

GROUND FISH MANAGEMENT TEAM REPORT ON FLEXIBILITY IN ANNUAL CATCH LIMIT MANAGEMENT RESPONSE, SCOPING

While the management of West Coast groundfish has set the standard for rebuilding overfished species, including implementation of a trawl rationalization program to promote individual accountability and flexibility in fishing operations, there has been a continued interest to find ways to be more flexible in how species are managed so that all of the goals and objectives of the [Pacific Coast Groundfish Fishery Management Plan](#) (FMP) and the National Standard (NS) Guidelines may be better achieved. Historically, there have been situations where fishery sectors have been restricted because of the risk of exceeding an annual harvest specification, leading to negative impacts on fishing communities and preventing the achievement of optimal yield for co-occurring stocks. This happens even when, over the long term, there is no conservation risk (risk to the ability of the stock to be at maximum sustainable yield) to the stock from the one year exceedance. Furthermore, fish left unharvested in one year are not available in subsequent years even though there is likely no biological concern in harvesting those fish during a later year. This undermines our ability to achieve long-term optimal yields, as stock assessment projections, the resulting overfishing levels (OFLs) and buffered annual catch limits (ACLs) that are the main driver to meeting management goals, are typically based on assumptions of full ACL attainment.

Recently, the Pacific Fishery Management Council (Council) has discussed potential available mechanisms that promote more flexible management responses including: 1) Multi-Year Average Catch Policy and 2) New NS-1 Guidelines on Carryover. While the Groundfish Management Team (GMT) recommended, and the Council approved, consideration of both items in September under a single agenda topic, the GMT has kept them segregated in this document. Both items would require a FMP amendment, while the latter would also likely require a regulatory amendment.

Multi-Year Average Catch Policy

In June, the Council tasked the GMT and Groundfish Advisory Subpanel (GAP) with developing a draft purpose and need statement, and additional examples on how the provisions of the NS-1 Guidelines, described in the [June Decision Summary Document](#), would work. The GMT noted two sections of NS-1: 1) multi-year approach to determining overfishing status and 2) accountability measures based on a multi-year average data. Below, the GMT discusses each provision separately. **The GMT would ultimately like input from NOAA General Counsel and the national technical working group on our understanding of the policy.**

Multi-Year Approach to Determining Overfishing Status

Under the current regulations, stock or stock complex status is often determined based on data for a period of one year. Because of this limited information, there may be situations where there is high uncertainty in stock abundance due to natural fluctuations and assessments are not timely enough to forecast such changes, or other circumstances where the most recent year's catch does not reflect the overall status of the stocks or stock complexes. Under the new NS-1 guidelines, in these situations, a multi-year approach to determine overfishing status may be useful.

NS-1 Guidelines state that:

“Small amounts of excess effort or catch in a single year may not jeopardize a stock’s ability to produce [maximum sustainable yield] MSY over the long term, thus an overfishing stock status determination based on that single year’s reference point may not be the most appropriate characterization of stock status. To address this issue, the proposed revisions introduced a multi-year approach (that may not exceed 3 years) to allow Councils to examine whether the extent to which a stock has surpassed its overfishing threshold actually jeopardizes the stock’s ability to produce MSY on a continuing basis. See § 600.310(e)(2)(ii)(A)(3) of the proposed action. Using a multi-year approach to determine overfishing stock status is best used when managers believe the most recent year’s data point may not reflect the overall status of the stock.”

In essence, this provision would provide the Council and NMFS a pathway for retrospectively analyzing if a stock truly was undergoing overfishing and potentially changing the overfishing status determination.

Purpose and Need

This action is needed in order to provide a better assessment of whether or not a stock was undergoing overfishing. The purpose of this action is to incorporate a multi-year approach into the FMP, which allows NMFS to take a retrospective look at previous year’s catch to determine if a status determination of “overfishing” was valid.

FMP Amendment

The GMT briefly reviewed the FMP to make a preliminary determination on whether an FMP amendment would be needed to establish a multi-year approach to determine overfishing. On page 24, the FMP defines overfishing as “...exceeding an OFL specified in regulations.” If the multi-year approach is used, the FMP should be amended to include a provision to re-assess a previous overfishing declaration using the multi-year average mortality. If the Council moves forward with this action, **the GMT recommends that Council and NMFS staff conduct a more thorough review of the FMP to determine whether additional changes to the FMP are desired.**

Accountability Measures Based on Multi-Year Average Catch Data

Every biennium, the Council sets annual catch limits (ACLs) and develops management or accountability measures (AMs) designed to keep stocks or stock complexes within their specified ACLs. While the status of the groundfish fisheries is tracked inseason, and adjustments are made to keep the fishery under harvest specifications, unforeseen circumstances sometimes arise that result in the Council recommending to NMFS to close the fishery.

