North Pacific Fishery Management Council

Simon Kinneen, Chair | David Witherell, Executive Director
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October 21, 2021

Ms. Marian Macpherson, Acting Branch Chief
Office of Sustainable Fisheries
National Oceanic and Atmospheric Administration
Office of Science and Technology
1315 East-West Highway, 13th Floor
Silver Spring, MD 20910

Dear Ms. Macpherson:

During its October 2021 meeting, the North Pacific Fishery Management Council's (Council) Scientific
and Statistical Committee (SSC) received a presentation on behalf of a subgroup of the SSC that drafted
written comments in response to the "Draft NS1 Technical Guidance Subgroup 3 Tech Memo: Managing
with ACLs for data-limited stocks in federal fishery management plans - Review and recommendations
for implementing 50 CFR 600.310(h)(2) flexibilities for data limited stocks." The written comments from
the subgroup (attached), which were reviewed and approved by the SSC as a whole, provide a summary
of the literature with relevant references for developing data-poor management approaches. Technical
guidance will be helpful for assessing and perhaps revising some of the approaches to managing data-
poor crab (Tier 5) and groundfish stocks (Tier 6) in the North Pacific region. The Council endorsed the
SSC comments and recommendations.

The Council and the SSC appreciate the opportunity to review and provide comment on the Tech Memo.
The Council is aware of the challenges and limitations of managing data-limited stocks and encourages
the ongoing development of methods necessary to improve the science necessary to promote ongoing
sustainable harvest of North Pacific fishery resources. Please contact Sara Cleaver on Council staff or me
if you have any questions about these comments.

Sincerely,

David Witherell
Executive Director

Enclosure: 1

Subject: Request for Input on: NMFS Technical Guidance Subgroup 3 Tech Memo, Managing with ACLs for data-limited stocks in federal fishery management plans - Review and recommendations for implementing 50 CFR 600.310(h)(2) flexibilities for data limited stocks

Date: October, 2021

From: NPFMC SSC

To: Marian Macpherson, Stephanie Hunt and Kelly Denit

The North Pacific Fishery Management Council's (NPFMC) Scientific and Statistical Committee (SSC) reviewed the draft NMFS technical memorandum "*Managing with ACLs for data-limited stocks in federal fishery management plans - Review and recommendations for implementing 50 CFR 600.310(h)(2) flexibilities for data limited stocks"*. This document describes proposed recommendations from a technical sub-group regarding allowing additional flexibility within National Standard 1 (NS1) guidelines when specifying reference points and management measures for data-limited stocks. The document identifies data-limited methods where standard ACL approaches can be used (e.g., MSY or MSY proxies), and then provides situations where an alternative ACL may be needed. Here we review these situations and recommendations for their applicability and consistency with NPFMC harvest specification processes.

Overall, the SSC found the draft technical memorandum provided a helpful review of options for applying the flexibilities afforded in the National Standard 1 guidelines regarding ACLs, Overfishing Limits (OFLs), and Acceptable Biological Catch (ABC) for data-limited assessments (§ 600.310(h)(2)(2016)). It also provides a useful summary of the literature on potential options for their use in setting ACLs for data-limited stocks. In particular, it provides advice for when and how to use the (h)(2) flexibilities for data-limited stocks. The figures clarify assessment options and consideration of ACLs based on data available. The step-wise recommendations and the examples in the appendix of how to identify stocks for alternative ACL consideration helped to clarify the options and exemplify the discernment necessary for decision-making. The SSC recognizes that there may be stocks in the Gulf of Alaska (GOA), Bering Sea, and Aleutian Islands (BSAI) that could benefit from alternative data-limited assessment methods and potentially alternative ACL considerations, but also acknowledges that time and resources for altering or adding data collection or analyses can be limiting. The option for using rate-based ACLs for data-limited stocks appears to provide a useful avenue in some situations. One caveat to some of the methods and concepts in this technical memorandum and the FishPath examples in the appendix is that they often apply to "target" fisheries, where in the NPFMC, stocks that we would categorize as data-limited are considered "non-target" or incidental catch. An application of rate-based methods to a stock that is either incidentally caught or being actively avoided would be challenging.

