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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XC853

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 2013 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/. You also may send requests for copies of reports to: Chief, Marine Mammal and Sea Turtle Conservation Division, Office of Protected
Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3226, Attn: Stock Assessments.

Copies of the Alaska Regional SARs may be requested from Robyn Angliss,

Alaska Fisheries Science Center, 7600 Sand Point Way, BIN 15700, Seattle, WA 98115.

Copies of the Atlantic Regional SARs may be requested from Gordon Waring, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543. Copies of the Pacific Regional SARs may be requested from Jim Carretta,

Southwest Fisheries Science Center, NMFS, 8604 La Jolla Shores Drive, La Jolla, CA

92037-1508.

FOR FURTHER INFORMATION CONTACT: Shannon Bettridge, Office of Protected Resources, 301-427-8402, Shannon.Bettridge@noaa.gov; Dee Allen, Alaska Fisheries Science Center, 206-526-4048, Dee. Allen@noaa.gov; Gordon Waring, Northeast Fisheries Science Center, 508-495-2311, Gordon.Waring@noaa.gov; or Jim Carretta, Southwest Fisheries Science Center, 858-546-7171, Jim.Carretta@noaa.gov. 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 M/SI 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 3 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 2013, and the revised reports were made available for public review and comment for 90 days (78 FR 66681, November 6, 2013, 2012). NMFS received comments on the draft SARs and has revised the reports as necessary. This notice announces the availability of the final 2013 reports for the 122 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 2013 SARs from the Marine Mammal Commission, the U.S. Navy (Pacific Fleet), the Makah Tribe, the Western Pacific Regional Fisheries Management Council, and six non-governmental organizations (The Humane Society of the United States, Center for Biological Diversity, Whale and Dolphin Conservation, Ocean Conservancy, Hawaii Longline Association, and Cascadia Research Collective).

Some comments recommended initiation or repetition of large data collection efforts, such as abundance surveys, observer programs, or other efforts to estimate mortality. Some comments recommending additional data collection (e.g., additional abundance surveys or observer programs) have been addressed in previous years.

Although NMFS agrees that additional information may improve the SARs and inform conservation decisions, resources for surveys and observer programs are fully utilized, and no new large surveys or other programs may be initiated until additional resources are available. Such comments on the 2013 SARs and responses to them may not be

included in the summary below because the responses have not changed. 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 below.

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 2013 SARs. These delays are due to the schedule of the review of the reports by the regional SRGs. NMFS provides preliminary copies of updated SARs to SRGs prior to release for public review and comment. If a comment on the draft SAR suggests a substantive change to the SAR, NMFS may discuss the comment and prospective change with the SRG at its next meeting.

Comments on National Issues

Comment 1: The Marine Mammal Commission (Commission) recommends that NMFS complete its review of the Guidelines for Assessing Marine Mammal Stocks (GAMMS) III Workshop recommendations and public comments received on those recommendations, and issue new stock assessment guidelines before conducting the 2015 stock assessments.

Response: NMFS is working to complete its review of the GAMMS III recommendations as well as the public comments received on those recommendations, and intends to issue updated stock assessment guidelines as expeditiously as possible.

Comment 2: The Commission recommends that NMFS make every effort to ensure that data collected on at-sea distribution and movements of pinnipeds are made available in a timely manner and to a broad audience.

Response: NMFS appreciates this comment and recognizes the value in disseminating the results of studies of pinniped distribution and movements. While most pinniped science on at-sea distribution and movements is conducted by scientists external to the agency, NMFS will encourage researchers to publish results of pinniped research peer-reviewed journals or reports that are broadly available in a timely manner.

<u>Comment 3</u>: The Humane Society of the United States, the Center for Biological Diversity, and Whale and Dolphin Conservation (Organizations) recommend that NMFS use the most recent data in the SARs to overcome the two-year lag.

Response: The marine mammal SARs are based upon the best available scientific information, and NMFS strives to update the SARs with as timely data as possible. In order to develop annual mortality and serious injury (M/SI) estimates, we do our best to ensure all records are accurately accounted for in that year. In some cases, this is contingent on such things as bycatch analysis, data entry, and assessment of available data to make determinations of severity of injury, confirmation of species based on morphological and/or molecular samples collected, etc. Additionally, the new serious injury determination policy now requires several phases of review, which can extend the process and time required to estimate bycatch. Reporting on incomplete annual M/SI estimates could result in underestimating actual levels. The MMPA requires us to report mean annual M/SI estimates, and we try to ensure that we are accounting for all available data before we summarize those data. With respect to abundance, in some cases we provide census rather than abundance estimates (such as North Atlantic right whales) and the accounting process to obtain the minimum number alive requires two years of sightings to get a stable count, after which the data are analyzed and entered into the SAR in the third year. All animals are not seen every year; waiting two years assures that greater than 90% of the animals still alive will be included in the count.

