

SCIENTIFIC AND STATISTICAL REPORT ON  
2019-2020 HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES

The Scientific and Statistical Committee (SSC) received a report from the SSC Groundfish Subcommittee (GFSC) Chair Dr. David Sampson regarding a Webinar held on February 8, 2018 to review corrections to overfishing limit (OFL) projections for lingcod and bocaccio for the 2019-2020 biennium and beyond. In addition, the SSC reviewed the attachments provided in the briefing book and the appended GFSC report. Six different sets of lingcod OFL projections under different removal assumptions for 2017-2018, different buffers between the OFL and acceptable biological catch (ABC) based on  $P^*$  values assumed for the southern stock (0.40 versus 0.45), and full versus partial attainment of removals in 2019 and beyond are described in Attachment 2 and the resulting values provided in Attachment 3.

The SSC endorses the OFLs associated with Options 3 or 4 referred to in Table 1 of Attachment 1 as No Action and Alternative 1, respectively. These options assume partial attainment in 2017-2018 and full attainment thereafter, and if annual catch limits (ACLs) are not attained in the future, a catch-only update assessment could be conducted during the next biennial harvest specification process to replace assumed ACLs with realized catches. While partial attainment under the status quo regulations in 2017 and 2018 appears likely, and the Groundfish Management Team's (GMT's) recommended values for 2017-2018 are well supported, potential changes in future regulations and allocations make attainment assumptions increasingly uncertain with time.

The No Action Alternative and Alternative 1 differ from each other in their assumed  $P^*$  values and associated buffers with Alternative 1 applying a  $P^*$  of 0.45 in both management areas and the No Action Alternative applying a  $P^*$  of 0.45 in the north and 0.40 in the south. The preliminary preferred alternative  $P^*$  adopted at the November Council meeting was 0.45 consistent with Alternative 1. The OFL for 2019 (5110 mt north of 40°10' N latitude and 1143 mt south of 40°10' N latitude) do not differ between alternatives though the ABC and ACL do vary across options as a result of the difference in  $P^*$  values. Under Alternative 1, the recommended OFL is 4768 mt north of 40°10' N latitude in 2020 vs. 4770 mt under the No Action Alternative. The OFL south of 40°10' N latitude under Alternative 1 would be 977 mt in 2020 vs. 983 mt under the No Action Alternative. A decision table will be created on the basis of the alternatives selected by the Council.

The preliminary preferred OFL for bocaccio adopted at the November Council meeting was subject to an error in the application of the  $P^*$  buffer in Stock Synthesis. Updated projections of OFL values and depletion from revisions to the bocaccio assessment are reflected in Table 2 of Attachment 1. Though the 2019 OFL of 2194 mt did not change, the 2020 OFL decreased by 21 mt, from 2125 to 2104 mt. The SSC endorses these OFL projections for use in management in 2019 and beyond.

## **SSC Groundfish Subcommittee Report on Webinar Meeting Held on 08 February 2018**

The Scientific and Statistical Committee's (SSC) Groundfish Subcommittee (GFSC) met via Webinar on 8<sup>th</sup> February 2018, primarily to review revised overfishing limits (OFLs) for two stocks assessed during 2017 for which projections had been revised. The revised OFLs will be reviewed by the full SSC at its March 2018 meeting. There were also discussions during the webinar of the process for identifying research and data needs relating to groundfish for the Council's 2018 *Research and Data Needs* document.

The draft agenda from the webinar is attached as Appendix A; a list of participants is attached as Appendix B.

### ***Revised Overfishing Limits for Lingcod***

Dr. Melissa Haltuch of the National Marine Fisheries Service (NMFS) Northwest Fisheries Science Center (NWFSC) presented results of corrections to the lingcod OFL projections originally presented to the Council at its September meeting. The revised OFLs address an incorrect model forecast included in the assessment results that informed the 2019 and 2020 groundfish harvest specifications considered at the November Council meeting. Dr. Haltuch presented tabular comparisons of six different sets of OFL projections under different removal assumptions for 2017-2018, different buffers between the OFL and ABC based on P\* values assumed for the southern stock (0.40 versus 0.45), and full versus partial attainment of removals in 2019-2028. She also provided text descriptions corresponding to each of the six resulting options.

Options 1 and 2 (which correct a cut-and-paste error in the September version of the assessment document) assumed full attainment for the entire time series and apportioned 2017-2018 catches to the assessment areas based on 8% of the coast-wide lingcod survey biomass being between the 40°10' and 42° N Latitude region. Catches from 2019 forward are allocated between stock assessment model areas and management areas based on 21.31% of the lingcod survey biomass off California being between the 40°10' and 42° region and both options assume full ACL attainment. These options differ from each other in their P\* buffers with Option 1 having a buffer of 0.45 in the north and 0.40 in the south and Option 2 having buffers of 0.45 in both management areas. Options 3 to 6 differ from Options 1 and 2 in that catches for all years are apportioned to the assessment areas based on 21.31% of the biomass off California being between the 40°10' and 42° region. Options 3 and 4 assume partial attainment of the ACL in 2017 and 2018, but full attainment thereafter. These options differ from each other in their P\* buffers with Option 3 having a buffer of 0.45 in both management areas and Option 4 having buffers of 0.45 in the north and 0.40 in the south. Options 5 and 6 assumed partial attainment during the entire time series given expected attainment as judged by the GMT. These options differ from each other in their P\* buffers with Option 5 having a buffer of 0.45 in both management areas and Option 6 having buffers of 0.45 in the north and 0.40 in the south.

