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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XD513

Marine Mammal Stock Assessment Reports

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of availability; response to comments.

SUMMARY: As required by the Marine Mammal Protection Act (MMPA), NMFS has incorporated public comments into revisions of the 2014 marine mammal stock assessment reports (SARs).

ADDRESSES: Electronic copies of SARs are available on the Internet as regional compilations and individual reports at the following address:

<http://www.nmfs.noaa.gov/pr/sars/>.

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SUPPLEMENTARY INFORMATION:

Background

Section 117 of the MMPA (16 U.S.C. 1361 *et seq.*) requires NMFS and the U.S. Fish and Wildlife Service (FWS) to prepare SARs for each stock of marine mammals occurring in waters under the jurisdiction of the United States. These reports contain information regarding the distribution and abundance of the stock, population growth rates and trends, the stock's Potential Biological Removal (PBR) level, estimates of annual human-caused mortality and serious injury from all sources, descriptions of the fisheries with which the stock interacts, and the status of the stock. Initial reports were completed in 1995.

The MMPA requires NMFS and FWS to review the SARs at least annually for strategic stocks and stocks for which significant new information is available, and at least once every three years for non-strategic stocks. NMFS and FWS are required to revise a SAR if the status of the stock has changed or can be more accurately determined. NMFS, in conjunction with the Alaska, Atlantic, and Pacific Scientific Review Groups (SRGs), reviewed the status of marine mammal stocks as required and revised reports in each of the three regions.

As required by the MMPA, NMFS updated SARs for 2014, and the revised reports were made available for public review and comment for 90 days (80 FR 4881, January 29, 2015). NMFS received comments on the draft SARs and has revised the reports as necessary. This notice announces the availability of the final 2014 reports for the 88 stocks that are currently finalized. These reports are available on NMFS' website (see **ADDRESSES**).

Comments and Responses

NMFS received letters containing comments on the draft 2014 SARs from the

Marine Mammal Commission (Commission), the Makah Tribe, seven non-governmental organizations (The Humane Society of the United States, Center for Biological Diversity, Oceana, Turtle Island Restoration Network, Hawaii Longline Association, Sustainable Fisheries Association, and the Maine Lobstermen's Association), and five individuals. Responses to substantive comments are below; comments on actions not related to the SARs are not included below. Comments suggesting editorial or minor clarifying changes were incorporated in the reports, but they are not included in the summary of comments and responses. In some cases, NMFS' responses state that comments would be considered or incorporated in future revisions of the SARs rather than being incorporated into the final 2014 SARs.

Comments on National Issues

Comment 1: The Humane Society of the United States and Center for Biological Diversity commented that NMFS failed to submit the draft 2014 SARs for public review in timely manner, thus rendering any comments on the draft 2014 SARs moot as the draft 2015 SARs had already been reviewed by the SRGs.

Response: We acknowledge that the draft 2014 SARs were made available for public comment later than usual. While the SRG review of the draft 2015 SARs occurred prior to the 2014 reports being finalized, should any substantive comments on the draft 2014 reports have been received that would have led to changes to the draft 2015 reports and required SRG review, we would have sent the revisions to the SRGs for review prior to submitting the draft 2015 reports for public review.

Comment 2: The Commission recommended that NMFS expand its efforts to understand and estimate the recovery rates of carcasses for marine mammal stocks

(where the requisite data are available) and report those estimated rates and their associated uncertainties in future stock assessment reports.

Response: We agree that there is a need to better understand and estimate undetected marine mammal mortalities and serious injuries. We are working on estimating carcass recovery rates for some species, and by extension, estimating the “cryptic mortality” rate for these species. When such rates are estimated and it is appropriate to do so, NMFS will report those estimated rates and their associated uncertainties in the SARs on a stock-by-stock basis.

Comment 3: The Commission recommended that NMFS immediately publish new stock-assessment guidelines from the Guidelines for Assessing Marine Mammal Stocks (GAMMS) III recommendations that are not controversial or problematic.

Response: We appreciate this recommendation and will endeavor to do so as promptly as feasible.

Comment 4: The Commission recommended that NMFS develop guidelines for the development of new stock assessment methods that include review by appropriate experts not only on their scientific merit but also on their application to the management decision-making process. The Commission also recommended that NMFS develop a mechanism for the timely (i.e., faster than the GAMMS process), joint review and adoption of new methods by all six of the science centers.

Response: NMFS thanks the Commission for this recommendation. We are investigating the most efficient process to incorporate new methodologies in a standardized way across regions where appropriate. NMFS is working to ensure that all centers have access to comparable analytical tools as new methods become available, and

that these methodologies are being applied consistently across regions.

Comment 5: The Commission recommended that when NMFS reviews and revises the policy on serious injury that it considers changing criterion L8 by deleting the provision for altering initial assessments about risks of separating mothers and calves pending better information on the length of calf dependence and in the interim refrain from making alterations based on subsequent sightings.

Response: NMFS appreciates this recommendation and will consider it when reviewing and revising the Policy and Procedure for Distinguishing Serious from Non-Serious Injury of Marine Mammals. Each injury event is carefully evaluated and all available information used to make the best judgment of prognosis under the serious injury definition of “likely to die” being equal to or greater than a 50 percent. Our intention is to provide the most accurate injury outcome results given the information available. A whale that has sustained a serious injury and is re-sighted many months later with the injury resolving and in relatively good health compared to non-injured conspecifics is considered not likely to die due to that injury and is no longer counted against PBR as a removal from the population. In the rare case of subsequent sightings indicating deterioration of health that can be attributed to the injury, the whale would again be considered seriously injured and counted against PBR.