In section II.B.1, "*Data-limited Methods that Support ACLs developed through the Standard Approach*", the document provides a considerable discussion of the drawbacks of "average catch" or "catch-scalar" approaches. The SSC agrees that these may not be ideal but, as acknowledged in the technical memorandum, they may represent best scientific information available (BSIA) and therefore may be the most appropriate to use. The SSC considers these methods the BSIA for the truly data-limited stocks currently managed under NPFMC FMPs (i.e., Tier 6 groundfish and Tier 5 crab). While the number of these stocks managed by the NPFMC are few, they usually represent stocks that are least detectable to our core fishery-independent surveys. In the past decade, there has been some debate about the recommended approach in the NPFMC to set the OFLs for data limited species in Tier 6 (groundfish) or Tier 5 (crab), from which ABCs/ACLs are derived. Methods discussed have been average catch, maximum catch, or some percentile of the catch time series, and methods based on predator consumption. Maximum catch methods have been employed cautiously to ensure that the time period being used did not represent a period where the stock was potentially targeted. Average catch has also been used, but can result in creating a "choke stock" when catch is highly variable or uncertain. Due to these uncertainties, the ABC has typically been set between 25 - 40% below the estimated OFL and the ACL is set equal to the ABC. Despite some of the discussed drawbacks and uncertainties, it appears that these methods have performed adequately, as they have not resulted in major industry disruptions or conservation concerns. The Alaska Region's catch estimation and observer program and State of Alaska's observer program are of high quality, so the SSC considers catch-based methods appropriate in these cases. The SSC agrees generally with the recommendations provided in section II.B.1 in principle, but suggests that resources would only be available to pursue these recommendations in specific situations. In particular the recommendation regarding catch-estimator methods that currently states '*Avoid "average catch" and "catch scalar" approaches when data are available to apply other data limited methods*' should be edited to read '*when data are available to apply other data limited methods, analysts should evaluate the applicability of these methods as an alternative to "average catch" and "catch scalar" approaches.*

In section II.B.2, "*Other Data-limited Methods that Provide Management Advice*", the document has a very brief review of alternatives that can be used when methods that produce ACLs in weight or numbers cannot be effectively employed. These situations are generally when a time series of removals are unavailable, sparse or imprecise. The SSC considers this situation to be rare at the NPFMC, even for "ecosystem component" stocks, but may wish to explore the alternatives provided in those cases.

In section II.C, "*Managing with Alternative ACLs in Data-limited Fisheries*", the flowchart is helpful, but the final box with "Rate-based may not be appropriate and alternative ways could be explored" would send the reader to section II.C.3, "*Recommendations for Data-limited Stocks that may Qualify for (h)(2) but Lack Data for Use of Rate-Based Approach*". This section does not seem to provide any specific options at this point except collecting more data and using

conservative buffers, to which one is left unsure what reference points those buffers are to be applied to. For the NPFMC, the SSC expects such a stock may be deemed an "Ecosystem Component" or removed from the FMP entirely.

In section II.C.1, "*When to Consider Proposing an Alternative Approach for Data-Limited Stocks under (h)(2)*", the document proposes that if none of three situations bulleted below are satisfied, an alternative approach may be needed:

- A mostly complete time series of removals and basic life history information
- At least one year of absolute abundance information and basic life history information
- A combination of basic life history information, recent annual removals, and a stock size indicator, such as a relative index of abundance, with an adequate time series to capture the effects of the fishery

The Alaska Region and the AFSC Alaska Observer program provide a robust catch accounting and in-season management system, and thus, removals are well documented for most stocks in the FMPs. In cases where catch accounting is not robust at the species level due to identification difficulties (e.g., squids, octopus, some rockfishes), species are combined into complexes for assessment. In addition, the core bottom trawl fishery-independent surveys generally provide at least some measure of abundance. Tier 6 groundfish and Tier 5 crabs are those where the bottom trawl surveys are deemed unreliable, usually when the stock is either off-bottom (e.g., squid), not well sampled by the gear (e.g., octopus), or trans-boundary (e.g., spiny dogfish). Where basic life history information is lacking, it is usually borrowed from indicator stocks and combined in a complex when available (e.g., some sculpins and rockfish).

In section II.C.1.b, "*Monitoring and Enforcement,*" it is stated that being able to set an ACL is not enough if there is no way to adequately monitor, enforce, and implement AMs if there are overages. As discussed earlier, there is a robust monitoring and in-season management system at NPFMC, and overages of ACLs result in moving a stock to prohibited status, until an OFL is reached, at which time a fishery closure may be instituted.

In the section, "*Recommendation When Proposing to utilize the (h)(2) flexibilities for a data-limited stock*", the SSC agrees that these recommendations are reasonable, but as stated earlier, stocks with these data limitations are unlikely to receive the resources to implement these recommendations.