<u>Comment 4</u>: The Organizations recommend that NMFS discuss concerns related to altered ocean conditions caused by global climate change and concerns regarding the impacts of sonar and other training exercises in the Habitat Impacts sections.

Response: The MMPA requires for strategic stocks a consideration of other factors that may be causing a decline or impeding recovery of the stock, including effects on marine mammal habitat and prey. The GAMMS II recommend that such issues should therefore be summarized in the Status section for all strategic stocks. If substantial issues (such as global climate change or impacts of sonar, for example) regarding the habitat of the stock are considered to impede recovery of a stock, a separate section titled "Habitat Issues" is used; if data exist that indicate a problem, they are summarized and included in the SAR.

 $\underline{\text{Comment 5}}\text{: The Organizations recommend that NMFS adhere to the GAMMS in cases where abundance data are aging and reduce the minimum abundance estimates annually until new abundance data are available. For example, the outdated <math>N_{mins}$ for pygmy sperm whale and dwarf sperm whale should be reduced incrementally over time as per GAMMS.

Response: The proposed revisions to the GAMMS (i.e. GAMMS III) - which recommend incrementally increasing the uncertainty around the abundance estimate, thereby reducing the minimum abundance estimate (N_{min}) and associated PBR- have not yet been finalized or fully implemented by NMFS. NMFS is adhering to the guidance provided in GAMMS II until new guidance is finalized.

Comments on Pacific Regional Reports

Comment 6: The Makah Tribe recommends that NMFS update the gray whale SAR to include the most current information on the now 27 gray whale observations in the Western and Eastern North Pacific. The comment cites Urban et al. (2013) as an updated information source.

Response: Reference to the Urban et al. 2013 paper and information on movements between the Western and Eastern North Pacific will be included in the draft 2014 SAR.

Comment 7: The Makah Tribe recommends that NMFS replace the word "residency" with "fidelity" in the sentence that describes gray whales in the Pacific Northwest which reads: "whales that frequently return to the area, display a high degree of intra-seasonal 'residency' and account for a majority of sightings between 1 June and 30 November." Additionally, the Makah Tribe recommends changing the phrase "Pacific Coast Feeding Group gray whales" to "gray whales observed in the Pacific Coast Feeding Group range and season" in the Fisheries Information and Other Mortality sections, as the referenced whales include whales that were identified as Pacific Coast Feeding Group (PCFG) whales solely because they were observed in one year in the geographic range and season for PCFG, while the formal definition for PCFG includes whales seen in at least two years in the range and season for PCFG.

Response: The word "fidelity" replaces the word "residency" and the phrase PCFG gray whales" was changed to "gray whales observed in the PCFG range and season" in the final 2013 SAR as suggested.

Comment 8: The Makah Tribe recommends that the gray whale SAR should

discuss whether the PCFG satisfies the statutory definition of a stock, and in particular whether the animals within the group interbreed when mature

Response: The final 2013 SAR elaborates on 'interbreed when mature,' citing the gray whale stock identification workshop report of Weller et al. (2013). New text states: "Further, given the lack of significant differences found in nuclear DNA markers between PCFG whales and other Eastern North Pacific (ENP) whales, the task force found no evidence to suggest that PCFG whales breed exclusively or primarily with each other, but interbreed with ENP whales, including potentially other PCFG whales."

Comment 9: The Makah Tribe suggests that the recovery factor default value of 0.5 for PCFG gray whales is too low and recommends that NMFS instead use a recovery factor of 0.75 in the PCFG gray whale potential biological removal (PBR) calculation.

Response: The Pacific Scientific Review Group (SRG) was asked to review the use of the default recovery factor of 0.5 at their April 2014 meeting. They raised a concern about using a recovery factor of 0.75 as it had not been adequately reviewed. They recommended the SAR could contain a range of recovery factors, from 0.5 to 1.0. We concluded that using a range would not meet the statutory intent of calculating a PBR. Given a lack of specific guidance from the SRG on the recovery factor for PCFG, NMFS will continue to use the default of 0.5 for these animals. We will revisit the issue of the appropriate recovery factor in the 2014 SAR.