Comments on Atlantic Regional Reports

Comment 6: To clarify the information presented in the Atlantic stock assessment reports, the Commission recommended that NMFS replace the term “Fate” as a column header in Table 2 with the term “Injury Determination” and limit the categories used under that heading to the following three: “Mortality” (when the individual is known to

have died), “Serious injury,” or “Prorated serious injury” as appropriate based on the large whale injury determination categories.

Response: NMFS will rename the “Fate” column to “Injury Determination” and change the “unknown” category to “prorated injury” in the Atlantic reports. We would rather not use the phrase “prorated serious injury” because in such cases it not known whether the injury is serious or not.

Comment 7: The Commission suggests that three serious injuries to North Atlantic right whales (#1151, #4160, and #3308) should be added to Table 2 in the SAR.

Response: The following is a summary statement about each case. Cases were reviewed by NMFS Northeast Fisheries Science Center (NEFSC) staff and determinations made by NEFSC staff were later reviewed by experienced staff at all other Fisheries Science Centers, per the Policy and Procedure for Distinguishing Serious from Non-Serious Injury of Marine Mammals.

- 08/09/09 - #1151 was badly entangled but freed with her condition subsequently deteriorating. Re-sightings confirmed the whale was gear free and indicate both mom and calf healthy. This whale was categorized L2 but assigned a serious injury value of 0 due to disentanglement and evident healing.
- 07/19/11 - #4160, Calf of #2660 – Entanglement Scarred Calf with significant cuts and wounds seen off Provincetown. The whale was re-sighted healthy in 2014. The last SAR listed this whale with a serious injury value as 1.0, but that was changed to 0 in the 2014 report based on the healthy re-sight.
- 7/20/12 - #3308 – Entanglement scarred (but gear free) whale found in Gulf of Maine with extensive wounds whose condition subsequently declined in 2013 and

2014. Re-sights showed some health decline but overall condition was fair and injuries healing. This whale was categorized as L10 but assigned a serious injury value of 0 due to evident healing.

Comment 8: The Maine Lobstermen Association (MLA) recommended that the “Population Size” section of the North Atlantic right whale SAR should have a more in-depth discussion of recent changes in right whale distribution over the last five years, during which time fewer are being seen in their known historic habitats. The comment stated that since the minimum population estimate (N_{MIN}) for right whales is based only on those whales observed in surveys in combination with photo-identification of whales, if they are not seen, they are not counted. The MLA fears that as the population continues its positive growth trend, the population estimate could actually decrease because the whales are no longer frequenting the same habitats, which would impact PBR.

Response: This comment may be valid in future SARs; however, the data used in this assessment show no appreciable decline in capture probability during the years succeeding the reference year. Because it is the probability of seeing an individual at least once that determines the robustness of N_{MIN} when calculated as Minimum Number Alive, there has been no discernible impact on that estimate due to changes in right whale residence times in surveyed habitats. NMFS closely monitors mean group-wise capture probabilities using a mark recapture (MRR) statistical model. At the point in time that population estimation via MRR offers a more robust estimate of N_{MIN} than does Minimum Number Alive, that new estimate can then be vetted and used in the SAR.

Comment 9: The MLA recommended that the minimum population estimate for the North Atlantic right whale should be revised to 510 whales, based on the best

available science from the North Atlantic Right Whale Consortium 2014 Annual Report Card.

Response: The MMPA requires that NMFS report a minimum abundance estimate that provides reasonable assurance that the stock size is equal to or greater than the estimate. The estimates provided by the North Atlantic Right Whale Consortium do not meet that standard in that they count whales that are likely to be dead (what the Consortium calls “presumed alive” - those whales not seen for one to five consecutive years). Including those whales in an N_{MIN} for the SAR would increase the likelihood that the estimate is biased high, which fails to meet the mandate of MMPA. Note also that the North Atlantic Right Whale Consortium’s 2014 Annual Report Card includes the statement that their number “should not be considered a “population estimate”.”

Comment 10: The MLA recommended that the “Current Population Trend” section of the SAR for the North Atlantic right whale should be revised to reflect that the population has been increasing over the past decade.

Response: The SAR provides a graph that depicts the population increase over a 12-year period and it includes in the text an estimate of growth during that time frame. The current wording in the “Current Population Trend” section is “Examination of the minimum number alive population index calculated from the individual sightings database, as it existed on 25 October 2013, for the years 1990-2011 (Figure 1) suggests a positive and slowly accelerating trend in population size. These data reveal a significant increase in the number of catalogued whales with a geometric mean growth rate for the period of 2.8 percent.” This text reflects that the population has been increasing over the past decade.

Comment 11: The MLA recommended that the “Current and Maximum Net Productivity Rates” section of the North Atlantic right whale SAR be revised to include a more recent analysis of the pool of reproductive females, mean calving intervals, and age structure of the population.

Response: NMFS agrees that providing a demographically-based productivity value in the SAR would be slightly more informative than the present SAR’s accounting of the number of detected calves. NMFS will revise the section in future years by providing a per capita production value. Because many whales are of unknown age, the development of detailed information on age structure will require vetting estimates through a peer review process that cannot be organized in the short term, but will be included in the next SAR feasible. The same is true for calving interval.

Comment 12: The MLA recommended that the PBR for the North Atlantic Right Whale should be revised to 1.02, using 510 as the minimum population size for the population as referenced above.

Response: See response to comment 9.

Comment 13: The MLA recommended that the North Atlantic right whale SAR include a short explanation of the methodology used to make the assignment for serious injury and mortality rates in U.S. versus Canadian waters. The comment states that the SAR should not include 13.75 reported fisheries entanglements as being “from U.S. waters,” as the origin of the gear in these cases is unknown. The location of where the entanglement was first observed does not indicate the origin of the gear, so this extrapolation cannot be made.

