

**2025 Widow Rockfish Assessment – Considerations  
for Setting 2027-2028 Harvest Specifications**

**Background**

The Magnuson Stevens Act (MSA) broadly mandates that fishery resources should be managed to achieve, on a continuing basis, the optimum yield (OY) from each fishery (16 U.S.C. 1801). The OY is the maximum sustainable yield (MSY) as reduced by relevant economic, social, or ecological factors (16 U.S.C. 1802). *MSY* is the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological, environmental conditions and fishery technological characteristics (*e.g.*, gear selectivity), and the distribution of catch among fleets ([50 CFR 600.310\(e\)\(1\)\(i\)\(A\)](#)). The MSA also requires that fishing levels do not exceed a rate (overfishing) or level of fishing mortality (overfished) that jeopardizes the capacity of a fishery to produce the MSY on a continuing basis (16 U.S.C. 1802; 16 U.S.C. 1851). These concepts as fishery management tenets are provided for in the MSA. Further detail on these requirements, and options for how the National Marine Fisheries Service (NMFS) and the regional fishery management councils established under the MSA (Councils) may manage fisheries to meet these requirements, are provided in the National Standard 1 guidelines ([50 CFR 660.310](#)). Under the National Standard 1 guidelines, there is broad latitude for how these concepts are specified and used by the Councils to manage specific fisheries.

Councils are charged with describing MSY and OY reference points and status determination criteria (SDC) in a fishery management plan (FMP). The National Standard 1 guidelines include information on how these reference points can be determined ([50 CFR 600.310\(c\)](#)). SDCs are management policies developed by Councils, informed by their respective scientific and statistical committee (SSC). Each SSC shall provide its Council ongoing scientific advice for fishery management decisions, within the framework provided by the relevant FMP adopted by the Council, including recommendations for acceptable biological catch (ABC), preventing overfishing, MSY, achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of fishing practices (16 U.S.C. 1852(g)(1)(B)). Council recommendations on annual catch limits (ACLs) may not exceed the fishing level recommendations of the SSC or peer review process (16 U.S.C. 1852(h)(6)).

National Standard 2 requires that these catch limit decisions, like all fishery conservation and management measures, are developed based on the best scientific information available (BSIA).

National standard 2 guidelines acknowledge that fishery management depends on the quality and thorough analysis of the information available to effectively conserve and manage fishery resources ([50 CFR 315\(a\)\(1\)](#)). Accordingly, under the guidelines, the MSA's BSIA policy is focused on a process to develop and review scientific information, rather than on an explicit outcome or product. The guidelines provide that scientific information that is used to inform decision making should include an evaluation of its uncertainty and identify gaps in the information. Additionally, management decisions should recognize the biological (e.g., overfishing), ecological, sociological, and economic (e.g., loss of fishery benefits) risks associated with the sources of uncertainty and gaps in the scientific information ([50 CFR 315\(a\)\(2\)](#)).

The National Standard 2 guidelines specify that science is a dynamic process and BSIA is not static ([50 CFR 315\(a\)\(5\)](#)). Further, the guidelines identify criteria to consider when evaluating BSIA: relevance, inclusiveness, objectivity, transparency and openness, timeliness, verification and validation, and peer review, as appropriate ([50 CFR 315\(a\)\(6\)](#)). These criteria provide that a BSIA evaluation should include and openly address alternative points of view, and that scientific information should be presented in an accurate, clear, complete, and balanced manner that acknowledges data gaps and limitations. With respect to historical information, the National Standard 2 guidelines instruct that such information should be evaluated for its relevance to inform the current situation and that historical data (e.g., abundance, environmental, catch statistics, market and trade trends) may provide time-series information to inform management decisions. In sum, under the guidelines, BSIA is not a single study, assessment, or other piece of information. Rather, it is considered and evaluated as a suite of information, with explicit consideration of the context and uncertainty of the scientific information considered, as well as the management purposes and decisions for which the specific information is informative.

