

JOINT REPORT OF THE CANADIAN AND U.S. ADVISORY PANEL of
The Agreement between the Government of the United States of America
and the Government of Canada on Pacific Hake/Whiting (the Agreement)

March 5, 2019

The U.S. and Canadian Advisory Panels (“AP”) convened March 4-5, 2019 to receive and review the advice of the SRG and JTC, review the management of the fisheries of the two Parties, provide advice and make recommendations on the 2019 TAC, provide a list of scientific experts and representatives to be candidates for the JTC and SRG, reappoint representatives to the MSE working group and trawl survey design group and make their recommendations to the JMC on these items.

The U.S. AP members in attendance were Joe Bersch (Chair), Mike Okoniewski, Mike Hyde, Bob Dooley, Dave Smith, Brent Paine, Tom Libby and Al Carter. AP Advisor to the SRG, Lori Steele, also attended.

The Canadian AP members in attendance were Dave Dawson (Chair), Shannon Mann, Albert Radil, and Joe Greene.

Members of the public also attended the AP meetings and were provided the opportunity for public comment.

The AP provided the JMC a report on the 2018 Fishery and fielded questions following. The AP attended the presentations from the Joint Technical Committee (JTC) and Scientific Review Group (SRG) to the JMC on the 2018 fishery and on the 2019 stock assessment, the presentation of the 2019 Survey Design and the 2018 Sairdrone Feasibility Study by Sandy Parker-Stetter and the Management Strategy Evaluation update by Aaron Berger. Members of the AP asked questions following each presentation and participated fully in the process.

The AP wishes to recognize and thank the JTC and SRG, for the excellent work they did on the stock assessment and related documents under more difficult than usual circumstances due to the U.S. Government shutdown. In spite of limited time, their teamwork produced an excellent work product that fully informed the process and decision making regarding an appropriate TAC for 2019.

The AP considered the 2019 Status of the Pacific Hake (whiting) stock in U.S. and Canadian Waters in the U.S. Report and Appendices, the Joint U.S.-Canada Scientific Review Group Report for 2019 report, the advice of the JTC and the SRG, the reports on the U.S. and Canadian fisheries in 2018 and comments from the public. After consideration of this information, the AP recommends the following for consideration by the JMC:

1. TAC ADVICE

- The AP considers the 2019 Status of the Pacific Hake (whiting) stock in U.S. and Canadian

waters in 2019 Report and Appendices provided by the JTC and reviewed by the SRG to be the best available science.

- Based on the assessment document and the decision tables contained therein, the AP recommends a 2019 adjusted (including carry over) total allowable catch (TAC) of 597,500 mt.
- Although this is a rollover of the adjusted 2018 TAC this recommendation is made after due consideration of the changes to the stock assessment that have occurred between 2018 and 2019.
- The AP's recommended TAC is supported by the decision tables in the assessment document and in particular by Tables 29, 30.
- The adjusted TAC recommended by the AP is well below the default harvest level of 725,593. Furthermore, actual harvest is not projected to equal TAC.
- Table 29 shows that in the unlikely event the 2019 harvest reaches 500,000 mt, beginning of year relative spawning biomass in 2020 is projected to be 61% of B_0 . Table 30 shows that a harvest of 500,000 mt in 2019 is projected to result in a fishing intensity of 93% of F_{40} .
- The AP reviewed past harvest, past fishing effort, performance of individual sectors in the US and Canadian industry and considered relevant factors influencing potential harvest outcomes for 2019. Based on this review, the AP estimates that total coastwide harvest in 2019 will likely be greater than the 410,000 mt harvest of 2018 and more likely similar to the 440,000 mt harvest in 2017. This anticipated increase in harvest is intended to account for and reflect additional processing and harvesting effort that is expected in both the U.S. and Canadian fisheries in 2019.
- The 2010 and 2014 cohorts are expected to continue to contribute economically and biologically over multiple years providing benefits to the nations of Canada and the U.S. In addition, there are further indications of an above average recruitment of the 2016 year class in both the 2017 acoustic survey and fishery data and also the 2018 U.S. and Canadian fisheries. There is also evidence from the 2018 U.S. and Canadian fisheries' catch data that the 2017 year class may also be above average. The 2017 year class is not yet considered in the advice on the TAC as they were not part of the spawning biomass.
- The AP looks forward to the results of the 2019 acoustic survey in order to provide a higher level of certainty regarding the strengths of the 2016 and 2017 year classes.
- Members of the AP and of industry understand the benefits of minimizing fishery harvest of one and two year old whiting and will continue their efforts to work with other members of industry to minimize fishing on these year classes.
- To the extent Figure 45 is intended to be used as a tool in forecasting age compositions in the Fishery catch in future years, the AP requests further information about the selectivity and other assumptions used in the model and a comparison over time of the forecasted and the actual harvest.
- The AP appreciates the review of the alternative models for estimating B_0 and forecasting conducted by the JTC and SRG and the conclusion to use the weight-at-age data for the 1975-2018 period.