Comment 10: The Makah Tribe recommends that NMFS prorate the serious injury for the gray whale observed entangled on 21 July 2009, because it was re-sighted on 3 August 2009 as well as in 2010 and 2011 still trailing gear.

Response: This whale was seen again in 2013 and had shed all gear and was

apparently in good health. This record has been updated with a non-serious injury designation in the final 2013 serious injury determination report.

Comment 11: The Makah Tribe recommends that NMFS remove the PCFG range assigned to the gray whale that was necropsied on 6 June 2011; because it was found south of the PCFG range, the whale may have been struck and killed before the PCFG season, and there is no photo-identification.

Response: NMFS has reclassified this whale as an ENP whale, based on its being south of the time/area range currently used for PCFG gray whales.

Comment 12: The Cascadia Research Collective (CRC) recommends that for the three newly recognized insular stocks of pantropical spotted dolphins in Hawaiian waters, NMFS should provide a range of likely abundance estimates and PBR values using density values for this species. The Organizations also recommend that NMFS consider using density estimates (e.g. false killer whales (FKW) around American Samoa and spotted dolphins around Palmyra) to produce a range of PBR and abundance estimates for pantropical spotted dolphins insular stocks. Further, the Commission recommends that NMFS make full use of information on abundance, density and/or stock ranges, and new analytic methods such as spatially explicit mark-recapture and line-transect models or Bayesian inference from similar cases, to provide bounds on possible abundance estimates and PBR levels for newly split stocks, whenever possible, as was done for pantropical spotted dolphins in waters surrounding Palmyra and for FKW around American Samoa in 2010.

Response: The suggested inclusion of density information from other regions to provide a range of likely abundance and PBR values needs to be evaluated more carefully

within the context of small, range-restricted insular populations. NMFS will evaluate such an approach for the future, as well as alternative approaches for assessing abundance based on a range of available data for each of the new insular stocks.

Comment 13: The CRC recommends that NMFS incorporate alternative sources of information on fisheries interactions with melon-headed whales as there is no observer coverage in any nearshore fisheries and Aschettino (2010) documents signs of fishery interactions (bullet wounds and linear scars) in her photo-identification study. The CRC also recommends revising the "no known fishery mortality" language in the PBR section, again citing Aschettino (2010) as containing information inconsistent with that statement. And, the CRC notes that the melon-headed whale Kohala resident stock abundance estimate based upon Aschettino (2010) likely overestimates abundance by including both individuals that have died since 2002 and those that were born after 2002 but before 2009. The CRC further recommends that NMFS note that melon-headed whales are sensitive to impacts from anthropogenic sound, citing Southall et al. (2013), Southall et al. (2006) and Brownell et al. (2009) as information sources.

Response: The reference to potential fisheries injuries as evidenced by bullet holes and linear scars, discussed in Aschettino (2010) was added to the final SAR. Lack of observer coverage in all nearshore fisheries was already noted within the SAR. The section on Other Mortality was expanded to include discussion of the Southall et al. (2013) report, and the likely overestimation of abundance of Kohala Resident whales was noted in the section on Kohala Resident stock population size. The section on Other Mortality was expanded to include discussion of the Southall et al. (2013) report.

Comment 14: The CRC recommends that NMFS revise its language in the

pantropical spotted dolphin SAR (Hawaiian Islands Stock Complex) about photo identification catalogs available through the Collective for developing mark-recapture estimates. The comment notes that the O'ahu and 4-island stocks photos are limited and old and that the Hawai'i Island stock photos are not incorporated into a photo-identification catalog.

Response: The SAR contains language about the availability of photos and states that a photo identification catalog has not been developed. For the Oahu and 4-islands stocks, the text about the photo identification catalog was removed, while for the Hawaii Island stock, the text was clarified regarding the availability of a catalog.

Comment 15: The CRC recommends that NMFS update the pantropical spotted dolphin Status of Stock section to reflect work by Burgess et al. (2011) that documented vessel noise associated with directed fishing effort as a habitat issue in Hawaiian waters.

Response: NMFS will further evaluate the impacts of vessel noise on cetacean stocks in the region, but has not included the Burgess et al. (2011) reference in the SAR. The suggested study of Burgess et al. (coauthored by a SAR author) did not evaluate noise exposure levels or evaluate any responses from cetaceans. The main findings indicate that cetaceans are exposed to echosounder noise, but it is unknown if these sounds represent habitat threats.