Stock assessments provide critical scientific information for fishery management. A Council's SDC policies are applied to information from a stock assessment to establish numerical reference points (harvest specifications) and to determine the status of stocks across each SDC. Stock assessments must be subject to a peer review process, the tenets of which are outlined in the NOAA policy directive on BSIA ([PD 01-101-10](#)). Consistent with regional or fishery-specific terms of reference, the charge to peer review panels is to explicitly and separately consider whether an assessment provides the scientific basis for four topics, including for use in establishing status determinations and/or for use in management (i.e., setting overfishing limit (OFL) and ABC). NOAA's policy directive specifies that the peer review may conclude that an assessment supports some, but not all, of the topics identified. For Pacific Coast groundfish, the roles and responsibilities relative to BSIA are set out in the regional BSIA framework ([https://media.fisheries.noaa.gov/2022-07/WC%20BSIA%20Regional%20Framework%20Summary%20Document\\_FINAL.pdf](https://media.fisheries.noaa.gov/2022-07/WC%20BSIA%20Regional%20Framework%20Summary%20Document_FINAL.pdf)).

As noted in the NOAA policy directive on BSIA ([PD 01-101-10](#)), “In general, catch recommendations made by the Fishery Management Councils’ Scientific and Statistical Committees (SSCs) lead to a Council’s catch specifications, which are reviewed by NOAA Fisheries for approval. Although it is ultimately the responsibility of NOAA Fisheries to make stock status determinations, approve catch specifications, and certify that these decisions are consistent with BSIA, the agency relies on input and advice from the SSCs and peer review processes.”

The [Pacific Coast groundfish terms of reference](#) set out guidance for stock assessments and provide information on the types of assessment products and their appropriate utility. Specific to update assessments, it notes “For assessment models that have relatively few outstanding modeling or data issues and provide relatively stable results as new data are added, an “update assessment” may be preferable when more current information is desired and there are other priorities for full assessments.” Because update assessments are iterations on an earlier benchmark assessment, considerations of BSIA incorporate current and past assessments for these stocks. Additionally, where an update assessment substantially changes the scientific understanding of a stock and its status – rather than fills out the picture of a stock consistent with existing scientific and other historical information – such an assessment may warrant scrutiny and it may be appropriate to limit the application of the assessment in management decisions, pending follow-up assessment work.

The Pacific Coast Groundfish FMP sets out three methods of determining OFLs and ABCs, referred to as Category 1, 2, and 3 (FMP sections 4.4.1, 4.4.2, and 4.4.3 respectively). Each method provides a typical approach based on the data available in the assessment as well as uncertainty. Category recommendations are a component of the BSIA determination on an assessment. Additionally, Chapter 5 of the FMP provides the framework for the typical process of developing the numerical reference points for stocks for each biennium. [see Appendix 1 for relevant FMP excerpts] Within the options in the FMP for determining reference points, the SSC and Council have latitude to develop alternative approaches, with robust rationale and a record that supports and illustrates the how and why deviation is needed. Further, the SSC and Council may elect to consider alternatives developed either by assessment staff, or that utilize specific aspects of the available assessment information to provide alternative input on stock status, with sufficient rationale.

## **Widow Rockfish**

While considering the merits of the widow rockfish update assessment within the context of the stock and the fishery, the broader groundfish assessment context is important as well. For example, recent experiences with sablefish had an update assessment estimating a substantial increase in the estimate of biomass leading to a significant increase in catch limits only for the

scientific understanding of the stock and new limits to be reversed in the next cycle, following a new benchmark assessment. Resource limitations, both in assessment capacity and data capacity, create the need for update assessments and data moderate assessments as tools. However, as the Terms of Reference for assessments suggest, these assessment products are assumed most appropriate for informing management decisions when stocks/fisheries are well assessed, well monitored, stable, etc. An update assessment or data moderate assessment<sup>1</sup> that substantially changes the perception of stock status or trajectories may warrant a need for further evaluation, including additional assessment work, before implementing significant management changes based on the new information.

Widow rockfish was determined overfished in the early 2000's and then rebuilt, though some later assessments suggested it may have never been overfished. When the Trawl Rationalization Program began in 2011, widow rockfish was allocated as a bycatch species, and through a separate Council action and rulemaking was later reallocated as a target species (82 FR 55775; December 26, 2017). For widow rockfish, a benchmark assessment conducted in 2015 occurred at (and ushered in) the start of the re-emergence of the midwater rockfish fishery. An update assessment for widow rockfish was completed in 2019. For many years, catch of widow rockfish with midwater trawl gear was restricted to the primary whiting season, until 2018, when NMFS issued the first exempted fishing permit (EFP) to allow a year-round midwater rockfish fishery. This EFP continues today. Over the 10 years since the benchmark assessment, in 2015, the fishery has continued to change. The assessment currently under evaluation by the SSC does not provide a full appraisal of these changes.

