

GROUND FISH MANAGEMENT TEAM REPORT ON FISHERY MANAGEMENT PLAN AMENDMENT 23: ANNUAL CATCH LIMITS AND ACCOUNTABILITY MEASURES

In this statement, the Groundfish Management Team (GMT) briefly updates the Council on progress made to date and on our plan for continued work between now and March 2010. We did not have time for a comprehensive review of the proposed Fishery Management Plan (FMP) changes in Agenda Item G.5.a, Supplemental Attachment 2 and so offer comments only on selected sections. In general, the proposed changes appear consistent with the National Standard 1 (NS1) guidelines.

As we have highlighted in recent statements, the Council finds itself both identifying the standards and criteria to include in Amendment 23 (“putting the tools in the toolbox”) and beginning to apply those standards and criteria during the 2011-12 harvest specifications and management measures process. So far, the GMT has found this situation to involve considerable “learning while doing.” However, we have made considerable progress to date and will continue advancing the analyses mentioned below over the winter. Overall, we believe that the changes being made through Amendment 23 will strengthen the Council’s conservation and management of the groundfish fisheries.

In the Fishery

As discussed in our September statement on this topic, we have begun an evaluation of the species in the FMP for the new NS1 guideline classification system of stocks that are “in the fishery” and those that may be more appropriately classified as ecosystem component species or removed from the FMP altogether if not vulnerable to any groundfish fishery.¹ We have made considerable progress with the productivity-susceptibility analysis (PSA) and have preliminarily scored more than 90 species.² Together with Council staff, we are currently reviewing susceptibility scores to make sure they are consistently applied across all species. This analysis will be complete in time and ready for review by the Scientific and Statistical Committee (SSC), Groundfish Advisory Subpanel (GAP), and Council at the March 2009 meeting.

We have also been discussing and scoring a few stocks not currently listed in the FMP. In fact, several California nearshore species were scored during development of the methodology. Our preliminary work with the PSA analysis leads us to believe there will be species not currently listed in the FMP that are indistinguishable from FMP species in terms of their vulnerability to the fishery. For example, Bering (or sandpaper) skate (*Bathyraja interrupta*) has productivity characteristics similar to the skate species currently in the FMP and susceptibility to trawl gear as evidenced by publically available West Coast Groundfish Observer’s Program (WCGOP) and Northwest Fisheries Science Center (NWFS) trawl survey reports. The GMT recommends bringing vulnerable non-FMP species into the fishery, yet acknowledges there may be workload challenges to doing so during this first go round. We believe the PSA may accomplish much of the needed analysis and rationale for doing so, and we will report back to the Council in March.

¹ September 2009 Briefing Book, Agenda Item E.5.b, Supplemental GMT Report.

² ADD Citation to Patrick et al. (2009) in quantifying vulnerability (aka, NMFS VEWG)

Similarly, the PSA will also provide the Council with analysis and rationale for any stocks that might be removed from the FMP or at least, moved to the ecosystem component species category.

Lastly, we note that the Council could recommend Pacific hake be exempted from the annual catch limit (ACL) requirement because the stock is subject to management under a bilateral treaty with Canada. The Council has become familiar with this international exception to the ACL requirement through development of Amendment 2 to the Highly Migratory Species FMP and in the context of the Pacific Salmon Treaty. Of course, exempting the stock from the ACL requirement would not preclude the Council from applying other management measures necessary and appropriate to conserve and manage the stock, including accountability/management measure to control the catch of whiting. The Council has such measures in place now and with new measures coming under Amendment 20.

The GMT recommends that the Council discuss whether to consider applying the international exception Pacific hake/whiting stock.

Inclusion of New Species in the FMP

The proposed FMP language does include the ecosystem component category in section 4.4.4, the use of which is at the discretion of the Council. The GMT plans on developing the rationale for inclusion of new ecosystem component species over the winter pending Council guidance. We understand that the NS1 guidelines may require the classification of stocks in the fishery and ecosystem components to be placed in the FMP (instead of in regulation). We expect to make classification recommendations to the Council for consideration in March. *The GMT recommends that the FMP include language that allows for inclusion of new species into the FMP either as in the fishery or as ecosystem component species.*

Stock Complexes

The GMT reviewed the definitions and criteria/standards for defining and managing stock complexes included in the NS1 guidelines and recommends they be incorporated into the FMP language, at least by reference. In short, the NS1 guidelines define a stock complex as:

a group of stocks that are sufficiently similar in geographic distribution, life history, and vulnerabilities to the fishery such that the impact of management actions on the stocks is similar.

The GMT has begun analyzing the stocks in the FMP for their similarity in terms of vulnerability (which includes life history/productivity) and geographic distribution using the same PSA analysis we are using in reclassification of the stocks in the FMP. As with the “in the fishery” question, this analysis could also look at species not currently identified in the FMP.

The GMT also recommends that the FMP incorporate the NS1 guideline concept of an “indicator stock,” defined as “a stock with measurable SDC that can be used to help manage and evaluate more poorly known stocks that are in a stock complex.” These guidelines also included specific

suggestions on how indicator species should be used. The PSA analysis of vulnerability will also inform the use of indicator stocks.