Response: The SAR text will be revised to read “Of the 13.75 reported fisheries

entanglements first reported in U.S. waters during this five-year time period...” Further details on assigning entanglements to countries can be found in Cole T.V.N., and Henry A.G. (2013) Serious injury determinations for baleen whale stocks along the Gulf of Mexico, United States East Coast and Atlantic Canadian Provinces, 2007-2011. Northeast Fish Sci Cent Ref Doc. 13-24; 14p.

<http://www.nefsc.noaa.gov/publications/crd/crd1324/crd1324.pdf>.

Comment 14: The MLA recommended that the North Atlantic right whale SAR be revised to include data from the last ten years to characterize the overall impacts of serious injury and mortality on the North Atlantic right whale population size.

Response: NMFS is presently working on a more robust depiction of the impact of entanglement-related serious injury and mortality on the right whale population, which should be available in subsequent SARs (assuming the procedures receive a favorable peer review, possibly beginning with the next SAR).

Comment 15: The MLA recommended that the North Atlantic right whale SAR note that it is unknown whether any of U.S. fisheries entanglements relate to the efficacy of the sinking line rule.

Response: At this point, too little time has passed to make any statements relative to entanglement rates and the sinking ground rule.

Comment 16: The MLA recommended that the North Atlantic right whale SAR include the value of Optimal Sustainable Population (OSP) for right whales, as well as the value of the size of the stock to substantiate the statement that the “size of the stock is extremely low relative to OSP in the US Atlantic EEZ.”

Response: NMFS has provided a graph that depicts North Atlantic right whale population growth during 1990-2011. That graph indicates that population growth is accelerating and has not passed an inflection point. An inflection point would suggest that the population could be reaching Maximum Net Productivity Level (MNPL). Because the population appears to be at levels clearly lower than MNPL it is, by mathematical definition, less than OSP. Until population growth begins to decelerate – due to density dependence, not deaths caused by human activities - then it would be unwise to attempt to fit a growth curve and estimate OSP from the population data.

Comment 17: The MLA recommended that in the North Atlantic right whale SAR NMFS revise the sentence “the North Atlantic right whale is considered one of the most critically endangered populations of large whales in the world.” The comment states that this conclusion is based on a 1999 report that estimates the population of right whales to be 295 animals, which is substantially lower than the current estimate of 510 whales. The comment states that therefore, more recent data should be used to substantiate such a statement.

Response: NMFS’ comment regarding the critically endangered status of North Atlantic right whale is still true. There are likely only four large whale stocks in more dire straits than the North Atlantic right whale: Western gray whales, Gulf of Mexico Brydes whales, Arabian humpback whales, and North Pacific right whales.

Comment 18: Two individuals noted data deficiencies in the stock assessment reports for North Atlantic gray seals and recommended that NMFS provide current abundance and trend estimates.

Response: NMFS gray seal research has been constrained by lack of resources allocated specifically to seal work. Aerial surveys of index sites have occurred sporadically over the past decade, when resources allowed. Images from those surveys are being processed to inform trend estimates for seals in U.S. waters, and should provide a minimum estimate of abundance. NMFS is working with collaborators (at Woods Hole Oceanographic Institution and Duke University, particularly) to develop cost-effective tools to better survey seals along the New England coast. In addition, NMFS is actively pursuing additional resources and expanding partnerships with other seal research groups to improve and enhance data collection and analytical methods.

Comments on Pacific Regional Reports

Comment 19: The Commission recommended that NMFS conduct further research on the ecological relationship between Hawaiian monk seals and two deep-water fish species also targeted by the Main Hawaiian Islands (MHI) bottomfish handline fishery and explicitly incorporate the requirements of the MHI monk seal population into future stock assessments of the two fish species in question.

Response: The NMFS Pacific Islands Fisheries Science Center (PIFSC) is conducting ongoing research on the habitat use and diet of MHI monk seals using a variety of tools, including fatty acid analysis, seal-mounted video cameras and a variety of telemetry devices. Information about the presence, prevalence, and importance of any commercially fished bottomfish species in the monk seal diet is currently too uncertain to determine the requirements of the MHI monk seal population. This issue is a high priority of MHI monk seal research and the Hawaiian Monk Seal Research Program is working with the State of Hawaii and PIFSC Fisheries Research and Monitoring Division to better

understand and quantify direct and ecological (or indirect) interactions between monk seals and the bottomfish fishery.

Comment 20: The Commission recommended that NMFS use the default R_{MAX} for cetaceans (four percent) for the Eastern North Pacific Southern Resident stock of killer whales, until such time that the research from which the specific R_{MAX} estimate for this stock was derived has been peer reviewed and published.

Response: There are published estimates of R_{MAX} for other resident killer whales in the region that can be used as a reasonable substitute for the default R_{MAX} of four percent. Matkin et al. (2014) provides an R_{MAX} estimate of 3.5 percent for southern Alaska resident killer whales, which is applied to southern resident killer whales. This represents a better estimate than the default maximum, while also providing a lower, and hence, more conservative estimate of PBR than that calculated using the default R_{MAX} of four percent. In context, the difference between PBR calculated using the default R_{MAX} of four percent (PBR=0.16 animals) and the published estimate of 3.5 percent for southern Alaska resident killer whales (PBR=0.14 animals) is negligible.

Comment 21: The Turtle Island Restoration Network recommended that NMFS calculate the PBR for the CA/OR/WA stock of sperm whale using the full range of abundance estimates available – rather than only one study by Moore and Barlow (2014) – and the species-specific growth rate estimates from the scientific literature. They stated that this will result in a PBR calculation of 0.4, rather than the current estimate of 2.7 calculated in the SAR. The comment cites Whitehead (2002), IWC (1982), and Moore and Barlow (2014), which estimate annual population growth rates ranging from 0.6 to 1.5 percent.