None of the six options presented by Dr. Haltuch exactly matches the Council's preliminary preferred option adopted at the November Council meeting. Options 1 and 2, while assuming full ACL attainment in 2017 and 2018, assume a different apportionment to determine the portion of the stock occurring between 40°10' N latitude and 42° N latitude (8% of coastwide biomass based on recent average biomass in the NWFSC trawl survey). The apportionment in Options 3-6

(21.31% of the biomass off California based on recent average biomass in the NWFSC trawl survey) is the basis for the preliminary preferred option adopted in November. However, unlike Options 3-6, the preliminary preferred alternative assumed full ACL attainment from 2017 on. In March the full SSC will need to decide the apportionment and ACL attainment assumptions to recommend the new 2019 and 2020 lingcod OFLs; the Council will need to confirm its P\* choice. A decision table will be created on the basis of the option selected by the Council in March.

The GFSC and GMT members participating in the webinar discussed the likelihood of partial attainment assumptions in 2017 and 2018 and into the future. While partial attainment under the status quo regulations in 2017 and 2018 appears likely, and the GMT's recommended values are well supported, potential changes in future regulations and allocations make attainment assumptions increasingly uncertain with time. At present, the GMT has projections (unavailable for consideration in November 2017) of impacts from the alternatives analyzed in conjunction with the regulatory specifications for 2019 and 2020. After 2020, numerous changes could occur that would influence lingcod harvests (e.g., access to the RCA, changed allocations, and gear switching in the IFQ fishery). These would result in changes that are unanticipated under the assumed attainment values put forward under Options 5 and 6. Members of the GMT indicated their intent was to assume partial attainment into the future as the preferred method of addressing likely under-attainment, even beyond 2018.

Members of the SSC voiced concerns regarding the potential for exceeding the values anticipated given the level of uncertainty beyond 2017 and 2018, noting that if ACLs are not attained in the future, a catch-only update assessment could be conducted during the next biennial harvest specification process to replace assumed ACLs with realized catches. Alternatively, assumptions regarding partial attainment in 2019 and beyond could be made and the catch-only updates undertaken to address catch that exceeds the assumed partial attainment in the future. This catch-updating process may not be possible mid-biennium given process considerations. Further, lags in the availability of catch data would hamper adjustments for the most recent year in any case.

There is some limited precedent for assuming partial attainment of the ACL in projections. This was done for Dover sole in the past, but the assumed partial attainment of Dover sole was due to a lack of market demand rather than limited access to the stock or allocations, which is the logic underlying the notion of future partial attainment of lingcod ACLs. In addition, the decision to apply partial attainment in the forecast for Dover sole was made prior to the use of catch-only update assessments in the Council process, which may have affected the decision had catch-only update assessments been available for consideration. This discussion brought to light the need for clarity in the Terms of Reference for stock assessments regarding attainment assumptions in constructing projections and decision tables. Updates to the Terms of Reference should specify (a) when the GMT should provide advice, (b) the starting year of projections, (c) how attainment is specified for the two years prior to the first year of the projection period, (d) the level of attainment to assume for the remainder of the projection period, and (e) the process for deciding what values are most appropriate. This should reduce the need to make changes to assessments late in the harvest specification process, as occurred for lingcod during the current harvest specification process. It was also noted that using complicated removal assumptions increases the risk of errors or miscommunications between advisory bodies and assessment analysts.

**Without additional information from the GMT regarding the justification for partial attainment after 2018, the GFSC endorses using Options 3 or 4, which assume partial attainment in 2017-2018 and full attainment thereafter.** Given the demands of the regulatory

specification development process, the GMT indicated they may not be able to provide additional information prior to the March Council meeting. If the GMT provides additional information in March, it could inform the choice between Options 3-4 (full attainment from 2019 on) versus 5-6 (partial attainment from 2019 on). Assumptions regarding future attainment could also be revisited through conducting a catch-only update assessment as early as the 2021-2022 biennial specification process.

### ***Revised 2020 Overfishing Limit for Bocaccio***

Dr. Xi He of the NMFS Southwest Fisheries Science Center presented updated projections of OFL values and depletion from revisions to the bocaccio assessment that used an assumed  $P^*$  of 0.45, applied an updated catch stream, and extended the projections in the decision table through 2028. These updates, which were made after the Council's November 2017 review of 2019 and 2020 groundfish harvest specifications, were included in a revised stock assessment document (He and Field, 2017). Projected depletion in 2026 (the last year in the projection reported in the June 2017 version of the assessment document) was 46.4 % in the revised assessment document compared to the 46.0% reported in the June 2017 version. In addition, the 2020 OFL decreased by 21 mt metric tons, from 2125 to 2104 mt. The 2019 OFL did not change.

