

GROUND FISH MANAGEMENT TEAM REPORT ON PRELIMINARY 2005-2006 GROUND FISH MANAGEMENT MEASURES

Based on the range of acceptable biological catches (ABCs) and optimum yields (OYs) that the Groundfish Management Team (GMT) is recommending the Council consider, the GMT discussed management measures for the 2005-2006 commercial and recreational groundfish fisheries with the Groundfish Advisory Subpanel (GAP), and recommends the following:

ABCs/OYs

The GMT notes that, for the most part, the proposed ABCs and OYs for 2005 and 2006 do not vary much from those adopted for 2004, as there have been only two new stock assessments for this management cycle. The GMT requests the Council provide guidance on the proposed ABCs and OYs to include, (1) further narrow the range of OYs, to what may be considered reasonable; (2) identify preferred OYs, if possible; and (3) provide preferred catch sharing regimes for the more constraining stocks between commercial and recreational fisheries; among limited entry trawl, fixed gear, open access, and exempted trawl fisheries; and among the three states. Based on that guidance, the GMT and the state representatives can further develop and refine management measure options that achieve the Council's preferred OYs. With regard to ABCs and OYs for widow, bocaccio, yelloweye, and cowcod, the GMT has included values for low and high scenarios that encompass the range of alternatives identified in the rebuilding plans for these species. The GMT recommends the Council narrow down the range of ABCs and OYs for these species after the Council has taken action on Amendment 16-3.

Precautionary Adjustments for Pacific Cod, Other Flatfish, and Other Fish

Additionally, the Council policy we have been operating under for some years regarding unassessed and poorly assessed stocks, which is not limited to rockfish, has been to take a precautionary approach. Specifically, for unassessed stocks, the Council has adjusted OYs to 50% of the historical average catch levels; for poorly assessed stocks, the Council has applied a 25% reduction to the assessment value. The GMT notes that this has been done for most of the stocks that fall into these categories; however, the GMT recently discovered the precautionary adjustment has not been made to Pacific cod and species in the other flatfish and other fish categories. Therefore, the GMT recommends the OYs for Pacific cod, other flatfish, and other fish be reduced by 50%.

Nearshore Rockfish Sharing Between Oregon and California

As in 2004, the GMT recommends carrying forward the black rockfish catch sharing recommendation of 58% to Oregon and 42% to California. It is our understanding that the states of California and Oregon have factored in precautionary approaches in managing to these black rockfish OYs. The states of California and Oregon will continue to discuss management strategies for cabezon, greenling, and other nearshore rockfish.

Cabezon Assessment and Resulting Harvest Levels

At the October GMT meeting, the Team discussed the results of the new cabezon stock assessment and

the Stock Assessment Review (STAR) Panel report. Assessment author Dr. Kevin Piner presented the technical aspects of the results to the Team, and STAR Panel chair Dr. Han-Lin Lai was also present to answer questions about the findings and recommendations from the review. The assessment produced acceptable results for the southern stock (off California), but insufficient data were available to model the northern stock (off Oregon and Washington). Consequently, GMT discussions on cabezon focused on the southern stock, and management recommendations are confined to the southern stock.

The current stock size is about 35% of B_{unfished} , based on maximum posterior density results from the “new” base case that was recommended by the STAR Panel. However, base-case results for “point estimates” and “posterior distribution” were presented as equally likely for determining current stock status and ABC. Therefore, the GMT would like to refer this issue to the Scientific and Statistical Committee (SSC) to determine the best supported approach for determining the ABC.

The modeling scenario that uses the combined posterior distribution of all nine analyses was identified as the most appropriate for determining harvest and stock projections for 2004 and beyond. The STAR Panel determined that this type of Bayesian analysis captures sources of uncertainty in the assessment, and represents the best available science for management advice. Based on the projections presented in the assessment, an $F_{45\%}$ harvest policy using the 40-10 precautionary adjustment may be too aggressive, and could result in a decrease in stock size over the mid- to long-term. An $F_{50\%}$ harvest policy using a 60-20 precautionary adjustment is the default harvest policy in the California Nearshore fishery management plan (FMP), and it provides for continuous increase in stock size for the short to mid-term.

However, the 60-20 precautionary adjustment has not been established as a groundfish harvest policy. An approach that has been previously used for other groundfish species is to explore incrementally more conservative spawners-per-recruitment (SPR) rates (including use of the 40-10 precautionary adjustment) in cases where a stock did not increase to $B_{40\%}$ under the default groundfish harvest policy. Therefore, the GMT requested that the Stock Assessment Team (STAT) Team analyze a $F_{50\%}$ SPR harvest rate with the 40-10 adjustment. It is expected that this may provide for an increase in stock size while conforming to established groundfish harvest policy. The GMT also requested the STAT Team provide biomass forecasts to go with the yield projections under the various harvest control rule options.

