

**GROUND FISH MANAGEMENT TEAM REPORT ON  
INITIAL STOCK ASSESSMENT PLANS AND TERMS OF REFERENCE (TOR) FOR  
GROUND FISH AND COASTAL PELAGIC SPECIES**

The Groundfish Management Team (GMT) received an update on the stock assessment priority rankings from Dr. Jim Hastie from the National Marine Fisheries Service (NMFS) Northwest Fisheries Science Center (NWFSC). Dr. Jim Hastie developed a matrix of rankings for stock assessment prioritization to meet the guidelines in *Prioritizing Fish Stock Assessments* by Dr. Richard Methot ([Agenda Item F.7, Attachment 4](#)). The national framework is similar to previous Pacific Fishery Management Council (PFMC) prioritization efforts, but presented in a transparent, consistent, and quantitative manner. We note that the new priority rankings are designed to be informative, not prescriptive, and the Council and advisory bodies will still have the chance to provide additional input before decisions are finalized.

Stock assessment prioritization is conducted independently by each Council using a set of weighted metrics, including scores for categories pertaining to conservation, fishery value, data availability; time elapsed since the last assessment, and others. Table 1 contains the list of factors and their weights developed contributing to the final stock scores for the PFMC effort. There is a base case (Base Weighting) and four alternatives to the factor weighting scheme (i.e., the degree of which individual category scores influences the overall ranking). The methods used to generate factor scores are well defined in [Agenda Item F.7, Attachment 1](#).

**Table 1. Alternative weighting schemes developed by Dr. Jim Hastie that influence the strength that each factor score contributes to the overall priority rank of stocks to be assessed.**

Factor	Base Weighting	Alternative 1 (comm = rec)	Alternative 2 (timeliness)	Alternative 3 (conservation)	Alternative 4 (-2 for 'Overdue' for 2015 Asmts)
Commercial	28%	17%	16%	14%	27%
Recreational	6%	16%	5%	5%	6%
Tribal	5%	5%	4%	4%	5%
Constituent	12%	12%	14%	16%	12%
Non-Catch	1%	1%	1%	3%	1%
Rebuilding	10%	10%	11%	12%	10%
Biomass	8%	9%	8%	15%	9%
Mortality	8%	10%	8%	15%	10%
Trophic Level	0%	0%	0%	0%	0%
New Info	5%	5%	8%	6%	5%
Years Past Target	17%	15%	25%	10%	15%
Unexpected Trend	0%	0%	0%	0%	0%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Rankings for many stocks are similar for each of the five alternative weighting schemes (Attachment 1). While there is variation in the specific ranks of individual stocks, the same stocks generally rank in the top twenty for all alternatives. This consistency suggests that no

matter the general focus, these top twenty stocks should be given high consideration for selection. Note that four of the top five ranking stocks for the Base Weighting are shelf dominant (i.e., yellowtail rockfish #1, lingcod #3, bocaccio #4, and vermilion rockfish #5), and that the other predominant mid-water shelf rockfish species (i.e., widow rockfish and canary rockfish) were assessed in the 2015 assessment cycle. Given that shelf activity has been dormant since the early 2000's but is expected to increase given the rebuilding of canary rockfish, the GMT supports further assessment of the shelf stocks, per the Base Weighting.

The GMT cannot underscore the importance of the stock assessment prioritization to groundfish management, as stock assessments produce the harvest specifications used to ensure long-term sustainable harvests and optimal yields. As can be seen from the choice of stocks selected for assessment during the last cycle, the selection of stocks that will be assessed influences harvest potential, and identifies conservation concerns. For instance, the rebuilding of canary rockfish is expected to increase harvest potential for healthy, underutilized shelf stocks (including widow rockfish), and the increased annual catch limit (ACL) contribution from China rockfish to the Minor Nearshore Rockfish Complex north of 40°10' N. lat. is expected to increase opportunity for the recreational and commercial nearshore fisheries. The near rebuilding of darkblotched rockfish is projected to better allow the at-sea whiting sectors to access their whiting allocations. While the outcomes from the last assessment cycle generally increased fishing opportunities, previous assessments were important for curtailing mortality for stocks that were overfished.