- The AP will continue to annually evaluate the latest surveys, stock assessments, best available science and provide their advice to the JMC accordingly. The continued conservative management recommendations of the AP are intended to ensure that each country will have the opportunity to receive, over the long term, the intended benefits contemplated in the Treaty.

2019 TAC RECOMMENDATION

AP Recommended Unadjusted TAC	519,835
Unadjusted Canada TAC @26.12%	135,781
Unadjusted US TAC @ 73.88%	384,054
Canada 2018 Carryover @15% of previous Year TAC	20,286
US 2018 Carryover @15% of previous Year TAC	57,380
Canada Adjusted TAC	156,067
US Adjusted TAC	441,433
Coastwide Adjusted TAC Total	597,500

2. MSE ADVICE

- Although the AP agrees that the 2019 Status of the Pacific Hake (whiting) stock in the U.S. and Canadian waters in 2019 Report and Appendices is the best available science, it is the opinion of the AP that it does not adequately inform industry/managers on all of the issues relevant to the long-term management of the Pacific whiting stock.
- Consistent with the observations and advice of the JTC and SRG, the AP recognizes the significant progress that has been made towards developing an MSE framework that includes a spatially-explicit model that may be used to assist in assessing management procedures and decisions related to management of Pacific whiting.
- The AP is encouraged by the progress on the MSE but does not believe it is ready for utilization in informing the process on management alternatives.
- The AP requests that the following individuals continue to serve as representatives of the AP on the MSE Working Group- **U.S. Representatives-** Joe Bersch, Mike Okoniewski, Alternate Dave Smith **Canadian Representatives-**(pending reappointment to the AP) Shannon Mann, Mike Buston, Alternate Dave Dawson

2. SURVEY RECOMMENDATIONS

- The AP wishes to thank the Survey Team and especially Sandy Parker-Stetter and Stéphane Gauthier for their continued outreach to industry and AP members.

- The AP continues to be concerned about the impacts on the acoustic survey caused by limited resources, limited vessel days, and other factors requiring frequent modification to survey operation, implementation and design. The AP requests that all reasonable efforts be made by the JMC to insure that adequate resources are available and allocated by the Parties to insure that a survey of consistent design is completed in 2019.
- The AP continues to believe that an annual acoustic trawl survey is necessary to maximize the benefits of the Parties. At a minimum, a full acoustic trawl survey should be performed bi-annually. Annual surveys allow for better management by reducing uncertainty associated in management of a dynamic and highly variable stock and as a result will improve long term economic performance for the Parties.
- The AP is concerned by this year's survey design that intends to drop every 8th transect in the U.S. and utilize 20 mile transects in Queen Charlotte Sound. The AP requests that the Parties allocate additional vessel time and other resources necessary to complete a full acoustic survey consistent with prior survey design. In the future, the AP requests notice and consultation prior to any recommendations being made to modify the survey design.
- The AP requests that the JMC appoint a collaborative working group, including AP membership, and schedule a workshop to review current survey methodologies and develop new tools for utilization in future survey protocols including, but not limited to Vessels of Opportunity, Saildrone, and other research opportunities. This working group is intended to consider and advise on how to best allocate limited resources on improvements to the survey design and implementation process and on other issues central to the effective implementation of the Agreement.
- The AP appreciates and desires to expand industry's participation in acoustic survey design, sampling methodology and planning. The AP hopes to expand the input/involvement from industry representatives in this process and again recommends Dave Smith and Joe Greene to advise the survey team for this purpose. Involvement of industry is one of many critical factors in achieving transparency into the process and building confidence that acoustic survey outputs adequately and accurately reflect the actual biomass observed by the fishery.

4. SRG/JTC APPOINTMENTS

- The AP recommends the following individuals for appointment as independent members of the JTC and SRG. For the JTC: **Sean Cox**, Andre Punt, and Mark Maunder. For the SRG: **Trevor Branch, Allan Hicks**, Dave Sampson, Tom Jagielo, John Horn, and Sandy McFarlane. (Bold face type indicates preferred candidates).

The AP further nominates Lori Steele and Shannon Mann as public Advisors to the SRG.

End of Report