Comment 16: The CRC clarifies that the ika-shibi fishery is a tuna fishery that catches squid for bait, not a squid fishery (see Hawai'i rough-toothed dolphin and bottlenose dolphin Fishery Information sections) and also clarifies that gillnet fishing in Hawaiian waters occurs in nearshore areas, making it unlikely that Hawai'i rough-toothed dolphin, striped dolphin, or Fraser's dolphin would interact with gillnets. The CRC

recommends that NMFS revise the statement that total fishery-related M/SI can be considered to be insignificant and approaching zero in the Status of Stock section of the Hawai'i rough-toothed dolphin. Rough-toothed dolphins are known to take bait and catch from fishermen off of the island of Hawai'i in unobserved fisheries.

Response: Text in the Status of Stock section has been revised to reflect that insufficient data exist to assess whether fishery-related M/SI is insignificant and approaching zero.

Comment 17: The CRC recommends that NMFS rename the Hawai'i pelagic stock of Blainville's beaked whale to Hawai'i stock until two stocks are recognized. Further, Blainville's beaked whales in Hawaiian waters should be separated into two stocks: island-associated and pelagic.

Response: The stock's name has been changed in the SAR. SAR text already includes discussion of possible insular and pelagic populations of this species and that splitting the stock may be warranted in the future. However, following recommendation of the SRG, NMFS is not splitting the stock at this time based upon lack of sufficient data.

<u>Comment 18</u>: The CRC recommends that NMFS modify the Status of Stock section for Risso's dolphin Hawai'i stock to reflect world-wide habitat issues. The current status reads: "no habitat issues are known to be of concern for this species."

Response: The SAR text reflects that no habitat issues are known for this stock of Risso's dolphin in U.S. waters. Habitat issues in other parts of the world for this species are not discussed in the SAR.

Comment 19: The CRC recommends that NMFS change the wording about the imprecision of the common bottlenose dolphin Hawai'i stock complex, O'ahu stock

mark-recapture abundance estimate CV of 0.54, which is similar to the CV (0.59) for the pelagic stock.

Response: Language pertaining to the lack of precision in the O'ahu estimate has been deleted

Comment 20: The CRC recommends that NMFS revise the fin whale, Hawaiian stock to reflect the potential for anthropogenic sounds to impact fin whale behavior as is done in the CA/OR/WA stock report.

Response: Such language has been added to the Status of Stock section of this report.

Comment 21: The Navy recommends that NMFS make several edits to the Pacific SARs for blue whale (ENP stock), humpback whale (CA/OR/WA stock), fin whale (CA/OR/WA stock), blue whale (CNP stock), and sei whale (Hawaiian stock) to reflect the speculative effects of anthropogenic sound on marine mammal behavior as supported by Goldbogen et al. (2013).

Response: NMFS has revised the language in the respective SARs to reflect the full range of behavioral responses reported by Goldbogen et al. (2013) for blue whales. For other species, NMFS has changed language to reflect that behavioral responses of other baleen whale species to such sounds may vary.

Comment 22: The Western Pacific Regional Fishery Management Council (Council) recommends that NMFS use a higher recovery factor for the pelagic stock of FKW as supported by Hilborn and Ishizaki (2013). The Hawai'I Longline Association (HLA) recommends that NMFS use a recovery factor greater than 0.5 for the PBR estimate for the pelagic stock of FKW, because all available data contradict any

hypothesis that the abundance of FKW in the Hawai'i exclusive economic zone (EEZ) is decreasing.

Response: NMFS is working to obtain additional data to examine abundance trends in pelagic FKW; however, this does not change the conclusions of the Draft 2013 SAR or the Final 2012 SAR (see 78 FR 19446, April 1, 2013, comment 45) that trend analyses are inappropriate with only two data points, particularly given changes in group size estimation and analysis methods in 2010 and that the proportion of the population in the study area, and its variance over time, are not known. The Hilborn and Ishizaki (2013) report lacks sufficiently robust methods in a number of aspects and its conclusions and recommendations are not incorporated into the SAR. Their conclusion that there is an 83% chance that the population is increasing is faulty, as the growth estimate is dependent on many unverified assumptions, conditions, and parameter inputs. More specifically:

1) The estimates of growth are strongly dependent on the inputs (priors) for the natural vital rate parameters, which are likely optimistic, because they are intended to represent optimal values and exponential growth (i.e., density dependence is ignored). If the population is depleted (low abundance relative to carrying capacity), then these vital rates may be appropriate, in which case, one might conclude that the population is growing from a depleted state toward some equilibrium with fishing mortality (i.e., population growth does not mean the population is at Optimum Sustainable Population (OSP) or otherwise healthy). The "tuned" birth rates are known to be far lower than that estimated for other populations of FKW, and the estimates of adult survival are likely too high.