A second update assessment was scheduled in 2025 and is currently under evaluation by the SSC. The substantial change in stock projections and estimated stock productivity in the new assessment resulted in the assessment being recommended for supplemental review. Based on these issues, the SSC could endorse the assessment as reflecting BSIA but recommend limiting its application for use in management decisions. The SSC should also include an evaluation of the new assessment's uncertainty in its report, and identify any relevant gaps in information, or other caveats associated with the new scientific information's use to inform decision making.

Additionally, based on the substantial change in the understanding of the stock suggested by the assessment, and consistent with the MSA's requirement to prevent overfishing and the Council's policy to target a stock size for rockfish above an unfished biomass of 40 percent or  $B_{40\%}$  (Chapter 4.3 of the FMP), the Council could request the SSC evaluate the impacts and risks of using an alternative method to develop reference points for widow rockfish for the 2027-2028 biennium. This approach could occur even if the SSC determined that the 2025 widow rockfish update assessment reflects BSIA. In particular, this pathway may be most appropriate when

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<sup>1</sup> California quillback rockfish is an example of a data moderate estimate providing a low biomass estimate and estimating the stock as overfished. However, a benchmark estimate 4 years later estimated it was never overfished.

utilized for a short period of time (e.g., a biennium) with the high likelihood of a benchmark assessment for this stock in the next round of assessments, which would allow for another careful scientific evaluation of the stock to inform future decision making. A new benchmark assessment for widow rockfish in 2027 would allow for a more full evaluation of the changes in the fishery since the 2015 benchmark assessment.

In general, for rockfish, a policy of setting harvest to the  $F_{50\%}$  MSY whenever the stock size is above  $B_{40\%}$  would be expected to lead to a stock that would decline to near  $B_{40\%}$ , and thus be consistent with the requirements of the FMP. An evaluation of whether an alternative method appropriately prevents overfishing, while also providing for MSY over the long-term, would be important. Overall, the alternative methods to develop OFLs for widow rockfish currently under consideration appear consistent with the MSA, the National Standards, and the framework for management of this stock laid out under the FMP. The evaluation of impacts and risks would be necessary to ultimately support and provide the rationale for adoption, however.

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## Appendix 1: Pacific Coast Groundfish FMP excerpts

### CHAPTER 4 PREVENTING OVERFISHING AND ACHIEVING OPTIMUM YIELD

#### 4.3 Determination of MSY, or MSY Proxy, and BMSY

Harvest policies are to be specified according to standard reference points such as MSY, where MSY is interpreted as a maximum average achievable catch under prevailing ecological and environmental conditions over a prolonged period. The long-term average biomass associated with fishing at FMSY is BMSY. In this FMP, MSY generally refers to a constant F control rule that is assumed to produce the maximum average yield over time while protecting the spawning potential of the stock. Thus, the constant F control rule is generally the proxy for the MSY control rule. Fishing rates above FMSY eventually result in biomass smaller than BMSY and produce less harvestable fish on a sustainable basis. The biomass level that produces MSY (i.e., BMSY) is generally unknown and assumed to be variable over time due to long-term fluctuations in ocean conditions, so that no single value is appropriate. During periods of unfavorable environmental conditions, it is important to account for reduced sustainable yield levels.

One problem with an FMSY control rule is that it is tightly linked to an assumed level of density-dependence in recruitment, and there is insufficient information to determine the level of density-dependence in recruitment for many west coast groundfish stocks. Therefore, the use of approximations or proxies is necessary. Absent a more accurate determination of FMSY, the Council will apply default MSY proxies. The 2015 default FMSY proxies are: F30% for flatfish, F40% for whiting, F50% for rockfish (including thornyheads), F50% for elasmobranchs, and F45% for roundfish species such as sablefish and lingcod. The default FMSY proxies (F30%, F40%, F45%, and F50%) are science-based values that are expected to be modified from time to time as scientific knowledge improves. The default FMSY proxies in use for the current biennial harvest specifications period can be found in the Groundfish Stock Assessment and Fishery Evaluation (SAFE) document. If available information is sufficient, values of FMSY, BMSY, and more appropriate 25 harvest control rules may be developed for any species or species group.