NS-1 Guidelines state that:

“Some fisheries have highly variable annual catches and lack reliable inseason or annual data on which to base AMs. If there are insufficient data upon which to compare catch to ACL, AMs could be based on comparisons of average catch to average ACL over a three-year moving average period or, if supported by analysis, some other appropriate multi-year period. Councils should explain why basing AMs on a multi-year period is appropriate. Evaluation of the moving average catch to the average ACL must be conducted annually, and if the average catch exceeds the average ACL, appropriate AMs should be implemented consistent with paragraph (g)(3) of this section.”

The multi-year policy could be used to inform inseason AMs or to inform AMs after a fishery was closed because an ACL was exceeded. Currently, if a situation arises at a Council meeting, the GMT, GAP, and Council assess the latest catch information, available inseason AMs, and the risk to harvest specifications. If AMs are sufficient to reduce the projection to a reasonable level (below the ACL), then the Council will take that action; if not, the Council may recommend that NMFS close the fishery.

If the Council were to incorporate the use of a multi-year catch policy into the FMP, the Council could implement inseason AMs based on that policy, in addition to existing sources of data (e.g., inseason, annual catch compared to the ACL). Additionally, after a fishing year is complete, in which an ACL was exceeded, the GMT could use this policy to assess the final catch data early in the following year, and determine what AMs, if any, are needed to keep the ACL from being exceeded in the subsequent year.

Overall, the GMT believes that this provision will be used infrequently as our pre-season measures and ability to take routine inseason actions are designed to keep catch below ACLs. However, the GMT sees benefit in having additional management options to consider when an ACL is exceeded and there is likely no biological concern to the stock or stock complex.

Purpose and Need

Action is needed to more accurately assess the biological risk to a stock when an ACL is projected to be or is exceeded and what resulting AMs, if any, should be enacted to correct the overage. The purpose of this action is to develop a process to assess multiple years of catch data to determine a potential alternative management response to the risk of exceeding an ACL using multi-year average catch data.

FMP Amendment

In order to be able to use this provision, the groundfish FMP must explicitly state that multi-year catch data will be used to assess and implement AMs ([Agenda Item E.5., Attachment 1, September 2017](#)). NS-1 Guidelines, Section 600.310(g) states that “The FMP should identify what sources of data will be used to implement AMs (e.g. inseason data, annual catch compared to the ACL, or multi-year averaging approach).”

The FMP defines AMs as “management controls, such as inseason adjustments to fisheries or annual catch targets, to prevent annual catch limits, including sector-specific annual catch limits, from being exceeded, and to correct or mitigate overages of the annual catch limit if they occur. AMs should address and minimize both the frequency and magnitude of overages and correct the problems that caused the overage in as short a time as possible.” In order to be able to use the multi-year average catch policy, this definition must also include the provision to base AMs off the three year rolling average (or other specific time period).

Example of Implementation

As described in the NS-1 Guidelines, AMs based on multi-year average data can be used for fisheries that have “highly variable annual catches and lack reliable inseason or annual data on which to base AMs.” (Section 600.310 (g)(5)) For FMP groundfish stocks, estimates of mortality are not available until late the following year for the incidental open access and research sectors. Off-the-top deduction amounts are based on the recent ten year period (in general) and

projections are based on the most recent year's groundfish mortality reports. In the paragraph below, we provide an example of how this policy might have been useful in a situation in which we had limited information.

In 2015, the mothership sector was in jeopardy of having an automatic closure as they were approaching their allocation of darkblotched rockfish. To reduce their bycatch constraints so they could better attain their whiting allocations, the GMT proposed transferring darkblotched rockfish from the ACL's pink shrimp deduction. However, there was uncertainty regarding how much darkblotched rockfish would be available from the pink shrimp fishery since final estimates are produced post-season by the West Coast Groundfish Observer Program (WCGOP) late the following summer. Furthermore, the proposal by the GMT to transfer darkblotched rockfish from the pink shrimp fishery was largely based on a hypothesis that the 2015 bycatch would be lower than past years that were used to establish the set-aside due to use of bycatch reducing lights by shrimpers that first started in 2015. While the transfer was eventually made, it required considerable efforts by WCGOP to produce expedited preliminary estimates of pink shrimp fishery bycatch. If the Council amends the FMP to allow inclusion of a multi-year averaging approach with other data sources to implement AMs, then the Council and NMFS could have taken into consideration the recent year's average catch in addition to the year's inseason data.

While this is not a perfect example, since there was little risk to the ACL (due to low IFQ attainments), it does provide a good theoretical example of how the multi-year average catch policy could provide benefits if there had truly been a risk to the ACL associated with the proposed transfer of pink shrimp set-aside (e.g., if darkblotched rockfish attainments had been high across the board).