The GMT notes that the state of California has actively managed cabezon in recent years, and may choose to limit the fishery to a lower yield than is established by the Council. This approach has recently been adopted for black rockfish in both California and Oregon.

As a result of the SSC’s discussion on the cabezon assessment, the GMT is recommending a range of ABCs and OYs that are within 50% of the medium ABC and OY as placeholders for the low and high ABCs/OYs for analysis purposes.

Lingcod Assessment and Resulting Harvest Levels

At the October GMT meeting, Dr. Han-Lin Lai, chair of the STAR Panel, presented the findings of the new coastwide lingcod assessment from the perspective of the STAR Panel as outlined in their report (Exhibit D.6, Attachment 4). This assessment treated the lingcod resource as two separate areas of the stock; a northern area (U.S./Vancouver, Columbia areas) and a southern area (Eureka, Monterey, Conception areas). Both stocks were assessed using the multiple fleet age and sex structured Coleraine model.

In both areas, the assessment model was found to be sensitive to the natural mortality rate (M) and, like many recent assessments, steepness. The STAR Panel agreed to a steepness of 0.9 for the base model. The base case assessment resulted in current depletion of 29% for the northern area (previous assessment indicated 14%), while for the southern areas the current depletion is estimated to be 16% (previous assessment indicated 9%). The consensus of the Panel was that the new lingcod assessment utilizes the best available data and that the results should be used for the Council's 2005-2006 harvest decisions. The Panel noted a degree of uncertainty in the current depletion level, but agreed that depleted lingcod stocks are now increasing.

The GMT underscores one of the STAR recommendations which states the importance of including estimates of discard mortality in future assessments. Observer data is available to estimate commercial and recreational discard. Mortality rates for these discards are available from Jagielo (1996), Albin and Karpov, and Parker *et.al* (2003).

The GMT requested the SSC discuss the following:

1. Which selectivity pattern is most appropriate, asymptotic, or domed? The STAR Panel notes that differential growth by sex and area, and other factors make this decision difficult.
2. Stock delineation: While no specific evidence is available that the southern and northern area lingcod stocks are different at a genetic level, it may be prudent to manage them as separate stocks based on other factors (i.e., the difference in depletion level, different growth rates, sustainability of a higher exploitation rate in the north, slow rate of stock mixing north and south, etc.).
3. Exploitation rate: The lingcod stock could be managed using exploitation rates that are similar in both areas. This may constrain harvest in the north more than is necessary, or it might result in the southern portion of the stock undergoing additional biological depletion. An alternative would be to manage using exploitation rates that fit the specific status of rebuilding in each area. Which case would best support meeting the goals of the coastwide rebuilding plan?

The GMT discussed management of lingcod as a combined coastwide stock, pending the view of the SSC regarding the above topics. If a coastwide OY is selected, the Council should consider setting subarea OYs or harvest guidelines (HG) to avoid the possibility of a disproportionate catch of lingcod coming from the southern or northern area. Since the division of these areas is at Cape Blanco, Oregon, a small adjustment to the subarea OY or HG could be made to allow for management at the Oregon/California border.

The GMT developed the following tables to capture our recommended harvest levels prior to the SSC's discussion. These harvest levels are based on the STAR Panel's preferred base model for the harvest of lingcod at a 60% probability for rebuilding using a coastwide domed selectivity model which is 2,089 metric tons (mt) and 2,098 mt for 2005 and 2006 respectively. The 40-10 management reference point is provided for comparison to the rebuilding output.

TABLE 1a. Recommended harvest (in metric tons) of lingcod for 2005 (areas are north and south of Cape Blanco).

Rebuilding Model	ABC Rule	40-10 Rule	Rebuilding @ P60%
Coastwide (OY)	2,118	1,966	2,089
North (HG)	1,195	1,198	1,464
South (HG)	858	618	629

TABLE 1b. Recommended harvest (in metric tons) of lingcod for 2006 (areas are north and south of Cape Blanco).

Rebuilding Model	ABC Rule	40-10 Rule	Rebuilding @ P60%
Coastwide (OY)	2,124	2,137	2,098
North (HG)	1,192	1,194	1,427
South (HG)	858	764	659

The GMT met with the SSC, following their review of the lingcod assessment and rebuilding trajectories. During their review, the SSC discovered the preferred base model may have over constrained the variability in predicted recruitment. The SSC recommended re-running the base model with relaxed variation in recruitment ($\text{Sigma } R = 1.0$). While it is not possible to predict what the outcome (allowed level of harvest under a rebuilding projection) of the revised model, it is highly likely to fall somewhere below the values recommended by the GMT prior to the SSC review.