Response: Abundance estimates from the Moore and Barlow (2014) study were used, rather than prior published estimates, because these newer estimates are considered to represent the best available science, based on the use improved statistical methodology that has been vetted through multiple peer-reviewed journal publications (Moore and Barlow 2011, 2013, and 2014), and based on revised estimates of $g(0)$ (from Barlow 2015). The analytical method employed makes use of all available survey data dating back to 1991 to estimate abundance in each year, rather than basing each estimate solely on information contained within an individual survey. As such, the annual estimates are substantially more stable through time (not less, counter to Turtle Island Restoration Network's suggestion). In contrast, sperm whale estimates based only on data from a particular survey are highly imprecise estimates due to small within-year sample sizes. The strong increase in mean estimated abundance compared to previously published estimates is mostly due to the use of new $g(0)$ estimates (from Barlow 2015), not due to revised statistical methodology. General imprecision in the estimates for many of the model parameters is a problem of limited information in the data, not of the method. The minimum (20th percentile) abundance estimate accounts explicitly for these uncertainties. Substantial estimated levels of process variance are not surprising given that the population is highly mobile and wide-ranging (i.e., the study area is not closed). The current PBR estimates do not make use of estimates older than eight years. Rather, the current PBR estimate is based on a current abundance estimate, which is appropriately informed by data spanning two decades. The default maximum population growth rate of four percent for cetaceans is used in the calculation of PBR for this stock. There are no reliable empirical estimates of maximum potential population growth rates for sperm

whales. The values used by the International Whaling Commission (IWC) (1982) were based on uncertain estimates of life history parameters now considered to have been pessimistic (Whitehead 2002). Potential growth estimates proposed by Whitehead (2002) were based on a survival schedule for killer whales, while those of Chiquet et al. (2013) were based on assumed ranges for annual survival. Distributions for the growth rate estimates by Chiquet et al. were centered on approximately zero percent per year with half of the distribution being negative. Such results suggest consideration of implausible life table schedules. Reproductive rate estimates for sperm whales used in these and other previous models may also be pessimistic in that the data come from heavily exploited populations rather than maximally growing ones.

Comment 22: Oceana recommended NMFS update the estimates of fishing-induced mortality and serious injury (M/SI) for both humpback and gray whales, based on: (1) new data through 2014 on whale entanglements, which reflect substantially higher rates than reported in the 2008-2012 period; and (2) revising the mortality and serious injury estimates to reflect the best available scientific estimate of the number of M/SI from entanglements that go unreported.

Response: The SARs incorporate serious injury determinations that have been vetted through the Procedure for Distinguishing Serious from Non-Serious Injury of Marine Mammals and reviewed by the SRGs. As a result of the reporting and revision process, data used for these determinations typically lag two years behind the year of the SAR; in this case, the 2014 SARs include mortality and serious injury estimates for the 2008-2012 period.

NMFS acknowledges in the SARs that observed whale entanglements represent

underestimates, because the number of undetected cases is unknown. The NMFS report cited by the commenter (Saez et al. 2013) refers to an unpublished estimate for Gulf of Maine humpback whales indicating that approximately ten percent of entanglements were documented (Robbins and Mattila 2004). The Robbins and Mattila (2004) report is not directly applicable to large whale entanglements on the U.S. west coast, as fishery characteristics and spatial overlap with large whales are different in each region. NMFS will continue to pursue the development of methods that would enable the accurate correction for underestimating entanglement impacts on large whales.

Comment 23: Oceana recommended that NMFS assess how the decreased availability of humpback whale prey may be affecting the stock, and cited a Hill et al. (2015) presentation related to Pacific sardine and anchovy fisheries.

Response: NMFS assumes this comment was directed at the SAR for the CA/OR/WA stock of humpback whales, which was not updated in 2014. We appreciate the comment and will consider it when the SAR is next updated.

Comment 24: The Makah Tribe recommended that NMFS note in the SAR for Western North Pacific (WNP) gray whales that the newly seen non-calves may be immigrants to the Sakhalin feeding aggregation.

Response: Text in the SAR for WNP gray whales has been revised to state that: “While a few previously unidentified non-calves are identified annually, a recent population assessment using photo-identification data from 1994 to 2011 fitted to an individually-based model found that whales feeding off Sakhalin Island have been demographically self-contained, at least in recent years, as new recruitment to the population is almost exclusively a result of calves born to mothers from within the group

(Cooke et al. 2013).”

Comment 25: The Makah Tribe questioned the assertion that the WNP stock of gray whales is listed as endangered under the Endangered Species Act and further recommended that in the absence of scientific evidence for rejecting hypotheses 1 through 6 and adopting hypothesis 7 from Bickham et al. (2014) [a list of hypotheses regarding the population biology of North Pacific gray whales] , NMFS alter the SAR for WNP gray whales in the following ways:

(1) remove the statements in the draft SAR asserting that the Sakhalin feeding aggregation is considered “endangered” under the ESA and “strategic and depleted” under the MMPA;

(2) state instead that the Sakhalin feeding aggregation does not have a formal status under the MMPA, although the population size has been increasing for the last ten years;

(3) change the title of the draft SAR to “GRAY WHALE (*Eschrichtius robustus*): Sakhalin Feeding Aggregation” to help eliminate confusion between the whales identified as a stock in the SAR and the WNP stock listed as endangered under the ESA; and

(4) re-calculate the Sakhalin feeding aggregation’s PBR based on a recovery factor of 0.5 (the default factor for a stock of unknown status).

