UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

SEP 2 1 2018

Megan Peterson
Acting Chair, Alaska Scientific Review Group
10293 Somerset Drive
Truckee, CA 96161

Dear Dr. Peterson:

Thank you for the letter from Grey Pendleton to Chris Oliver, Assistant Administrator for Fisheries, transmitting recommendations from the February 2018 meeting of the Alaska Scientific Review Group (SRG). Your letter was forwarded to me because the Office of Protected Resources within NOAA Fisheries is responsible for national programs under the Marine Mammal Protection Act and leads NOAA Fisheries' coordination of the SRGs.

The SRG has made many valuable recommendations to help guide NOAA Fisheries' marine mammal science and management, which are addressed in the enclosure. I want to thank you for agreeing to Act as Interim Chair of the Alaska SRG. I appreciate the continued service and contributions by members of the Atlantic SRG in providing advice and support to NOAA Fisheries in accordance with the Marine Mammal Protection Act. I look forward to our continued partnership to improve the science supporting the conservation of marine mammals.

Sincerely,

for

Donna S. Wieting
Director, Office of Protected Resources

Enclosure

cc: Chris Oliver, Assistant Administrator for Fisheries
Francisco Werner, Director of Scientific Programs and Chief Science Advisor
Ned Cyr, Director, Office of Science and Technology

Responses to 2018 Recommendations of the Alaska Regional Scientific Review Group

N_{min} for partial stock ranges

(1) The SRG recommends that guidelines be developed for when, and how, Nmin should be calculated from data when only a subset of the stock's range is available. When such guidelines are developed, we also recommend that in cases where these guidelines are not followed, clear justification be given in SARs justifying why the guidelines were not appropriate in that specific case.

Section 117 of the MMPA requires that stock assessment reports provide a minimum population estimate, and "minimum population estimate" is defined in the MMPA as an estimate that "provides reasonable assurance that the stock size is equal to or greater than the estimate. " To meet the statutory requirement of providing a minimum population estimate, it is the agency's practice to include Nmin in all SARs even if the estimate is derived from surveys of only a portion of a stock's range, as that meets the statutory definition. In these cases, we note in the body of the report that the estimate is likely biased low and do not provide the Nmin in the summary table. While this approach is not specifically spelled out in the Guidelines for Assessing Marine Mammal Stocks (NMFS 2016), we intend to include it in the next revision of the guidelines.

Estimating mortality and serious injury (M&SI) related to small-boat and shore fisheries

(2) The SRG supports observer programs and development of other innovative approaches for estimating M&SI in small-boat and shore fisheries that have no, incomplete, or extremely outdated, estimates.

Many Alaska federally-managed commercial fisheries are observed routinely by the North Pacific Observer Program, which is administered by the Alaska Fisheries Science Center (AFSC). The Alaska Marine Mammal Observer Program (AMMOP), focused on understanding marine mammal bycatch in state-managed fisheries, had been administered by the NMFS Alaska Regional Office (AKR) for many years, but it has lacked funding since 2013. In 2018, the AKR and AFSC formally agreed that the AFSC would take the lead on future observer programs directed at marine mammal bycatch in Alaska. Combining AMMOP with other fishery observer programs should result in administrative efficiencies, which we hope will make the program more viable and sustainable over time. A process for prioritizing fisheries and stocks for further data collection is underway, and an update will be reported at the next Alaska SRG meeting. Both traditional and non-traditional methods for collecting data on marine mammal stock abundance and bycatch will be considered during this process.

Precision for mortality and serious injury estimates

(3) *The SRG recommends that procedures for estimating M&SI be improved, include associated precision estimates, and that guidelines for the use of the estimated precision when comparing M&SI with Potential Biological Removal level (PBR) be developed.*

The precision of the mortality and serious injury estimate for a particular stock varies depending on many factors, including whether there are observer programs for commercial fisheries that incur M&SI of a stock, the observer coverage of particular fisheries, and whether the level of M&SI for a stock is assessed using opportunistic data either in whole or in part. However, because the PBR process was designed to automatically account for poor precision in both the abundance and M&SI rates, comparing M&SI rate with poor precision to a PBR level should only rarely result in inaccurately assessing whether a stock is strategic under the MMPA (Wade, 1998). This point is fundamental to the PBR process, and we will offer a briefing on this topic to the SRG at their next meeting. In addition, we will consider using new approaches for estimating precision of M&SI as they become available.

Complete data for abundance surveys

(4) *The SRG recommends that in future surveys, if at all possible, data for all essential components of a survey necessary for producing unbiased estimates (and measures of precision) be collected. If it is not feasible to collect all relevant data, we recommend that the limited utility of the resulting estimates be considered before proceeding with the survey.*

NOAA Fisheries uses the best data available to estimate the abundance of a marine mammal population for the purposes of the stock assessment reports. In some cases, this means that population estimates include only a portion of the range of the stock, or are lacking important information on behavioral factors, such as the tendency for some species to be attracted to vessels. NOAA Fisheries balances the expected benefits of improving survey precision by collecting additional information about a stock with the expected cost of that additional data collection. In some cases, it is clear that additional data collection is critical for management purposes (e.g., the collection of stock structure information for Southeast Alaska harbor porpoise). In other cases, we feel it is appropriate to use information from other studies to improve our estimates. For instance, in the 2019 SARs we will propose the use of a g(0) estimate for harbor porpoise line-transect surveys from a study outside Alaska. We look forward to an ongoing dialog with the SRG on how we can best improve abundance estimates for marine mammals in a resource-limited environment.