The SSC also recommended that the sub-area models should be used, rather than the coastwide version. For the purposes of generating a coastwide OY, these sub-area models will be combined in the rebuilding forecasting tool. Elements such as differential growth can be accommodated, which is preferable over a coastwide projection, which tends to average the differences in sub-area stock status, growth, etc. The SSC agreed with the GMT that it is reasonable to ensure meeting the requirements of the coastwide rebuilding plan by using soft harvest targets (HGs) for the northern and southern areas; however, a large deviation from the ratio of catch to be taken in each area could stall future rebuilding efforts. Finally, the SSC agreed that because of the division of the northern and southern areas at Cape Blanco it would be acceptable from a management perspective to divide the areas at the Oregon/California border. An evaluation of the proportion of biomass or average catch in the zone from Cape Blanco south to the border would be used to adjust the HG for each area.

Because of the need to specify an OY range which will accommodate the results from the revised model (and to facilitate moving forward with development and analysis of harvest options) the GMT recommends using the previous assessment as the lower end of the range, the preferred STAR model as the upper end of the range, and an average of the both as the midpoint. These values are summarized in the ABC/OY table.

COMMERCIAL MANAGEMENT MEASURES

Because the range of ABCs and OYs does not differ much from those in 2004, the GMT believes that the same range of commercial management measure options considered for 2004 should be considered for the 2005-2006 process. Additionally, as a result of the trawl buyback, the upper bound of trawl trip limits should be 200% of the options analyzed for 2004. Further refinement of specific commercial management measures will occur over the winter months (including development of a new model for fixed gear fisheries and a trawl model based on changes resulting from the buyback program), and a preliminary suite of options will be available at the Council meeting in April.

Conversion of Exempted Fishing Provisions into Federal Regulations

During its meetings in September and October, the GMT discussed the conversion of fisheries conducted under past exempted fishing permits (EFPs) into federal regulations that would apply fleetwide. The GMT focused its discussion primarily on the former Oregon Selective Flatfish Trawl EFP and the current Washington Arrowtooth Flounder Trawl EFP. The GMT recommends the provisions and allowances provided for under these EFPs be adopted in federal regulations for the 2005-2006 management period. The GMT has received presentations and written reports on the results from both of these EFPs and, because the data seem to demonstrate that use of these gear configurations result in lower bycatch of overfished rockfish (particularly canary), the GMT would like to use these data for management purposes. To that end, the GMT requests the SSC review the available data to determine whether replacing the current bycatch rates in the bycatch model with those from the EFPs (when the selective gear is used) is warranted. The GMT would appreciate SSC review occur by the March 2004 Council meeting at the latest.

The application of the new EFP bycatch rates, which are significantly lower in some cases than what is currently used in the bycatch model, will likely result in allowing higher trip limits for targeted flatfish species. The Oregon Selective Flatfish Trawl EFP results rely heavily on the use of the prescribed selective flatfish trawl gear used both in research activities and by EFP participants. The Washington Arrowtooth Flounder EFP also experimented with rockfish excluder devices with demonstrated success. Both of these EFPs allowed fishing in the trawl Rockfish Conservation Area (RCA) using bycatch caps for overfished rockfish, 100% observer coverage, and mandatory rockfish retention as additional tools to ensure that the rockfish bycatch was measured and accounted for. The GMT recommends that, if fishing with these selective gears and/or excluders were provided for within the RCA, the Council adopt measures similar to the EFP provisions for bycatch caps, observer coverage, and rockfish retention.

If fishing were confined to the area outside the RCA (shoreward and/or seaward), then the GMT does not recommend additional observer coverage above what is provided by the NMFS West Coast Groundfish Observer Program. The GMT believes that monitoring of bycatch caps is not accomplishable without 100% observer coverage, and therefore, should also not apply while fishing outside the RCA. Mandatory rockfish retention could still be required, however, monitoring of rockfish retention would be limited. The GMT believes that fishing outside the RCA may work for the Selective Flatfish Trawl as some flatfish are available nearshore, however, this option is likely not feasible for targeted arrowtooth flounder fishing which occurs in deeper waters. The GMT also notes that providing a Selective Flatfish Trawl fishery will require an additional gear stratum to be added to the NMFS Observer Program data analysis. Lastly, the GMT recommends that a declaration process be implemented to estimate fishing effort using selective gear before fishing occurs, and the gear requirement language be developed in conjunction with Enforcement Consultants to ensure the specifications are measurable and enforceable.