In addition, Southwest Fisheries Science Center (SWFSC) personnel are evaluating data poor methodologies that will help the GMT and Council evaluate harvest specifications for stock complexes. This information should be available for review prior to the March meeting.

Acceptable biological catch (ABC) and the annual catch limits (ACLs)

As discussed in September, the ABC is the starting point to use in setting ACLs. ACLs may be set equal to the ABC, but may also be set lower as highlighted in the Situation Summary. Reasons why the Council would consider setting the ACL below the ABC would include:

- Scientific uncertainty or risk considerations beyond what is included in the ABC control rule;
- Optimum Yield considerations (discussed below);
- Management uncertainty not appropriate for an annual catch targets (ACT) (discussed below);

We cannot elaborate on the first bullet at this time but simply highlight there could be reasons why the Council may wish to take further reductions from the ABC control rule based on scientific uncertainty and risk. The scope of the ABC control rule is discussed in the SSC's statement.

Sector Specific Limits

The proposed changes to FMP Section 4.7 include mention of sector specific ACLs and ACTs. The GMT agrees that these tools could prove useful and should be included in the FMP. The merits of using sector specific ACLs and ACTs in particular circumstance can be further explored in the management measures process.

Management Uncertainty and the Annual Catch Target (ACT)

Management uncertainty, like scientific uncertainty, is a key concept in the new NS1 guidelines.³ The NS1 guidelines identify two primary sources of management uncertainty:

1. Uncertainty in the ability of managers to constrain catch so the ACL is not exceeded [(i.e., ability to control catch)];
2. Uncertainty in quantifying the true catch amounts (*i.e.*, estimation errors).⁴

³ See Response to Comment 34, 74 Fed. Reg. 3210]: NMFS believes that fisheries managers cannot consistently meet the requirements of the MSA to prevent overfishing and achieve, on a continuing basis, [optimum yield] unless they address scientific and management uncertainty.

⁴50 C.F.R. 600.310 (f)(7)

Ability to Control Catch

This type of management uncertainty focuses on the effectiveness of management measures at stopping catch at or below the management target (e.g., Harvest Guidelines, OYs (status quo)/ ACLs (after Amendment 23 is implemented)). The ACT is the tool the NS1 guidelines envision Councils using to account for any uncertainty in the Council's ability to control catch to stop catch from exceeding the ACL. Where management measures are effective at keeping catches below the ACL, ACTs may be unnecessary.

To evaluate this uncertainty and explore the need for using ACTs, the NS1 Guidelines suggest that the Councils "consider past management performance in the fishery and factors such as time lags in reported catch." The guidelines also state that "[s]uch analyses must be based on the best available scientific information from an SSC, agency scientists, or peer review process as appropriate."

Council staff included a draft evaluation of the Council's effectiveness at controlling catch below established OYs for the period 1999-2007 (Agenda Item G.5.a, Attachment 1). The GMT has not had time to discuss the document in detail at this meeting. The analysis appears to be exactly what is called for by the guidelines. We plan to use it to evaluate the need for ACTs for each stock and stock complex in the FMP between now and March. In addition, we will also update the draft evaluation based on estimates just released in the 2008 Total Mortality Report.

In general, we do not see this NS1 guidelines recommended evaluation as substantially different from how the Council operates now. The GMT works to factor in our ability to control catch into projection models and analyses of bycatch and trip limits and recreational management measures. Time lags in reporting of catch are also incorporated into our models, analyses, and recommendations to the Council. In addition, when we have exceeded OYs in the past, the Council has attempted to diagnose and learn from what went wrong. Nonetheless, ACTs may be necessary and appropriate for some stocks or fisheries in the Groundfish FMP.

Estimation Errors

This type of uncertainty arises because the tracking of catch relies on statistical sampling and estimation rather than a complete count. Statistical estimates are limited by our ability to observe and measure catch and so vary in their accuracy (bias) and precision (e.g., error, confidence limits). Whereas the first type uncertainty is concerned with whether a given "point estimate" of catch ended up below the relevant management target, this second type of management uncertainty looks to the accuracy and precision of the point estimate itself.

There is some uncertainty in what the "true" total removals were over the year, so the NS1 guidelines suggest that Council should evaluate the precision of their estimates and evaluate any bias that may affect accuracy. Ultimately, the NS1 guidelines imply that the precision of management targets should be proportionate to the precision and accuracy of catch estimates (e.g., an imprecise estimate with large confidence limits should not be relied upon to manage to precise targets).

The guidelines do not, however, suggest a particular method for evaluating this type of management uncertainty. *The GMT recommends that the FMP include language specific to*

evaluation of catch estimation error. The process would involve regular examination of how catch estimates are constructed and evaluation of associated uncertainties and how those might affect management targets in each biennial management cycle. This suggestion is not intended to place a new, unduly onerous requirement but rather just as an explicit acknowledgment of this important source of management uncertainty. Evaluation of catch estimation error involves many agencies including the states, the committees of the Pacific States Marine Fisheries Commission PacFIN and RecFIN, the NWFSC West Coast Groundfish Observer Program, and more. The biennial management process provides the Council with opportunity to revisit how catch estimation error may or may not affect management and to identify priorities for improvement.

