock may be considered for removal from conservation and management under an FMP and designated as an EC.

viii. What is the economic condition of the fishery, and would an FMP produce more efficient utilization?

This factor assesses the health or profitability of the fishery that harvests a potential EC stock as it pertains to the commercial and recreational components. Some indicators that might describe the economic condition or health of a fishery include vessel activity, landings, and revenue. Landings and revenue can be considered as absolute numbers, and relative to the catch limits set for the resource. If there is high or efficient utilization of the stock within the fishery (i.e., most of the ACL is harvested), this may warrant maintaining the stock as one in need of conservation and management within the FMP. In cases where utilization is low and the stock generates minimal contributions to the overall condition of the fishery; this may warrant designating the stock as an ecosystem component.

To determine the economic condition of a fishery, the analysis summarizes time series data of commercial catch and trips sourced from CAMS⁴⁵ and recreational effort from MRIP⁴⁶. Aggregations of annual commercial revenue, landings, number of trips, number of vessels, and number of dealers focus on the ports that reported landings of the specific stock to define that stock's fishery and participation. A linear regression is applied to each of the fishery indicators to identify their trend over the most recent five fishing years (increasing, decreasing, no change). Recreational revenue data is limited; however, the analysis uses recreational effort data from MRIP⁴⁷ and applies the same approach as that for the commercial fishery to evaluate the trend in number of targeted trips (as defined in **Factor iv**) over the most recent five fishing years as a proxy to determine the stock's relative recreational economic condition. Additionally, the analysis includes expert opinion from FMP Plan Coordinators, PDTs, and APs as time permits, regarding the expansion or contraction of a fishery over the same timeframe for currently managed or non-managed stocks.

A score of 1 is given if trends in fishery indicators (e.g., landings, revenue, trips, vessels, etc.) for the stock are increasing or constant, indicating an expanding or stable fishery, respectively. A score of 0 is given if trends in fishery indicators (e.g. landings, revenue, trips, vessels, etc.) for the stock are decreasing, indicating a contracting fishery. Stocks that are currently managed as zero-possession or prohibited species within an FMP should be excluded from this factor analysis and are thus given a score of 0 by default. Because management measures for the stock could be appropriate regardless of the score given, the results for this factor should be considered in conjunction with the other 9 factors.

⁴⁵ Hocking D, Lanning J, Galuardi B, Smith L, Winiarski K, McAfee B (2026). *MAPS: Production system for matching and monitoring catch at the Greater Atlantic Regional Fisheries Office*. R package version 2.2.2, <https://apps-garfo.fisheries.noaa.gov/cams>.

⁴⁶ [NOAA Fisheries | Marine Recreational Information Program](#)

⁴⁷ [NOAA Fisheries | Marine Recreational Information Program](#)

ix. Are there needs of a developing fishery, and would an FMP foster orderly growth?

An FMP may afford some measures and protections to manage and conserve stocks within a developing fishery before it becomes subject to overfishing or is overfished. This factor is not applicable to stocks that are currently managed by the Council.

The analysis for this factor is like **Factor ii** and **viii**, whereby total catch, revenue, number of trips, vessels and dealers and their trends over time are used as indicators of a developing fishery. A score of 1 is given if trends in fishery indicators (e.g. landings, revenue, trips, vessels, etc.) for the stock are increasing, indicating a developing fishery. A score of 0 is given if trends in fishery indicators (e.g. landings, revenue, trips, vessels, etc.) for the stock are decreasing, indicating a lack of a developing fishery. Stocks that are currently managed within an FMP should be excluded from this factor analysis given there is an existing developed fishery and are thus given a score of 0 by default. Because management measures for the stock could be appropriate regardless of the score given, the results for this factor should be considered in conjunction with the other 9 factors.

x. What is the extent to which the fishery is 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?

In many circumstances, adequate management of a fishery by states, joint state and Federal programs, or another Federal FMP would weigh in favor of removing a stock from an FMP and/or designating a stock as an ecosystem component. In the absence of adequate management, stocks should be added or maintained within an FMP as one in need of conservation and management.

This factor aims to briefly describe but not evaluate the effectiveness of those programs. Sources of data for this factor are derived from state catch data and other Council reports such as the Council's Essential Fish Habitat (EFH) Review Component 3 Report⁴⁸. Notably though, many species that could be evaluated for the EC designation are currently managed under a NEFMC FMP, and as such the analysis for this factor is dependent on a lack of response to their existing management measures to warrant a potential EC designation and should be considered alongside **Factor i**.

A score of 0 is given if there is adequate management either by states, joint state and Federal programs, or another Federal FMP or the stock is responding to existing management measures. A score of 1 is given if there is adequate management either by states, joint state and Federal programs, or another Federal FMP.

III. Considerations for Additional Information

The Council has latitude to consider other information as necessary when adding or removing species from an FMP beyond the factors considered in the first two parts of the screening.

