

General comments

- The SSC strongly encourages continuation of the 5 boat survey in 2019 allow the NBS survey and sampling of a full survey including deep stations in the GOA.
- The SSC appreciates the letter of support sent after the October meeting.

C2/3 Groundfish Specifications

Reductions from the maximum ABC

- Reductions to the maximum ABC were discussed for five important groundfish species. This represents atypical and broad reaching scientific uncertainty in the specification process this year
- The SSC **supports** use of the risk matrix as a tool for organizing and reporting concerns not already captured in the Tier system and harvest control rules
 - **Requests** an additional category be added to include concerns related to fishery/resource use performance and behavior
 - **Recommends** that all authors apply the method for 2019, the PTs provide comment where a reduction to the ABC is recommended (concern levels 2-4). The evaluation must be complete enough for the SSC to make a determination, if the author or PT fail to do so.

C2/3 Groundfish Specifications

Reductions from the maximum ABC

- The SSC makes several comments on the use of the risk matrix:
 - The tool is not intended to add new reasons for reducing the ABC, but to organize the information leading to reductions
 - The approach should be used to reach a decision, not to justify a decision made *a priori*
- The SSC **requests** that the work group explore methods for simulating the performance of ABC reductions under different conditions
- The SSC **recommends** careful tracking of concern levels, ABC reductions and resulting stock dynamics moving forward

GOA Pollock

- Routine update of model with new data and inclusion of new acoustic biomass estimates that include correction of net selectivity.
- Accepted Model 18.3; relative to last year's estimate, this model produced a substantially higher estimate of max ABC
- SSC adopted the stair step approach to accommodating this increase resulting in a 14.2 % reduction from max ABC.
- The SSC accepted GOA PT OFL and Tier.
- Bottom trawl lowest on record, poor recruitment 2013-2016, low age diversity
- Suggest continued on mechanisms underlying time varying M.

C2 GOA Groundfish Specifications

Pacific cod

- New model changes:
 - Reader bias found in some ages (pre-2007) and removed
 - Maturity now by length instead of age
 - Marine heat wave natural mortality extended (2014-2016)
 - Natural mortality allowed to be more free
- Recommended new model and an ABC reduction

C2 GOA Groundfish Specifications

Pacific cod

- The SSC *agreed* with the authors' and PT recommendations for ABC and OFL
- The SSC accepted the PT recommendation for reducing ABC below the maximum permissible to stabilize the spawning biomass and reducing the risk of becoming overfished.
- The risk-table was valuable for accounting of concerns;

C2 GOA Groundfish Specifications

Pacific cod

- The SSC **recommends** the authors evaluate methods to properly incorporate older “biased” ages and ageing error in future models
- The SSC **suggests** that the mechanisms for environmentally linked parameters (M and survey catchability) be better described
- Change to length-based maturity, and adding new data, **needs** more review because of change in length@50%
- Incorporating IPHC survey abundance estimates **may** be useful, particularly in years when the GOA trawl survey is unavailable.

Sablefish

- The SSC **supported** the author and PTs choice of last year's model.
- The SSC **supported** the author and Plan Team's recommendation for a 45% reduction to the maximum ABC on the basis of:
 - Uncertainty in the size of the 2014 year class
 - Concerns over potentially high fishing mortality on the current spawning biomass
 - Environmental effects due to the recent warm waters in the GOA
- The SSC requested further refinements to the stock assessment including the new apportionment analysis for next year, and exploration of a combined GOA-west coast stock assessment.

C2 –GOA rex sole, deepwater flatfish, arrowtooth flounder, shallow-water flatfish

- All partial assessments
- Projected ABC and OFL for Tier 3 assessments were updated with catch and roll overs for Tier 5 and 6.
- The SSC concurs with the author's and Plan Team's recommended OFL and ABC for GOA deep-water flatfish as shown in Table 1.
- The SSC agreed with the methods used to estimate area apportionments and their values.

C2 GOA Northern rockfish

- The SSC *supported* the Plan Team and author recommended model for harvest specifications (Model 18.2)
- The SSC recommends Tier 3a status for northern rockfish and the recommended OFL and maximum permissible ABC

C2 GOA Dusky rockfish

- The SSC *supported* the Plan Team and author recommended model for harvest specifications (Model 15.5 updated with 2018 data)
- The SSC recommends Tier 3a status for dusky rockfish and the recommended OFL and maximum permissible ABC
- The SSC *accepted* authors recommended area apportionments, recognizing the shift in ABC to the Western region relative to the last assessment

C2 GOA Demersal shelf rockfish

- This complex includes both Tier 4 yelloweye rockfish and a Tier 6 group of six other rockfish species
- The SSC *supported* the Plan Team and author recommended assessment methodology for harvest specifications, which uses ROV densities to estimate yelloweye rockfish biomass
- The SSC that the recommended OFL and the ABC be reduced from the maximum permissible, as an interim measure
- However, the SSC requests that the author provide further clarification for the author's motivation for the recommended reduction from the maximum permissible ABC
- The SSC strongly requests the age structured model be pursued as a high priority

C2 GOA Thornyhead rockfish

- The SSC ***supported*** the Plan Team and author recommended model for harvest specifications (Model 18.1)
- The SSC endorsed the new methodology incorporating more than one survey into the random effects model (the GOA bottom trawl survey and the AFSC longline survey)
- The SSC accepted the author and PT recommendations of OFL and maximum permissible ABC
- The SSC ***accepted*** the area apportionments using the random effects model with two surveys

C2 GOA Groundfish assessments and specs

Sharks complex

- Full assessment, updated survey data. All but Spiny Dogfish are Tier 6
- New model for Spiny Dogfish uses depth data from satellite tags to estimate catchability. Value used to “correct” survey data and obtain reliable estimate of biomass. Makes dogfish Tier 5.
 - Novel approach may be useful for other data-poor stocks
- OFL and ABC are sum of Tier 6 and Tier 5 assessments, and increased 81% over 2018 (driven by dogfish)
- The SSC **supports** model improvements and **accepts** OFL and ABC as proposed by the authors and Plant Team
- Aggregate ABC for entire complex *may* expose other sharks to undue risk, and they are highly vulnerable

C2 –GOA sculpin, skate, octopus

- All partial assessments
- The SSC concurs with the author's and Plan Team's recommended OFL and ABC for GOA these species as shown in Table 1.