Response: In 2012, a NMFS Task Force (TF) was established to assess stock structure of gray whales in the North Pacific. With respect to gray whales in the western North Pacific, the primary objective of the TF was to determine if currently available data supported the recognition of gray whales in the WNP as a “population stock” under the guidance provided in the MMPA and the GAMMS (Weller et al. 2013). After

completion of their review, the TF provided unambiguous advice that WNP gray whales should be “recognized as a population stock pursuant to the GAMMS guidelines and the MMPA” (Weller et al. 2013). The TF did not explicitly consider how the available data fit in with the hypotheses presented in Bickham et al. (2014). However, the datasets examined by the TF and by Bickham et al. (2014) were very similar, and both included a review of the results of genetic analyses of biopsies collected from whales feeding off Sakhalin as well as of information on the movements of some whales between Sakhalin Island, Russia and the eastern North Pacific.

In the TF’s consideration of whether gray whales in the WNP represent a population stock under the MMPA, most of the data reviewed were collected from the gray whales off Sakhalin Island, Russia. Thus the recognition of a western North Pacific stock of gray whales that includes those animals that feed off Sakhalin is consistent with the TF’s advice. Similarly, the listing of western gray whales as “Endangered” under the ESA and designation as “Critically Endangered” by the IUCN were largely based on data collected from the gray whales that feed off Sakhalin. The recent data on movements of gray whales between the eastern and western North Pacific were not available when these whales were listed under the ESA and would be considered in any future reviews of these populations. Until such reviews are conducted, however, the continued recognition of the gray whales that feed off Sakhalin as “Endangered” under the ESA is consistent with the data used to inform these listings.

As outlined in the report of the IWC Scientific Committee (SC) (2015), additional analysis and modeling of gray whale range-wide population structure and status has been underway since 2014 and will be the topic of further review of a third IWC inter-

sessional workshop in April 2016. This report states the following: In order to successfully complete modeling efforts required for the workshop, data need to be compiled on: (1) updated abundance estimates and variance and covariance matrices for feeding grounds, (2) complete matching of gray whales photographed south of Sakhalin Island along the coast of Asia, (3) fishing effort along the US and Canadian west coast to determine trends by fishery type (e.g. pots, gillnets, set nets, etc.), and (4) further analyses to narrow the bounds on the stock composition of whales observed at Sakhalin Island. Modelling efforts will include (1) update modelling framework with revised abundance estimates and mixing matrices, (2) conduct further sensitivity examination to pre-specified parameter values, (3) incorporate available data on fishing effort for the west coast of the United States, (4) evaluate parameter uncertainty using bootstrapping, and (5) integrate the gray whale and PCFG strike limit algorithms (SLA) into the modelling framework.

Comment 26: The Makah Tribe recommended that the SAR for WNP gray whales should discuss the available data regarding whales seen feeding off of both Sakhalin and Kamchatka, and the implications of this information for the conclusions and analysis in the SAR, including the identification of a separate WNP stock and the abundance estimate for this stock.

Response: A description of information regarding whales off Kamchatka is provided in the Stock Definition and Geographic Range section as well as the Population Size section of the report. Division of nearshore vs. offshore feeding areas off Sakhalin is not provided because both areas are considered to be part of the overall Sakhalin feeding area and the intra-seasonal interchange of whales between the two sites is extensive. See

response to Comment 25 regarding the IWC's upcoming range-wide population structure and status workshop.

Comment 27: The Makah Tribe recommended that NMFS explain the basis of using a 0.575 multiplier in the PBR calculation for WNP gray whales.

Response: Moore and Weller (2013) evaluated the risk that a proposed Makah hunt of Eastern North Pacific (ENP) gray whales posed to WNP gray whales and stated that “The proportion of the WNP population that migrates along the North American coast is unknown but based on recent photo-identification, telemetry, and genetic matches of WNP whales to Eastern North Pacific (ENP) areas, we estimate the value to be at least 0.15, based on there being 23 known matches out of an estimated population size of 155 (Mate et al., 2011; IWC, 2012; Urbán et al., 2012; Weller et al. 2012).” The upper limit of this estimate is 1.0, or a precautionary value that represents the entire WNP population. The 0.575 multiplier represents the estimated proportion of the WNP population that utilizes U.S. EEZ waters and represents the mean value of a uniform distribution ranging from 0.15 to 1.0 that was used in risk models. NMFS has clarified the origin of the 0.575 multiplier in the final SAR.

Comment 28: The Makah Tribe recommended that NMFS update the SAR and PBR calculation for WNP gray whales to include information from Cooke (2015), which concludes that the proportion of gray whales feeding off Sakhalin that utilize wintering grounds off the coast of Asia is no greater than 63 percent. The comment stated that as a result, the proportion of such whales that migrate to North America would be between 0.37 and 1.0.

Response: At the IWC SC inter-sessional workshop on gray whale population

structure held in April 2015, a number of recommendations were made for work to be undertaken that would narrow the confidence range for this estimate of 63 percent reported in Cooke et al. (2015). Revision of this work will be reviewed at the next IWC inter-sessional workshop on gray whales (tentatively scheduled for April 2016).

Comment 29: The Makah Tribe recommended that NMFS update the SAR for the Sakhalin population of WNP gray whales to include the new abundance estimate from the 14th IUCN Western Gray Whale Advisory Panel's meeting's Second Rangewide Workshop (IUCN 2014), which concluded that as of 2013, the population contained 38 mature females ($SE = \pm 2$) growing at an average rate of 2.5 percent ($SE = \pm 0.5$ percent) over the previous 10 years, and that the best estimate of the age 1-plus population in 2013 was 176 ($SE = \pm 2$). The comment stated that the estimate currently listed in the SAR is biased low because it only accounts for whales observed at Sakhalin Island, and that the SAR should include and utilize this new abundance estimate (IUCN 2014), including whales sighted in Kamchatka, in the PBR calculation.