If concerns about estimation error do arise for any species or fishery, implementation of an ACT may be appropriate. At the same time, estimation uncertainty may not affect our ability to maintain point estimates of catch below the ACL. If the concern is more about how accurately or precisely a point estimate reflects the “true” catch over the year, then it may be more appropriate to account for this management uncertainty with a buffer between the ABC and the ACL. The ACL is meant to keep catch within the ABC, and so we should strive for point estimates that are precise and accurate enough to give the Council reasonable confidence that the “true” catch is under the ABC. There may be other methods for taking estimation error into account depending on the particular circumstances.

ACLs and Optimum Yield

Optimum Yield

The GMT suggests some additions to the proposed changes in Section 4.7 of the FMP related to the concept of optimum yield (OY).

OY is a central concept in Magnuson-Stevens Act National Standard 1. The Council has used the term OY as a primary management target/limit largely equivalent to what the NS1 guidelines contemplate as the ACL. However, the MSA concept of OY incorporates and gives the Council discretion to adopt broader policy objectives than biological reference points designed to prevent overfishing.

As currently described in Section 4.7 of the existing FMP, OY allows the Council discretion to lower catches for other reasons than preventing overfishing. Overfishing is defined, in statute, as “a rate . . . of fishing mortality that jeopardizes the capacity of a fishery to produce [MSY] on a continuing basis.” Overfishing is thus based on the biological concept of MSY.

OY, in contrast, uses MSY as a point of departure from which catches can be set lower based on “any relevant economic, social, or ecological factor.” The objective is to achieve the “greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems.”

Section 600.310(e)(3)(ii) of the NS1 guidelines state that:

An FMP must contain an assessment and specification of OY, including a summary of information utilized in making such specification, consistent with requirements of section

303(a)(3) of the Magnuson-Stevens Act. A Council must identify those economic, social, and ecological factors relevant to management of a particular stock, stock complex, or fishery, and then evaluate them to determine the OY.

Section 600.310(e)(3)(iii) and (iv) give more detail on how the Council might evaluate economic, social, and ecological factors when “determining the greatest benefit to the Nation.” The GMT recommends that these standards be incorporated, by reference, into the FMP at least until the national working group referred to in the proposed FMP changes is able to provide additional guidance.

Relationship between the OY and the ACL

Because OY can involve catches below those that produce MSY, it allows Council could chose to set catches well below the level at which overfishing becomes a concern. Given that ACLs were introduced primarily introduced as a measure against preventing overfishing, there has been some confusion on how OY considerations should be treated with respect to ACLs. The proposed rule identified the ACT as the proper reference point for OY considerations, yet that guidance changed between the proposed and final rules. Section 600.310(e)(3)(ii) now reflects NMFS’ final view on the relationship between OY and the ACL:

Exceeding OY does not necessarily constitute overfishing. However, even if no overfishing resulted from exceeding OY, continual harvest at a level above OY would violate NS1, because OY was not achieved on a continuing basis. . . . The choice of a particular OY must be carefully documented to show that the OY selected will produce the greatest benefit to the Nation and prevent overfishing.

In other words, NMFS interprets the ACL requirement as a tool not only to limit catches below levels that prevent overfishing and but possibly also target catches that achieve OY. At the same time, the NMFS’ Response to Comment 33 in the Final Rule notice suggests Councils have flexibility:

The Council should generally set the ACL lower than the ABC to take into account other factors related to preventing overfishing or achieving OY, or it may set the ACL equal to the ABC and take these additional factors into account when setting an ACT below the ACL.

We are not suggesting that these NS1 guidelines require the setting of an OY catch level for each stock separate from the ACL or ACT. Instead the guidelines treat the concept of OY as a parallel concept or “strategic vision” for the Pacific groundfish resources. In other words, the Council “greatest benefit to the Nation” and then strive to achieve those catches through effective use of ACLs, ACTs, and accountability measures.

ACLs and Overages

The GMT discussed the accountability measure that entails deduction of ACL overages for overfished species from the following year’s ACL as envisioned in the NS1 guidelines. Concerns were expressed that the reduction of the next year’s ACL do not align with the biennial management cycle for west coast groundfish. However, the GMT thinks that there is flexibility

in the NS1 language that allows for review of accountability measures that would not require respecification of ACLs in the second year based on preliminary estimates from the first year.

GMT Recommendations:

1. The GMT recommends that the Council discuss whether to consider applying the international exception Pacific whiting stock.
2. The GMT recommends that the FMP include language that allows for inclusion of new species into the FMP either as in the fishery or as ecosystem component species.
3. The GMT also recommends that the FMP incorporate the NS1 guideline concept of an “indicator stock.”
4. The GMT recommends that the FMP include language specific to evaluation of catch estimation error.
5. The GMT recommends that standards for establishing OY consistent with the new NS1 guidelines be incorporated, by reference, into the FMP.

PFMC
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