In section II.C.2., "*Potential Use of Rate-Based ACL as an (h)(2) Alternative for Data-limited Stocks*", the document suggests that a rate-based ACL should be considered. It also suggests "that such a recommendation would need to be proposed as an FMP amendment with a robust record documenting the rationale for the proposed approach and its consistency with the MSA and other applicable law." The SSC notes that the Tier systems outlined in the NPFMC FMPs are flexible enough to successfully manage fisheries in the region. If a proposal for a rate based

approach such as trip limits, size limits or time-area closures were proposed as alternatives to existing ACL measures, this would trigger public review and evaluation prior to inclusion in the FMP. However, it should be noted that these management tools are utilized by the NPFMC to address bycatch, gear conflicts and EFH considerations.

In section, II.C.2", "Calculating the ACL", the document suggests using "management uncertainty" to buffer between, F_{ABC} and F_{ACL}. The SSC suggests that "management uncertainty" applies to Annual Catch Targets, not ACLs.

In section "*Recommendations When Use of Rate-Based ACLs is Proposed for a Data-Limited Stock under (h)(2)*", the document suggests that the same controls and procedures should exist already so that rate-based ACLs could be used. In the North Pacific, there would need to be some additional monitoring infrastructure to apply in-season rate-based management which may not be feasible or practical. For example, the catch accounting system would need to be able to calculate and report in-season estimates of fishing rates to be able to shift or reduce effort, if the goal is to prevent an in-season overage of that rate. One further complication specific to the NPFMC, would be integrating any rate-based ACLs into our current BSAI ecosystem-level cap which is compiled in biomass (i.e., set at two million tons).

In "*Recommendations for Data-limited Stocks that may Qualify for (h)(2) but Lack Data for Use of Rate-Based Approach,*" there should be considerations here for removing a stock from FMPs and/or moving them into the "Ecosystem Component" category, as the SSC believes stocks at this level of data-availability would be rare and management would be unsupported.

The appendix provides regional examples of the use of the FishPath tool to identify fishery and data characteristics to recommend potential management measures that could be explored and their associated caveats. One example provided was the Alaska shark complexes and concluded that a biomass-based OFL was not supported, but FishPath or the authors do not appear to provide an alternative. One SSC member explored the tool on one data-poor stock (Pacific sleeper shark) and found that the tool provided lots of interesting outputs, but not a clear path toward when and how alternative ACLs might be used. A concrete example of when and how a rate-based ACL has been implemented (if it has) would have been a helpful addition.

The Tech Memo could benefit from some specific examples that illustrate how data-limited approaches have been implemented to evaluate stock status based on indicators and how these are used in the context of control rules. This would help inform each Council about data-limited approaches in other regions and would provide specific case studies that could serve as models for other regions. As an example, we provide a brief case study from the North Pacific region: *'Case study - Sharks in the Bering Sea and Aleutian Islands (BSAI): Groundfish stocks off Alaska are managed under a tier system, with the most data-limited stocks assigned to Tier 6. The BSAI shark complex, mostly consisting of Pacific sleeper shark and salmon shark, is one example of a Tier 6 stock and is a bycatch only stock. The OFL for this stock is based on the*

maximum historical catch observed between the years 2003–2015. Catches prior to 2003 were not included due to concerns regarding the accuracy of catch estimates. While catch data are available, sleeper sharks taken in the survey and fisheries are believed to be juveniles, so the effect of these catches on spawning stock biomass cannot be evaluated. Under the Tier 6 control rule, the ABC is set at or below 75% of OFL. The stock is assessed on a biennial cycle. Although bycatch of salmon sharks has increased since 2010, recent catch levels for the complex have been well below the ABC. This stock complex represents a challenge to catch-scalar approaches because a full accounting of catch biomass for the sleeper shark portion of the complex is difficult. This is due to large sharks not being brought on board or dropping off the long-lines before they can be observed or their size can be estimated. Sleeper sharks likely have a significant discard mortality, so research is underway on how to manage this complex in numbers instead of biomass and determining better methods of estimating unobserved average weights.'

In summary, the SSC believes that the document provides some useful references and recommendations for alternative ACLs for data-limited situations. However, the SSC notes that ACLs are already well-established in the North Pacific and a high quality fisheries monitoring program is in place so catch-based ACLs may often be the BSIA. The SSC also notes that much of the document appears to be focused on establishing ACLs for "target" fisheries, whereas the data-limited stocks in the North Pacific are generally not "target" fisheries. Therefore, the NPFMC may not need or desire to employ some of these methods. The SSC does recognize that for some stocks, the references and methods discussed in this paper could improve some of our current Tier 5 crab and Tier 6 groundfish harvest specification methods and should be considered for future data-limited assessments.