At this time, it is generally believed that the FMSY proxies strike a balance between obtaining a large fraction of the MSY if recruitment is highly insensitive to reductions in spawning biomass and preventing a rapid depletion in stock abundance if recruitment is found to be extremely sensitive to reductions in spawning biomass. The long-term expected yield under an FMSY proxy policy depends upon the (unknown) level of density-dependence in recruitment. The F45% level of harvest, for example, will reduce the average lifetime egg production by each

female entering the stock to 45 percent of the lifetime egg production for females that are unfished.

Under a Beverton-Holt stock-recruitment relationship, which is the form of relationship commonly assumed for west coast groundfish stocks, the level of recruitment is expected to decline as a stock is fished at F45% and the expected value for the BMSY proxy is less than 45 percent of the unfished biomass. A biomass level of 25 percent of unfished (BUNFISHED) is considered a reasonable proxy for BMSY for west coast flatfish species and a biomass level of 40 percent of BUNFISHED is considered reasonable for other west coast groundfish species. The short-term yield under an F45% policy will vary as the abundance of the exploitable stock varies. This is true for any fishing policy that is based on a constant exploitation rate. The abundance of the stock will vary, because of the effects of fishing, and because of natural variation in recruitment. When stock abundance is high (i.e., near its average unfished level), short-term annual yields can be approximately two to three times greater than the expected long-term average annual yield. For many of the long-lived groundfish species common on the west coast, this “fishing down” transition can take decades. Many of the declines in ABC that occurred during the 1980s were the result of this transition from a lightly exploited, high abundance stock level to a fully exploited, moderately abundant stock level. Further declines below the overfished levels in the 1990s were due in large part to harvest rate policies that were later discovered to not be sustainable. Stock assessments conducted during the late 1990s and early 2000s indicated that west coast groundfish stocks likely have lower levels of productivity than other similar species worldwide. Based on this retrospective view, harvest rate policies in the 1990s were subsequently thought to be too high to maintain stocks at BMSY. At various times the Council has revised its harvest rate policies as additional information has accumulated regarding the productivity of groundfish species as described below.

#### **4.4 Determination of OFL and ABC**

In establishing OYs and ACLs for west coast groundfish, this FMP utilizes the interim step of calculating OFLs and ABCs for major stocks or management units (groups of species). OFL is the MSY harvest level associated with the current stock abundance. Over the long term, if OFLs are fully harvested, the average of the OFLs would be MSY. The SSC recommends the OFL based on application of a proxy or deterministic  $F_{MSY}$  harvest rate to the estimated exploitable biomass of the stock or, for unassessed stocks, an historical catch-based approach (e.g., average catch, depletion-corrected average catch, or depletion-based stock reduction analysis).

The ABC is a harvest specification set below the OFL and is a threshold that incorporates a scientific uncertainty buffer against overfishing (i.e., exceeding the OFL). The ABC is adopted by the Council based on its preferred level of risk aversion in combination with the recommendations of the SSC regarding scientific uncertainty. The ABC is based on a percentage reduction of the OFL. In cases where scientific uncertainty associated with estimating an OFL

( $\sigma$ ) is quantified by the SSC, the percentage reduction that defines the scientific uncertainty buffer and the ABC can be determined by translating the estimated  $\sigma$  to a range of probability of overfishing ( $P^*$ ) values. Each  $P^*$  value is then mapped to its corresponding buffer fraction<sup>2</sup>. The Council then determines the preferred level of risk aversion by selecting an appropriate  $P^*$  value, accordingly. In cases where the  $P^*$  approach is used, the upper limit of  $P^*$  values considered will be 0.45.

#### **4.4.1 Stocks with OFL and ABC Set by Data-Rich Quantitative Assessments, Category 1**

The stocks with data-rich quantitative assessments are those that have recently been assessed by a catch-at-age or catch-at-length analysis and judged to be informative for deciding stock-specific harvest specifications by the SSC. Annual evaluation of the appropriate MSY proxy (e.g., F45%) for species in this category will require some specific information in the SAFE document. Estimated age- or length-specific maturity, growth, and availability to the fishery (with evaluation of changes over time in these characteristics) are sufficient to determine the relationship between fishing mortality and yield-per-recruit and spawning biomass-per-recruit. The estimated time series of recruitment, spawning biomass, and fishing mortality are also required to determine whether recent trends indicate a point of concern. In general, OFL will be calculated by applying F45% (or F40%, F50%, or other established MSY proxy) to the best estimate of current biomass. This current biomass estimate may be for a single year or the average of the present and several future years. Thus, OFL may be intended to remain constant over a period of two or more years.