### ***Groundfish Items for 2018 Research and Data Needs Document***

Dr. David Sampson (SSC Groundfish Subcommittee Chair) briefed the group on draft text for groundfish research and data needs that will be reviewed by the full SSC. Revised text will be included in the draft *2018 Research and Data Needs* document that the Council's advisory bodies will receive in advance of the April Council meeting. A revised draft *2018 Research and Data Needs* document will be considered by the Council at its June meeting and distributed for public comment, with final adoption by the Council in September.

To produce the draft text on groundfish research and data needs (RDN) David compiled a list of 544 RDN items from the stock assessment documents and STAR Panel reports that had occurred since the Council adopted its *2013 Research and Data Needs* document (during the 2013, 2015, and 2017 assessment cycles). Additional RDN items were taken from reports of the stock assessment process review meetings that were held in 2015 and 2017. The set of RDN items were systematically considered and reviewed by the members of the GFSC with each member picking up to six RDN items that were considered to be highest priority. This exercise resulted in 32 individual RDN items that David included in the draft text for groundfish RDN.

It was suggested that David include instructions with the draft 2018 groundfish RDN text to clarify elements for which he would like assistance. The initial portion of the draft text includes a summary of progress made on groundfish items from the *2013 Research and Data Needs* document. David was unsure of progress that may have been made for many of the 2013 RDN items and seeks assistance from others on those 2013 RDN items that are highlighted. Feedback on all parts of the draft 2018 groundfish RDN text is welcomed.

Mr. John DeVore (Council staff) plans to circulate the draft *2018 Research and Data Needs* document to the full SSC during the week of 12-16 February. Discussion and revisions to the draft document are to take place via email correspondence with the aim of preparing a version for distribution to the Council's advisory bodies in advance of the April Council meeting. The

Briefing Book deadline for the April meeting is March 15<sup>th</sup>. David requests comments and edits from the full SSC by March 12<sup>th</sup>.

### ***References***

He, X., and J.C. Field. 2017. Stock Assessment Update: Status of Bocaccio, *Sebastes paucispinis*, in the Conception, Monterey and Eureka INPFC areas for 2017. Pacific Fishery Management Council, Portland, Oregon.

*Appendix A.*

**PROPOSED AGENDA**  
**Scientific and Statistical Committee's**  
**Groundfish Subcommittee**

Pacific Fishery Management Council  
Large Conference Room  
7700 N.E. Ambassador Place, Suite 101  
Portland, OR 97220  
Online Webinar

Telephone: 503-820-2280

February 8, 2018

This is a meeting of the Scientific and Statistical Committee (SSC's) Groundfish Subcommittee (GFSC), with remote attendance via webinar (see webinar information below). There will also be a public listening station at the Pacific Council office (address listed above). SSC subcommittee meetings are open to the public, and public comments will be taken at the discretion of the SSC Groundfish Subcommittee Chair.

A suggestion for the amount of time each agenda item should take is provided. All times are approximate and subject to change. At the time the agenda is approved, priorities can be set and these times revised. Discussion leaders should determine whether more or less time is required, and request the agenda be amended.

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- Mac®-based attendees: Required: Mac OS® X 10.5 or newer
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THURSDAY, FEBRUARY 8, 2018 – 1 PM

**A. Call to Order-GFSC Administrative Matters**

1. Call to Order and Introductions Dave Sampson
2. Approve Agenda
3. Rapporteur Assignments  
(1 p.m., 0.5 hours)

**B. Revised Overfishing Limits**

1. Review Revised Overfishing Limits for Lingcod Melissa Haltuch  
(1:30 p.m.; 1 hour)
2. Review a Revised 2020 Overfishing Limit for Bocaccio Xi He and John Field  
(2:30 p.m.; 0.5 hours)

**C. Review Draft Sections of the 2018 Research and Data Needs Document Relevant to Groundfish**

Dave Sampson

1. Review Assignments and Deadlines for SSC and Council Review in April and Beyond
2. Discuss Research Priorities and Content  
(3 p.m.; 1 hour)

**D. Other Items?**

ADJOURN

PFMC

02/02/18

*Appendix B. Participant list (\*s indicate Groundfish Subcommittee members)*

Last Name	First Name
Berger *	Aaron
Budrick *	John
Conroy	Mike
DeVore	John
Doeringhaus	Jessi
Field *	John
Hamel *	Owen
Harley	Abigail
He	Xi
Hooper	Brian
Key *	Meisha
Krause	Sandra
Mandrup	Melissa
Matson	Sean
Mattes	Lynn
Petersen	Joe
Reed	Heather
Rudolph	Tom
Sampson *	David
Satterthwaite	Will
Shen	Chenchen
Simon	Jennifer
Stephens	Andi
Tsou *	Theresa
Zimm	Louis

PFMC  
03/10/18