Productivity and Susceptibility Analysis (PSA)

One such source of information could be derived by a Productivity and Susceptibility Analysis. This analysis was developed in 2009 by an NMFS Vulnerability Working Group⁴⁹ and has been implemented

⁴⁸ Coakley, Jessica, Michelle Bachman, Jennifer Couture, Julia Livermore, and Anne Simpson. 2025. Non Magnuson Stevens Act Fishing Activities in State Waters of the Northeastern U.S. Continental Shelf. 45p. Available at <https://www.nefmc.org/management-plans/habitat> and <https://www.mafmc.org/habitat>.

⁴⁹ Patrick, W. S., P. Spencer, O. Ormseth, J. Cope, J. Field, D. Kobayashi, T. Gedamke, E. Cortés, K. Bigelow, W. Overholtz, J. Link, and P. Lawson. 2009. Use of productivity and susceptibility indices to determine stock

as a part of the PFMC's evaluation process for EC designations. It assesses a stock's vulnerability to fishing pressures based on a suite of productivity and susceptibility attributes that combine to an overall vulnerability score and could be used to supplement the overall EC evaluation for a stock when the overfished or overfishing status is unknown or there is no formal empirical or analytical assessment.

PSAs should be conducted according to the methodology detailed in Patrick et al. 2010⁵⁰ alongside the evaluation of the factors and criteria detailed in the sections above. If a PSA is being used to supplement the absence of an assessment and a NOAA determination of stock status, a score of 1 is given if the vulnerability score is greater than 2.0, which would suggest the stock is moderately to highly vulnerable to fishing pressures and likely to be subject to overfishing or becoming overfished. This score would support maintaining the stock within the FMP under full conservation and management. A score of 0 is given if the vulnerability score is 2.0 or lower which would suggest the stock is minimally vulnerable to fishing pressures and would likely not be subject to overfishing or becoming overfished. This would support the designation of a stock as an ecosystem component. A threshold level of 2 is adopted here to mirror the process adopted by the PFMC⁵¹.

Screening Results

A total of twelve questions is scored across the two parts where a total score of **XX** indicates the stock may be eligible for an EC Species designation. Should the results of the screening signal the eligibility of a stock for EC designation, an amendment action must be prioritized and initiated to develop designation alternatives and management measures. Through the **Amendment Development** process, the PDTs may conduct more stock-specific or FMP-specific analyses as they see fit that supplement the screening analyses and should consult APs to validate the findings.

The results of the screening process should not be used in lieu of more detailed analyses required to designate EC species. Rather, in documenting rationale for designation, the factors as outlined in NS Guideline Factor Evaluation should be considered such that **Factors (i) – (iii)** are considered first, followed by **Factors (iv) – (ix)**, which set forth key economic, social, or other reasons, and finally **Factor (x)** should be considered last, according to NS Guidelines ([50 CFR 600.305\(c\)\(4\)](#)).

vulnerability, with example applications to six U.S. fisheries. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-F/SPO-101, 90 p.

⁵⁰ Patrick, W. S., Spencer, P., Link, J., Cope, J., Field, J., Kobayashi, D., Lawson, P., Gedamke, T., Cortés, E., Orsmeth, O., Bigelow, K., & Overholtz, W. (2010). Using productivity and susceptibility indices to assess the vulnerability of United States fish stocks to overfishing. *Fishery Bulletin*, 108(3).

⁵¹ [PFMC | Amendment 24 to the Pacific Coast Groundfish Fishery Management Plan](#)

Acronyms

AP – Advisory Panel

BSAI - Bering Strait and Aleutian Islands

CAMS – Catch Accounting and Monitoring System

CFR – Code of Federal Regulations

CVA – Climate Vulnerability Assessment

EBFM – Ecosystem Based Fisheries Management

EC – Ecosystem Component

EFH – Essential Fish Habitat

FEP – Fishery Ecosystem Plan

FMP – Fishery Management Plan

GOA - Gulf of Alaska

IRA – Inflation Reduction Act

MAFMC – Mid-Atlantic Fishery Management Council

MRIP – Marine Recreational Information Program

MSA – Magnusen-Stevens Act

NEFMC – New England Fishery Management Council

NMFS – National Marine Fisheries Service

NS – National Standard

PDT – Plan Development Team

PFMC – Pacific Fishery Management Council

PSA – Productivity and Susceptibility Analysis

SAFMC – South Atlantic Fishery Management Council

SOE – State of the Ecosystem

WPFMC – Western Pacific Fishery Management Council

APPENDICES

1. Case Study Species Rationale
2. A NEFMC Pilot Evaluation for Ecosystem Component Designation
 - a. Report out + EC decision matrix
3. Report Template / GitHub Repo
4. Ongoing analysis report template / dashboard

DRAFT