Evaluation of PBR when no estimate of N_{min} exists

(5) The SRG supports back-calculation of how small the population must be for PBR to exceed the known M&SI. Furthermore, we suggest that the terminology used to describe these back-calculations be formalized and that guidelines for when these procedures are appropriate be created.

We agree that the back-calculation approach is helpful for understanding whether a PBR level is likely being exceeded. NMFS will consider under what circumstances this type of approach is appropriate and include it in a future revision of the Guidelines for Assessing Marine Mammal Stocks. We will solicit input from the 3 SRGs on this topic.

Improved estimates of subsistence harvest

(6) The SRG recommends a survey design be constructed for estimating subsistence harvest of marine mammals (specifically ice seals), in consultation with local communities, and designed with greater sampling effort in high harvest communities such as Utqiaġvik.

NMFS' approach for estimating subsistence harvest of marine mammals has been to collaborate with our Alaska Native co-management partners to balance our need for such data against both the costs of conducting comprehensive surveys and the challenges of obtaining reliable data from surveys. In some cases, such as for beluga whales and bowhead whales, co-management organizations have been very successful at obtaining comprehensive information from hunters about harvested and struck-and-lost animals. For northern fur seals, harvests are well-monitored and we have similarly good data. For other species, such as ice seals, Steller sea lions, and harbor seals, household surveys are the best technique to obtain subsistence harvest data, but the harvests are widely dispersed and conducting a comprehensive survey would be both logistically complex and extremely expensive. NMFS does not currently have funding for a community-based survey program, but at various times we have provided grant funds to Alaska Native co-management organizations to conduct targeted surveys in a limited number of communities. Some survey programs have struggled with obtaining reliable community participation, which is essential for success. We will continue to work with our co-management partners to pursue opportunities to conduct household surveys as funds are available.

Steller sea lion stock boundaries

(7) The SRG recommends that the stock structure for Steller sea lions in the northeastern Pacific be re-evaluated to consider whether moving stock boundaries or creating an additional stock are warranted.

Extensive demographic and movement data on Steller sea lions has been collected since the current stock boundary designation, which followed the 1997 Endangered Species Act listing of the western and eastern populations as separate Distinct Population Segments. The greatest proportion of this work has involved the analysis of movement data based on observation of marked animals conducted by the Alaska Department of Fish and Game. An analysis of all of the available information could be beneficial for the reasons noted by the SRG and would be a necessary precursor to considering a change in stock boundary. In the interim, NMFS must use the best information available when determining whether and how to apportion serious injuries and mortalities, and we would welcome further suggestions from the SRG on how to handle this issue.

Northern fur seal population estimates

(8) The SRG recommends that a new expansion factor be developed for northern fur seals that reflect current population dynamics and that has an associated precision measure such that precision can be calculated for the population estimate. Similarly, a new expansion factor could be developed for Steller sea lions, whose Nmin is based on the observed animals rather than total population size.

We are currently developing new methodology for estimating total population abundance of Steller sea lions that should also be applicable to estimating northern fur seal abundance after some minor modifications. The new approach would use both aerial survey data of pups and capture-recapture data from pups and non-pups to predict the number of non-pups still alive in the current year. Thus, we get total abundance by adding the number of non-pups still alive with the number of pups in the aerial survey. The Alaska Ecosystem Program at the AFSC presented the draft method at a workshop in 2017. We have been refining the method in 2018, and we can present an update on the methodology at the next SRG meeting in February 2019.

Sperm whale stock structure

(9) *The SRG recommends that NMFS reexamine the stock structure for sperm whales in the north Pacific Ocean, with special consideration of the unique demographics (male-dominated) of the stock and the possibility of developing sub-stock estimates of Nmin or PBR for males interacting with commercial fisheries.*

NMFS agrees that it is worth developing an estimate of abundance for male sperm whales in Southeast Alaska and will pursue this as funds are available. It is unlikely that we can re-examine North Pacific sperm whale stock structure given the lack of any new data.

Harbor porpoise stock structure

(10) *The Alaska SRG supports continuation/expansion of the ongoing eDNA (and other genetics) projects to gather data on harbor porpoises and the use of these data in revising harbor porpoise stocks in Alaska. In addition the SRG recommends that once stocks are revised, necessary abundance and mortality data be collected for harbor porpoise stocks, prioritizing those where fishery-related mortality is known or suspected to occur.*

NMFS agrees with the recommendations regarding harbor porpoise stock structure; the AFSC is attempting to obtain new eDNA samples in FY2018 to address this question. Conducting an abundance survey remains a high priority and will be pursued as resources are available.

Humpback whale stock structure

(11) The SRG urges NMFS to complete the review of humpback whale stock designations under MMPA, taking into account the humpback whale DPS under ESA, as soon as possible and revise the humpback whale SARs accordingly.

NMFS is currently in the process of reviewing stock structure under the MMPA for all humpback whales in U.S. waters, following the change in ESA listing for the species in 2016, to determine whether we can align the stocks with the DPSs under the ESA. We agree that revising the stock structure for humpback whales is a high priority; however, the process of reviewing stock structure under the MMPA has taken longer than anticipated. Until such time that the humpback whale stock structure under the MMPA with respect to the ESA listing has been completed, we are retaining the current stock delineations. Any changes in stock delineation or MMPA section 117 elements (such as PBR or strategic status) will be reflected in future stock assessment reports.

References:
NMFS. 2016. Guidelines for Preparing Stock Assessment Reports Pursuant to the 1994 Amendments to the MMPA. Available at: https://www.fisheries.noaa.gov/national/marine-mammal-protection/guidelines-assessing-marine-mammal-stocks.

Wade, P. 1998. Calculating limits to the allowable human-caused mortality of cetaceans and pinnipeds. Mar. Mammal Sci. 14(1):1-37.