Response: While it is true that an analysis of the data from the parallel photo-ID team of the Vladivostok Institute of Marine Biology (IBM) has been conducted, including incorporation of their photo-ID data from Kamchatka, the reliability of these datasets is unclear. That is, analysis of the IBM photo-ID data from Sakhalin resulted in a "less optimistic population projection" as compared to the Russia-United States data, "with a high probability of future decline." Until the reasons for the apparent difference in results from the two datasets have been elucidated, this difference should be treated as a potential caveat to the assessment results presented in Cooke et al. (2013). Therefore, we have reported numbers from only the Russia-United States data which at this time

represent the best available science.

Comment 30: The Makah Tribe recommended that the SAR for the ENP gray whale, the recovery factor for the Pacific Coast Feeding Group should be 0.75 instead of 0.5. The comment stated that in the 2013 SAR, NMFS agreed to consider this change in the 2014 SAR. The Makah Tribe believe that a recovery factor of 0.75 is consistent with the best available science regarding the PCFG, the guidelines for preparing marine mammal stock assessments, the available precedent, and NMFS' February 27, 2014 analysis.

Response: NMFS considered alternatives to the recovery factor of 0.5 in consultation with the Pacific Scientific Review Group (PSRG) in 2014, including a proposal to increase the recovery factor to 0.75. The PSRG did not support the change in recovery factor and NMFS has retained the default factor of 0.5.

Comment 31: The Hawaii Longline Association (HLA) recommended that NMFS streamline the SAR administrative process to be more timely, because at any given time “there are presently three versions of the False Killer Whale (FKW) SAR available to the public, any one of which might be construed by the public to be “current”: (i) the Final 2013 SAR; (ii) the Draft 2014 SAR (dated October 2014), presently open for public comment; and (iii) the Draft 2015 SAR (dated February 2015).”

Response: While we understand the potential for confusion, at any given time the most recent “final” SARs should be considered the “current” version of the reports. The draft reports are reviewed by the Scientific Review Groups and then by the public; they are not considered “final” until the agency has addressed comments and issued a notice of availability of final reports. In this case, the draft 2014 reports were made available for

public comment from January 29, 2015 through April 29, 2105; during that time, the final 2013 SARs were the most current final versions, and the draft 2015 reports were made available to the Scientific Review Groups for review but not yet available to the general public (and therefore should not have caused any confusion for the public). With this *Federal Register* notice, NMFS is finalizing the 2014 SARs and the 2014 reports should be construed as the “current” assessment reports. The draft 2015 SARs are forthcoming and will be made available for public comment for 90 days, as directed by the statute.

Comment 32: The HLA recommended that the draft SAR be revised to reflect the current FKW management framework. The comment states that “the Draft 2014 SAR will effectively report information in 2015 that is current only through the end of 2012. However, the FKW Take Reduction Plan (TRP) regulations became effective in 2013 and a full two years of data gathered under the significantly new regulatory framework established by the TRP regulations are available. None of this (*sic*) data will be reported in the final SAR and, as a result, the Draft 2014 SAR is entirely irrelevant to the management of the Hawaii longline fisheries because it is based upon data gathered under a very different management framework.”

Response: The timelines associated with the drafting of SARs unfortunately require some lag in the use of various datasets. The SAR is prepared early in the calendar year, at which time the previous year’s Observer Program data are not yet available for use in estimating bycatch. In the case of the 2014 SAR, bycatch estimates were available only through 2012 at the time the SAR was reviewed by the Pacific Scientific Review Group.

Comment 33: The HLA requested that NMFS eliminate the five-year look-back

period for the FKW SAR. The comment states “data reported in the FKW SAR should reflect the data gathered after the implementation of the TRP regulations to accurately measure the effects of the Hawaii longline fisheries on FKW stocks.”

Response: As already indicated, the draft 2014 SAR uses data through 2012. The TRP regulations did not go into effect until early 2013, such that no data after the period of TRP implementation are included. It is appropriate to continue the 5-year look back for data collected prior to the TRP. When 2013 bycatch data are available, NMFS will evaluate whether it is appropriate to continue use of the five-year look-back in the bycatch estimates.

Comment 34: The HLA recommended that the draft SAR for the Hawaii pelagic FKW stock should expressly recognize the discrepancy between the reported M/SI rate for the deep-set fishery and the positive population trend for the stock, and requests that NMFS revisit the manner in which it determines M/SI for FKW interactions. The comment states “For a decade, NMFS has reported a M/SI rate for the deep-set fishery that far exceeds PBR for the Hawaii pelagic FKW stock...However, the best available information suggests that the number of FKWs in the Hawaii EEZ has not declined during the same time that the supposedly unsustainable M/SI rate was occurring.”

Response: This comment has been addressed previously (see 78 FR 19446, April 1, 2013, comments 45 and 51; 79 FR 49053, August 18, 2014, comment 26). The comment and included footnote continue to suggest that the pelagic stock of FKWs is increasing or stable since 2002 and, as such, deep-set fishery takes are not of concern, although serious injury and mortality have been above PBR for more than a decade. The commenter attributes this persistence of FKWs despite high levels of fishery mortality to

NMFS' "improper" assessment of the severity of injuries resulting from fisheries interactions, "improper" assessment of population abundance and trend, or both. Assessment of injury severity under the NMFS Policy and Procedure for Distinguishing Serious from Non-Serious Injury of Marine Mammals has been discussed in numerous previous comment responses, and is based on the best available science on whether a cetacean is likely to survive a particular type of injury. Further study of FKWs would certainly better inform the assigned outcomes, but until better data become available, the standard established in the NMFS 2012 Policy and Procedure for Distinguishing Serious from Non-Serious Injury of Marine Mammals will stand.