The ABC, which incorporates a scientific uncertainty buffer against overfishing, can be calculated for Category 1 species using the probability of overfishing ( $P^*$ ) approach. The SSC quantifies the variability in biomass estimates ( $\sigma$ , sigma) for Category 1 species from stock assessments and the Council chooses the  $P^*$  as described above to determine the size of the scientific uncertainty buffer. The SSC has also recommended larger biomass variability ( $\sigma$ )<sup>3</sup> proxy values for Category 2 and 3 stocks. In cases where the biomass variance estimated for a Category 1 stock is greater than the proxy value for Category 1 stocks, the internally estimated biomass variance is used instead for calculating the ABC buffer for that stock.

Approaches to quantifying the variability on biomass estimates include using the standard error about the estimated biomass of a stock in the most recently approved assessment and estimating the between-assessment variance in biomass estimates for a stock with multiple assessments or for all Category 1 stocks with multiple assessments in the meta-analysis. A proxy variability (sigma) can be calculated using this latter approach for all or some Category 1 species. These

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<sup>2</sup> Since estimated OFLs are median estimates, there is a 50% probability that the OFL is overestimated. Therefore, a  $P^*$  of 0.5 equates to no scientific uncertainty or, in other words, the ABC is set equal to the OFL.

<sup>3</sup> Sigma is actually a standard deviation; sigma<sup>2</sup> is a variance.

approaches are not exclusive and the SSC may recommend additional approaches to quantifying scientific uncertainty for Category 1 species, including approaches that are specific to individual stocks. Once scientific uncertainty is quantified, it is mapped to an estimated  $P^*$ . The Council chooses the ABC from the SSC recommended range based on its choice of  $P^*$ , which is a risk-assessment policy decision. The  $P^*$ -Sigma approach for quantifying scientific uncertainty will be the default approach for Category 1 species unless an SSC-recommended method is adopted by the Council during the biennial specification process.

#### **4.4.2 Stocks with OFL and ABC Set by Data-Moderate Quantitative Assessment, Category 2**

These stocks with OFL set by data-moderate quantitative assessments are less robust and more uncertain than Category 1 assessments, but do inform stock status by including at least one time series index of relative abundance. Category 2 stocks may have a recent assessment that was conducted using a Council-approved data-moderate assessment approach (e.g., extended DB-SRA) or that was judged to be relatively data-poor by the SSC (e.g., inadequate compositional data to estimate annual recruitment deviations). Detailed biological information (i.e., age and/or length composition data) is not routinely available or used in an assessment for these stocks, and OFL levels have typically been established on the basis of a data-moderate assessment which uses an historical catch-based approach coupled with at least one index of relative abundance. The Council places high priority on improving the information for managing these stocks so that they may be moved to Category 1 status.

Since there is greater scientific uncertainty for Category 2 stocks relative to Category 1 stocks, the scientific uncertainty buffer is generally greater than that recommended for Category 1 stocks. A  $P^*$  approach can be used to determine the ABC. In such cases, the SSC recommends a value for  $\sigma$ , which is typically larger than an associated  $\sigma$  for Category 1 stocks, and the Council chooses the  $P^*$  value to determine the size of the scientific uncertainty buffer. While other approaches for determining the scientific uncertainty in calculating the OFL (i.e., determining the ABC) are allowed (see below), only the  $P^*$  approach has been used since implementation of the new harvest management framework in 2011 under Amendment 23.

The following approaches can be considered for setting the ABC for Category 2 stocks:

- Apply a buffer of .25 for Category 2 stocks or
- Set the value of sigma for Category 2 stocks to two times the coefficient of variation (CV) for Category 1 stocks. These specific values are not based on a formal analysis of assessment outcomes and could change substantially when the SSC reviews additional analyses.

These approaches for quantifying scientific uncertainty will be the default approaches for Category 2 species unless an SSC-recommended method is adopted by the Council during the biennial specification process.