The choice of stocks for benchmark (full) assessments typically has long-term influence on harvest specifications, since benchmark assessments set model structure and assumptions for influential parameters (e.g., productivity). Between benchmark assessments, update assessments are limited to the inclusion of new data, and model structure or assumptions for productivity parameters may not change (Scientific and Statistical Committee; SSC recommendation). As a result, any improvements to our understanding of life history parameters such as steepness or natural mortality cannot be updated until the next benchmark assessment is conducted. Since the lag time between benchmark assessments for non-overfished species can sometimes be a decade or more, stocks with older assessments may reflect outdated information, or may become increasingly uninformative for producing overfishing level (OFL) estimates. The stock assessment prioritization process should remedy this to an extent by including a factor for "new information" as well as the time since the last assessment.

This new transparent prioritization process will also be helpful for prioritizing data collection, as we will have a better understanding of which stocks will be selected in future stock assessment cycles. Having more advanced notice is helpful for resolving data issues (e.g., catch reconstructions) and for more effective assignment of age reading capacity.

Regarding the specific stocks to be assessed, the GMT acknowledges that any of the top twenty stocks identified with the alternative weighting schemes could be considered priority stocks for the 2017 stock assessment cycle. The GMT would like to remind the Council that state agencies and the Science Centers have finite resources to conduct stock assessments and recommends the Council consider the workload requirements for each stock chosen for a 2017 assessment. The nearshore stock assessments require a higher workload than other species and a high level of coordination between the Science Centers and the state agencies. The GMT recommends that

the state agencies and the Science Centers continue the collaborative work initiated in the 2015 assessment cycle for data preparation and analyses.

The GMT recommends the following species for Council consideration for 2017 stock assessments, not in priority order:

- **Darkblotched rockfish - Update:** Last assessment has it projected to be rebuilt in 2017; can rebuild on update (per SSC);
- **Bocaccio - Update:** Last assessment has it projected to be rebuilt in 2016 ; can rebuild on update (per SSC); high historic value to historical California fisheries
- **Yellowtail rockfish - Benchmark:** Top five ranking for all weighting schemes; increased take expected due to re-emergence of mid-water shelf rockfish trawl fishery; impacts all sectors; overdue for a benchmark assessment (2000); needs steepness prior update:
- **Yelloweye rockfish - Benchmark:** Conservation concerns; constraining species; needs steepness prior update;
- **Blue/Deacon rockfish (coastwide) - Benchmark:** Last assessed in 2007 in California only; areas will be dependent on data availability, likely to be assessed as complex due to lack of species-specific information;
- **Gopher rockfish - Benchmark:** Last assessed in 2005; in top eight in all weighting schemes;
- **Lingcod - Benchmark:** Last assessed in 2009, previously overfished, high value stock to multiple sectors, potential ecosystem effects (predation);
- **Cabezon - Benchmark:** Last assessed in 2005 in California only and 2009 in Oregon; should be coastwide assessment as occurs in all three states, high value live fish market, sport value;
- **California scorpionfish - Benchmark:** Last assessed in 2005, important target species.

If there is additional capacity for stock assessments by the Science Centers, or if the Council chooses to consider alternative species for assessment, the GMT recommends the following species be considered:

- **Big skate - Data poor:** value to trawl fisheries, catch histories to need to be reconstructed to determine relative depletion;
- **Longnose skate - Data poor:** value to trawl fisheries, catch histories to need to be reconstructed to determine relative depletion;
- **Canary rockfish:** if changes to productivity priors (e.g., steepness, natural mortality), otherwise limited new information;
- **Bank rockfish -** never fully assessed;

- **Sablefish:** high value commercial stock to trawl and fixed gear sectors, but limited new information since last assessment.