The referenced 2002 and 2010 survey abundance estimates are not comparable in their published form, as the methodology for accurately enumerating FKW groups changed between surveys, significantly increasing the average group size of false killer whales and therefore, the resulting abundance estimate. Further, because the entire stock range of pelagic FKWs is unknown, but certainly extends beyond the Hawaii EEZ, the available abundance estimates do not reflect true population size. A robust assessment of population trend would require assessment of environmental variables that influence FKW distribution and the proportion of the population represented within the survey area during each survey period. Finally, many years of unsustainable take does not automatically lead to the conclusion that the population is declining. PBR was designed to provide a benchmark, in the face of great uncertainty about marine mammal populations, below which human-caused mortalities would not reduce the population beyond its OSP, which is defined as the abundance where there is "the greatest net annual increment in population numbers or biomass resulting from additions to the population

due to reproduction and/or growth less losses due to natural mortality.” The benchmark does not consider whether a population is declining, as this is very hard to prove, particularly for population abundance estimates with low precision.

Comment 35: The HLA recommended that NMFS produce a publicly available report that documents further analysis of the 2010 Hawaiian Islands Cetacean and Ecosystem Assessment Survey data for pelagic FKWs. The comment states that otherwise, NMFS should remove the comment from the draft 2014 SAR that states that there was “some suggestion” of “attractive movement” of FKWs in the 2010 survey. The comment states that there is no citation to support this statement.

Response: Citation to Bradford et al. (2014) has been added to the SAR within the sentence: “There is some suggestion of such attractive movement within the acoustic data, though the extent of any bias created by this movement is unknown.” Reports of responsive movement and its potential impact on the estimates is discussed within the Bradford et al. (2014) peer-reviewed publication.

Comment 36: The HLA recommended that the SAR for the pelagic stock of FKWs use a recovery factor greater than 0.5 (i.e., closer to 1.0 than to 0.5). The comment stated that the pelagic stock is not depleted or threatened, nor is its status unknown, and therefore the draft SAR should not assign it a recovery factor of 0.5.

Response: The current status of pelagic FKWs is unknown. This population may be depleted given fishing pressures within and outside of the EEZ over several decades. The status of Hawaii pelagic FKWs is considered unknown because there are no trend data available to evaluate whether the population is increasing, stable, or declining. Designation of a stock as “depleted” requires specific analysis of population trend which

is not currently possible with the available data. The recovery factor for Hawaii pelagic FKWs will remain 0.5, as indicated, for a stock of unknown status with a coefficient of variation of the mortality and serious injury estimate ≤ 0.30 , as directed by the GAMMS.

Comment 37: The HLA recommended that the 2014 draft SAR for the insular stock of FKW be revised to report the “correct” range, M/SI level, and status (i.e., status should be non-strategic). The comment stated that “...the Draft 2015 SAR appropriately proposes to modify the range of the insular stock...the Draft 2014 SAR continues to present the inaccurately assumed insular stock range, which will effectively be reported as the “best available science” through most of 2016. This inaccuracy is very significant. The draft 2014 SAR reports an M/SI rate of 0.9, which is greater than the PBR of 0.3. In contrast, if the correct insular stock range were used, then the M/SI rate should be 0.0.”

Response: NMFS has not completed the draft 2015 SARs, nor have we made them available for public notice and comment and, therefore, we cannot make this comparison.

Comment 38: The HLA recommended that the language of the draft SAR be revised to remove all implied allegations that the Hawaii-based longline fisheries are responsible for dorsal fin disfigurements observed in Insular Stock animals. The comment states that these fisheries have been excluded from nearshore fishing grounds for several years.

Response: The sentence has been reworded to be less explicit about any specific type of fishery. It now reads: “The commercial or recreational hook-and-line fishery or fisheries responsible for these injuries is/are unknown.”

Comment 39: The HLA recommended that NMFS acknowledge in the SAR for

the insular stock of FKW that the population has maintained a stable abundance since 2000, as maintained by the best available information, and asserted that the assumption that the insular stock has declined is speculative.

Response: The SAR cites the most recent Status Review for the MHI insular stock of FKW. Within that Review, a Population Viability Analysis was conducted, including 45 different scenarios incorporating various uncertainties in anthropogenic and natural mortality, the impact of allee and other small population size effects, and uncertainty around various measures of abundance. All but one model indicated the population has undergone decline. The SAR acknowledges that some two-stage models suggest a lower rate of decline since 2000. The Status Review does not consider the two-stage models as any more appropriate than the single growth rate models. When new data become available to support an updated analysis of trend in the MHI insular stock, NMFS will update the assessment of population status accordingly.

Comment 40: The HLA recommended that NMFS alter the proration assumptions used in the draft SAR for FKW interactions, as they do not reflect the best available information. The comment stated: “NMFS categorizes certain interactions as FKW interactions when, in fact, no data exist from which NMFS can reliably determine whether the interactions in question involved FKWs...First, NMFS assigns a proportion of FKW interactions for which no injury determination has been made as M/SI interactions that ultimately count against the fisheries. Second, NMFS assigns a proportion of “blackfish” interactions (i.e., interactions with unidentified cetaceans) as FKW interactions that also count against the fisheries. Neither of these methods is reasonable or lawful.”