#### **4.4.3 Stocks with OFL and ABC Values Set by Data-Poor Assessment, Category 3**

Of the 100-plus groundfish species managed under the FMP, OFL values have been established for only about 32 based on Category 1 or 2 assessments. The remaining species are incidentally landed and usually are not listed separately on fish landing receipts. Information from fishery independent surveys is often lacking for these stocks, because of their low abundance or they are not vulnerable to survey sampling gear. Until sufficient quantities of at-sea observer program data are available or surveys of other fish habitats are conducted, it is unlikely that there will be sufficient data to upgrade the assessment capabilities or to determine status of these stocks. OFL values are established for these Category 3 stocks based on an historical catch-based approach (e.g., average catch, depletion-corrected average catch, or depletion-based stock reduction analysis) or qualitative information, including advice from the Council's advisory entities.

Since there is greater scientific uncertainty for Category 3 stocks relative to Category 1 or 2 stocks, the scientific uncertainty buffer for such stocks is generally greater than that recommended for Category 1 and 2 stocks. A P\* approach can be used to determine the ABC. In such cases, the SSC recommends a value for  $\sigma$  (sigma), which is typically larger than an associated  $\sigma$  for Category 1 or 2 stocks, and the Council chooses the P\* value to determine the size of the scientific uncertainty buffer. While other approaches for determining the scientific uncertainty in calculating the OFL (i.e., determining the ABC) are allowed (see below), only the P\* approach has been used since implementation of the new harvest management framework in 2011 under Amendment 23.

The following approaches can be considered for setting the ABC for Category 3 stocks:

- Apply a buffer of 0.5 for Category 3 stocks or
- Set the value of sigma for Category 3 stocks to four times the CV for Category 1 stocks. These specific values are not based on a formal analysis of assessment outcomes and could change substantially when the SSC reviews additional analyses.

These approaches for quantifying scientific uncertainty will be the default approaches for Category 3 species unless an SSC-recommended method is adopted by the Council during the biennial specification process.

## **CHAPTER 5 PERIODIC SPECIFICATION AND APPORTIONMENT OF HARVEST LEVELS**

The ability to establish and adjust harvest levels is the first major tool at the Council's disposal to exercise its resource stewardship responsibilities. Each biennial fishing period, the Council will assess the biological, social, and economic condition of the Pacific Coast groundfish fishery and

update MSY estimates or proxies for specific stocks (management units) where new information on the population dynamics is available. The Council will make this information available to the public in the form of the SAFE document or the NEPA document used to analyze new harvest specifications and management measures described in Section 5.2. Based upon the best scientific information available, the Council will evaluate the current level of fishing relative to the MSY level for stocks where sufficient data are available. Estimates of the OFL for major stocks will be developed, as well as an ABC that accounts for the scientific uncertainty of the stock's estimated biomass. The Council will identify those species or species groups which it proposes to be managed by the establishment of numerical harvest levels (OYs, ACLs, ACTs, harvest guidelines [HGs], or quotas). For those stocks judged to be below their overfished/rebuilding threshold, the Council will develop a stock rebuilding management strategy.

The process for specification of numerical harvest levels includes the estimation of OFL, an ABC specification set below the OFL to account for scientific uncertainty, the establishment of OYs and ACLs for various stocks (may be set equal to the ABC), and the calculation of specified allocations between harvest sectors. The specification of numerical harvest levels described in this chapter is the process of designating and adjusting overall numerical limits for a stock either throughout the entire fishery management area or throughout specified subareas. The process normally occurs biennially between November and June, but can occur under specified circumstances at other times of the fishing year. The Council will identify those ACLs which should be designated for allocation between LE and open access sectors of the commercial industry. Other numerical limits which allocate the resource or which apply to one segment of the fishery and not another would be imposed through one of the management measures processes at either 6.2 C or D in Chapter 6.

The NMFS Regional Administrator will review the Council's recommendations, supporting rationale, public comments, and other relevant information, and, if it is approved, will undertake the appropriate method of implementation. Rejection of a recommendation will be explained in writing. The procedures specified in this chapter do not affect the authority of the U.S. Secretary of Commerce (Secretary) to take emergency regulatory action as provided for in Section 305(c) of the Magnuson-Stevens Act if an emergency exists involving any groundfish resource or to take such other regulatory action as may be necessary to discharge the Secretary's responsibilities under Section 305(d) of the Magnuson-Stevens Act. This chapter describes the steps in this process.

[Amended: 5, 12, 16-1, 17, 18]

## **5.1 General Overview of the Harvest Specifications and Management Process**

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

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

FMP. This section supersedes other provisions of this FMP relating to foreign and joint venture fishing.

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

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

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

[Amended: 5, 12, 16-1, 17, 23, 24]