New National Standard 1 Guidelines on Carryover

As described in [Agenda Item C.2., Attachment 1, March 2017](#), there are two approaches for issuing carryover based on the revisions to the NS-1 Guidelines. With Approach 1, ACL unharvested from Year 1 would be issued in Year 2 (up to the ABC where the $ACL < ABC$); Approach 2 would take into consideration ACL and ABC unharvested in Year 1 and recalculate a new OFL, ABC and ACL for Year 2 (where $ACL = ABC$).

Proposed Purpose and Need

Action is needed to provide additional opportunity to access target stocks and stock complexes, and provide relief to industry from constraining stocks while still achieving conservation mandates. Currently, fish left unharvested one year are not available in subsequent years, even when there is no biological or conservation concern in harvesting that fish during a later year. The purpose of this item would be to develop a process for determining new ACLs and ABCs mid-biennium, based on the new NS-1 Guideline revisions.

Examples of Implementation

Yelloweye Rockfish (Approach 1)

Yelloweye rockfish is one of, if not the most constraining stocks in the groundfish fishery for trawl and non-trawl sectors. In the shorebased individual fishing quota (IFQ) program, there is only 1.1 mt available to the entire fleet, which resulted in almost half of quota share accounts receiving three pounds or less in 2017. For the non-trawl sectors, both recreational and commercial sectors

are managed conservatively, to ensure that harvest guidelines (HGs) are not exceeded. The concern of exceeding an HG, or being unable to cover a quota pound (QP) deficit, has resulted in lost fishing opportunity of other, healthy target species. For example, because yelloweye rockfish are often encountered when anglers target lingcod, potential increased mortality on yelloweye rockfish limits access to lingcod resources in recreational and fixed gear commercial fisheries. However, as shown in Table 1, attainment of the yelloweye rockfish ACL has been less than 71 percent in each of the last 6 years.

Table 1: ACL, Total Mortality, and Percent Attainment for Yelloweye Rockfish.

Year	ACL (mt)	Total Mortality (mt)	Attainment (%)
2011	17	9	52.9%
2012	17	12	70.6%
2013	18	11	61.1%
2014	18	9	50.0%
2015	18	11.67	64.8%
2016	19	9	47.4 %

If the Council were to develop a mechanism to allow for Approach 1, some or all of the unused ACL could be moved to the following year (assuming that the current default harvest control rule stays the same). Using 2017 as an example,

$$2016 \text{ Residual from ACL} = 10 \text{ mt}$$

$$2017 \text{ ACL} = 20 \text{ mt}$$

$$2017 \text{ new ACL (including carryover)} = 30 \text{ mt}$$

The 2017 ABC is 47 mt, therefore the new ACL would still be less than the original ABC.

Petrale Sole (Approach 2)

Petrale sole is a highly attained and desired species, specifically in the shorebased IFQ program. While quota share owners are able to receive up to ten percent of carryover for some IFQ species, no IFQ carryover can be issued for species in which the ACL equals the ABC based on the current NMFS policy. When considering this approach, the Council may want to consider the relationship between IFQ carryover and carryover described under Approach 2. Furthermore, there is an alternative under Agenda Item E.7, that proposes to increase carryover from ten percent up to 100 percent for some species. However, since being declared rebuilt in 2015, overall attainment of the ACL remains below 95 percent.

The last petrale sole assessment was an update in 2015. OFLs used since 2015 have been taken from that assessment, which assumed that catch was equal to the projected ACL. Thanks to Ms. Melissa Haltuch, the GMT was able to get a recalculated OFL and ABC/ACL for 2017 based on actual mortality through 2016. The 2017 ABC/ACL in regulation is 3,136 mt. However, if the carryover provision was in place, the 2017 ABC/ACL could have been 3,307 mt. This would have resulted in an additional 163 mt to the IFQ sector. Based on the IO-PAC model, the ex-vessel revenue of \$381,000 for the 163 mt is modeled to be worth \$915 thousand in personal income and

11 jobs. For comparison, even if carryover was able to be issued for the IFQ sector for petrale sole in 2017, there would have only been 19 mt added.

Year	ACL (mt)	Total Mortality (mt)	Percent Attainment
2011	976	953	98%
2012	1,160	1,111	96%
2013	2,592	2,265	87%
2014	2,652	2,439	92%
2015	2,816	2,668	95%
2016	2,910	2,652	91%

Conclusion

Overall, the GMT believes that these provisions have the potential to provide significant economic benefit to the fishing sectors and communities while still achieving our overall conservation mandates. **The GMT therefore recommends that the Council consider developing a timeline for both multi-year average catch policy and carryover while considering both items in the overall prioritization of management measures as a part of the 2019-2020 management cycle (Agenda Item E.9 at this meeting).** Once the analytical requirements of the proposed changes are better understood a final determination can be made as to whether it can be accomplished within the 2019-2020 analysis or a separate package.

PFMC
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