## Draft Terms of Reference

The GMT reviewed the Draft Terms of Reference (TOR) for the Groundfish and Coastal Pelagic Species Stock Assessment and Review Process for 2017-2018 ([Agenda Item F.7, Attachment 5](#)) and offers the following comments. The Draft TOR proposes to change the process by which assessments are recommended for mop-up panels by allowing the SSC groundfish subcommittee to decide on the assessments to go to mop up during a noticed conference call or webinar. This new process would not allow for Council participation unless Council members participated in the publicly noticed webinar. The potential advantage of this process change is that it would allow the stock assessment teams (STAT teams) to begin moving forward with assessment modifications sooner in the calendar year. The Council could still make recommendations or adjustments to stock assessments for mop-up at the September Council meeting. The GMT does not have a recommendation on this process, but wanted to make sure the Council was aware of the change in process.

The GMT stresses the need for continued and improving communication among the state representatives and the STAT teams regarding model inputs, i.e., catch histories, biological data and removals. The GMT sees the benefit to including a hard deadline for data delivery to the STAT teams of seven weeks in advance to the stock assessment review (STAR) panel meeting, but does not want to limit productive data exchanges between the states and the STAT teams that may need to occur late in the stock assessment process.

The GMT recommends as best practice that prior to each assessment cycle, each state identifies a point person(s) responsible for data coordination. As soon as possible after the Council finalizes the list of stocks to be assessed, and assessors are assigned, communication should begin with the state data experts to develop a timeline and deadlines for data delivery.

**Attachment 1. The twenty highest ranked stocks resulting from each of the five weighting schemes.**

<b>Stock Rank</b>	<b>Base Weighting</b>	<b>Alternative 1 (comm = rec)</b>	<b>Alternative 2 (timeliness)</b>	<b>Alternative 3 (conservation)</b>	<b>Alternative 4 (-2 for last cycle)</b>
1	Yellowtail Rockfish	Yellowtail Rockfish	Yellowtail Rockfish	Yellowtail Rockfish	Yellowtail Rockfish
2	Gopher Rockfish	Bocaccio	Gopher Rockfish	Vermilion Rockfish	Gopher Rockfish
3	Lingcod	Vermilion Rockfish	California scorpionfish	Bocaccio	Lingcod
4	Bocaccio	Lingcod	Vermilion Rockfish	Quillback Rockfish	Vermilion Rockfish
5	Vermilion Rockfish	California scorpionfish	Blue Rockfish	Shortraker Rockfish	California scorpionfish
6	Sablefish	Gopher Rockfish	Bocaccio	California scorpionfish	Cabazon
7	California scorpionfish	Blue Rockfish	Lingcod	Yelloweye Rockfish	Bocaccio
8	Cabazon	Cabazon	Yelloweye Rockfish	Gopher Rockfish	Sablefish
9	Darkblotched rockfish	Brown Rockfish	Quillback Rockfish	Blue Rockfish	Blue Rockfish
10	Blue Rockfish	Quillback Rockfish	Cabazon	Tiger Rockfish	Brown Rockfish
11	Brown Rockfish	Yelloweye Rockfish	Darkblotched rockfish	Darkblotched rockfish	Quillback Rockfish
12	Quillback Rockfish	Copper Rockfish	Shortraker Rockfish	Cabazon	Yelloweye Rockfish
13	Yelloweye Rockfish	Black rockfish	Cowcod	Sablefish	Darkblotched rockfish
14	Petrale sole	Black and Yellow Rockfish	Brown Rockfish	Brown Rockfish	Longnose Skate
15	Longnose Skate	Sablefish	Longnose Skate	Lingcod	Shortraker Rockfish
16	Shortraker Rockfish	Grass Rockfish	Black and Yellow Rockfish	Treefish Rockfish	Black and Yellow Rockfish
17	Black and Yellow Rockfish	Darkblotched rockfish	Starry flounder	Pacific ocean perch	Pacific cod
18	Pacific cod	Treefish Rockfish	Grass Rockfish	Rougheye Rockfish	Grass Rockfish
19	Grass Rockfish	China Rockfish	Treefish Rockfish	Cowcod	Pacific ocean perch
20	Pacific ocean perch	Pacific Sanddab	Pacific cod	Black and Yellow Rockfish	Copper Rockfish