The GMT would appreciate Council guidance at this meeting regarding whether to proceed with the development of regulations for allowing fishing within the RCA. If the Council decides to only allow fishing outside the RCA, then the process for converting these EFPs into regulations will be much simpler than the process needed to fully develop regulations for bycatch caps and 100% observer coverage. The GMT notes that the funding aspects for observer coverage costs have not been addressed and that a vessel-funded program at 100% coverage may not be economically feasible for some fishermen. The Selective Flatfish Trawl EFP was prosecuted primarily inside 150 fms and the Arrowtooth Flounder Trawl EFP occurred around 100 fms to 120 fms. The trawl RCA for 2004 has a shallow boundary of either 60 fms or 75 fms, depending on the period, which (if carried over into 2005-2006) would not offer much fishing opportunity for flatfish or arrowtooth.

The California Selective Flatfish EFP was conducted in 2003 and is planned for 2004; pending review of the results of the data collected, the GMT recommends that consideration be given to apply the Selective Flatfish Trawl provisions off California inseason in 2005.

Area-Specific Management Measures

The GMT believes that more refined area-specific management should be considered for 2005-2006. Information collected through the federal observer program, state-sponsored EFPs, and data collected through other fishery dependent and independent sources continue to further define the precise locations of both target species and species of concern. Focusing fisheries in areas of high abundance of target species with relatively lower incidence of overfished species may provide both better fishing opportunity as well as conservation benefits than coordinates approximating broad depth strata. Additionally, the implementation of VMS provides us with a tool to accurately manage where fishing occurs.

RECREATIONAL MANAGEMENT MEASURES

The GMT recommends that the same recreational management measure alternatives that were considered and analyzed for the 2004 process be considered again for 2005 and 2006. As in 2004, recreational fisheries measures for 2005 and 2006 should be intended to reduce take of overfished species, primarily bocaccio in the southern area, yelloweye rockfish in the northern area, and canary rockfish coastwide. Following advice received from the Council, the GMT recommends prohibiting retention of both canary and yelloweye

rockfish. This prohibition is intended to discourage any targeting by recreational fisheries to reduce the potential of additional targeted catch of those species beyond true unavoidable catch, some of which would be expected to survive if encountered in shallow water. These prohibitions are recommended even in light of the fact that they result in creating some limited discard. This unavoidable discard mortality should be weighed against the benefit of removing incentives to target these species. The prohibitions are recommended to address the low and uncertain stock status of those species, the uncertainty in our ability to track actual removals in all fisheries and the disproportionate effects of recreational removals on rebuilding trajectories. Retention prohibitions for cowcod would also continue in 2005 and 2006. As noted above for commercial fisheries, further refinement of specific recreational management measures will also occur over the winter months, and a preliminary suite of options will be available at the Council meeting in April.

CA NEARSHORE MANAGEMENT

To simplify nearshore management and provide for a more stable fishery in 2005, it may be worthwhile to consider combining components of the shallow nearshore, deeper nearshore, and California scorpionfish complexes into a single nearshore rockfish complex. However, certain key species, such as black rockfish or black/blue rockfish may be considered for separate management. This would allow the nearshore fisheries to be managed on a finer geographic scale without creating an excessive number of harvest guidelines to track and manage.

Nearshore recreational fisheries in California have proved difficult to forecast in recent years, resulting in emergency actions by both state and federal jurisdictions. This has created a large workload for staff and has resulted in considerable confusion among the angling public. Inseason recreational management changes are difficult to convey to the public, resulting in low compliance with the modified regulations. Consequently, it may be advantageous to consider a season where the last two to four months of the year are closed. This could create a “buffer” against unexpectedly high inseason catches, provided that the open season was constructed, so the entire OY or HG was not expected to be taken within the proposed season. In this approach, if the fishery behaved as anticipated, and did not exceed expected catches, then an inseason action would be taken to open the year-end months. This helps eliminate the problem with non-compliance in regard to inseason closures and other actions and reduces staff workload compared to a closure.

Council Action:

4. ABCs/OYs - Provide guidance to GMT on:
 - Further narrow the range of OYs to what may be considered reasonable (e.g., sablefish low OY)
 - Further narrow the range of OYs for bocaccio, widow, yelloweye, and cowcod following consideration of Amendment 16-3 (on Friday)
 - Identify preferred OYs, if possible
 - Provide preferred catch sharing regimes for the more constraining stocks (e.g., canary, yelloweye, bocaccio, lingcod)
 - between commercial and recreational fisheries
 - among limited entry trawl, fixed gear, open access, and exempted trawl fisheries
 - among the three states (recreational)

2. Provide guidance to the GMT on whether to pursue allowing trawl fishing within the RCA using specified gear and/or excluder devices in 2005-2006.

PFMC
11/06/03