Response: FKW bycatch proration reflects the best available information on the species and injury status of cetaceans observed hooked or entangled in the longline fishery. First, NMFS prorates injuries with a status of ‘cannot be determined’ according to the ratio of known serious and non-serious injuries. To treat all ‘cannot be determined’ cases as non-serious would be a clear under-representation of total M/SI within the fishery. This proration supported within GAMMS, judged by NMFS, and supported by external peer-review, as the best approach for dealing appropriately accounting for injuries whose injury status cannot be determined based on the information provided by the observer. Second, when a species code of “unidentified blackfish” has been assigned to an interaction by the Pacific Islands Regional Office Observer Program, the Program has determined that the species identity is known to be either FKW or short-finned pilot whale. This species assignment is much more specific than “unidentified cetacean.” Because the species identity is known within two possible candidates, NMFS has used all other interactions with those two species to develop a proration model for assigning these blackfish interactions to be false killer whales or short-finned pilot whales. All available interaction data inform the proration scheme. Cetacean interaction with a species identity of “unidentified cetacean” are not currently prorated to any specific species and are therefore not included in any assessment of M/SI.

Comment 41: The HLA recommended that NMFS further consider its delineation of a Northwestern Hawaiian Islands (NWHI) stock of FKWs. HLA’s comment indicates that HLA remains “highly skeptical of NMFS’s ability to so quickly and conclusively ‘confirm’ that NWHI whales are a distinct stock separate from the Insular Stock and the Pelagic Stock.” HLA believes that “NMFS’s rush to judgment regarding the existence of

this new ‘stock’ appears to reflect an aversion to attributing these additional 552 whales to the Insular Stock or to the Pelagic Stock.”

Response: NMFS disagrees with the comment: the separation of the NWHI stock and the Hawaii insular and pelagic stocks is sound and based on multiple lines of evidence including genetic analyses indicating significant differentiation in both mitochondrial and nuclear DNA, photo-ID indicating separation from the tight social network of the Main Hawaiian Islands animals, and satellite telemetry data suggesting island and atoll association within the NWHI. The data on FKW stock structure, including the new NWHI stock, have been evaluated both for demographic independence, the benchmark for separation under the MMPA, and for evolutionary separation, the more stringent standard for separation under the ESA.

Comment 42: The HLA recommended that the draft 2014 SAR for the NWHI stock of FKWs be revised to state that the M/SI rate for the NWHI Stock is zero. The comment stated, “The Hawaii longline fisheries are excluded from fishing within the range of the NWHI Stock and, moreover, there has never been a reported interaction between either of the Hawaii longline fisheries and the NWHI Stock.”

Response: The Hawaii longline fishery is not excluded from fishing within the range of the NWHI stock of FKWs. The range of the NWHI stock extends outside of the Papahānaumokuākea Marine National Monument (where fishing is prohibited) to the islands of Kauai. Much of the NWHI stock range east of the Monument is exposed to longline fishery for a portion of the year when the Longline Exclusion Zone contracts toward the islands. Although such contraction was eliminated in 2013, prior to that time the NWHI stock did overlap with a reasonable level of fishing effort during the

contraction period. There are in fact two takes of FKWs within the overlap zone between the fishery and all three stocks of FKWs in 2012.

Comment 43: One commenter recommended that NMFS include a statistical test to determine whether the regression analysis of California harbor seals net production is statistically different from no change.

Response: The previous text (and figure) in this SAR addressing net production for this harbor seal population is being deleted, because any assessment of net production needs to incorporate accurate information on human-caused mortality. Such information is lacking for this stock, as the fishery historically responsible for most mortality has only been observed sporadically in recent years. Text appears in the SAR detailing why the estimation of net production for this stock is not possible.

Comment 44: One commenter suggested that the population estimate for California harbor seals does not represent the entire population of the stock. Another commenter suggested that NMFS's current sampling methods understate harbor seal and California sea lion populations along the California coast.

Response: The SAR states that a complete count of all harbor seals is not possible because not all seals will be hauled out of the water during the time of surveys. NMFS has worked with other researchers to develop haul-out correction factors, which are used to account for the number of animals not hauled out at the time of surveys. Such correction factors are incorporated into final population size estimates, which represents the best available method to adjust raw counts upwards to account for animals in the water at the time of surveys.

Comments on Alaska Regional Reports

Comment 45: The Commission recommended that NMFS reference in the Alaska Region SARs any workshop reports or recommendations that came from meetings in December 2010 and March 2011, when NMFS partnered with the Indigenous People's Council on Marine Mammals to convene two workshops of marine mammal hunters and representatives from Alaska Native Organizations.

Response: We appreciate the recommendation and will review the workshop reports and recommendations from these meetings to determine whether to include any of this information in future SAR revisions.

Comment 46: The Commission recommended that NMFS provide an update on the status of the development of a statewide program for monitoring subsistence hunting and harvests. The Commission further recommended that NMFS should update all related information in the SARs and address concerns about any potential shortcomings in these efforts. For example, NMFS should clarify if the following statement from the ribbon seal SAR is still accurate: "at this time, there are no efforts to quantify the total statewide level of harvest of ribbon seals by all Alaska communities."

Response: NMFS agrees that a comprehensive statewide program for monitoring subsistence hunting and harvests would be desirable, but is not funded. NMFS works with our partners in Alaska Native Organizations and the Alaska Department of Fish and Game to obtain information for many subsistence-harvested marine mammal species. While incomplete, these efforts provide some assurance that the current and foreseeable levels of subsistence use are sustainable for all marine mammal species under NMFS jurisdiction that are presently harvested.

We have made considerable updates of the subsistence harvest information in the

draft 2015 ringed seal, ribbon seal, and bearded seal SARs, and we will update this information in the spotted seal SAR the next time it is revised.

Comment 47: For the SAR for the North Pacific stock of right whales, the Commission recommended that NMFS estimate the range of ship-strike probabilities and assess the results in the context of this stock's PBR level and a population viability analysis.

Response: Unfortunately, at this time there are no data with which to undertake this exercise and too few data on other relevant variables to construct a meaningful population viability analysis for North Pacific right whales.

Dated: August 14, 2015.

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