- 2) The pelagic stock is treated as a closed population within the Hawai'i EEZ boundary, an assumption known to be false and which would have a significant impact on estimation of population abundance and trend. Given an open population, it is unreasonable to try to estimate a population trend from two estimates, even if the estimates were derived using identical procedures (which they were not); the higher estimate for the more recent survey could simply mean that a greater proportion of the population was within the survey area. Multiple survey estimates are needed to appropriately infer trends within the survey area, and even then, the trend for entire population would not be known.
- 3) Precision of the realized rate for population growth rate (r) is overestimated because uncertainty is ignored for several important parameters, including the number of takes by the fishery (which may also be biased), the multiplier for juvenile survival (0.95 of adult survival), and oldest age of reproduction. A more valid distribution for current r (that more fully accounts for uncertainty in the population model structure, vital rates, and fishing mortality estimates) would likely suggest a more equivocal result for population growth.

In summary, the current status of pelagic FKW is unknown. This population may be depleted given fishing pressures within and outside of the EEZ over several decades. We could expect a depleted population to be growing, though this would not represent a healthy state.

Comment 23: The Council recommends that NMFS clarify that when citing Kobayashi and Kawamoto (1995), interaction rate refers to depredation events, not hookings and entanglements that result in mortality or injury. Additionally, the Council

recommends that NMFS remove the Kobayashi and Kawamoto (1995) reference from the rough-toothed dolphin, Hawai'i stock SAR, as the paper only identifies bottlenose dolphins as the primary species causing depredation in the Northwestern Hawaiian Islands (NWHI).

Response: The definition of "interaction" in this context has been clarified in the bottlenose dolphin SAR, and the reference removed from the rough-toothed dolphin SAR.

Comment 24: The Council recommends that NMFS revise the Hawaiian Islands stock complex of pantropical spotted dolphins SAR to be consistent with the Proposed 2013 List of Fisheries (LOF), which acknowledges the lack of direct evidence of M/SI in the troll and charter vessel fisheries.

Response: The LOF is based on information from the SARs. The Proposed 2013 LOF (78 FR April 22, 2013) states that "available information indicates that pantropical dolphins are incidentally injured in theses fisheries at low levels." The draft 2013 SAR cites the sources of that available information: Courbis et al. (2009), Rizzuto (2007), and Shallenberger (1981), which document observations of troll fishermen "fishing" off dolphins to catch tuna and Rizzuto (1997) describes anecdotal reports of hookings. The draft 2013 SAR does not overstate the available evidence of interactions with the Hawaiian Islands stock complex of spotted dolphins.

Comment 25: The Council recommends that NMFS update the number of American Samoa longline permit holders in the SAR Appendix. The draft SAR Appendix says the number is "unknown;" however, the comment cites that monthly updated values are available at: http://www.fpir.noaa.gov/SFD/SFD permits index.html. The Council also recommends that NMFS address the federal management (e.g. Hawai'i

Archipelago Fishery Ecosystem Plan (FEP) and Pacific Pelagic FEP) that is in place for Hawai'i's nearshore fisheries that operate in federal waters. Further, the Council recommends that NMFS include information on the Hawai'i FEP annual catch limits in the Pacific SARs.

Response: NMFS appreciates Council's careful attention to the accurate and complete portrayal within the SAR Appendix of the management of Hawaii's nearshore fisheries. The requested changes have been addressed and all State fisheries descriptions have been checked, and if necessary, updated with assistance from NMFS Pacific Islands Regional Office (PIRO) Sustainable Fisheries and Protected Resources Division staff.

Comment 26: The HLA recommends that NMFS revise the pelagic stock of FKW SAR to reflect the discrepancy that takes cannot be at an unsustainable level since there is no evidence of a declining trend in abundance.

Response: This comment has been addressed previously (see 78 FR 19446, April 1, 2013, comments 45 and 51). The comment and included footnote continue to suggest that the pelagic stock of FKW 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 FKW 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 for Distinguishing Serious from Non-Serious Injuries of Marine Mammals has been discussed in 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 FKW would certainly better

inform the assigned outcomes, but until better data become available, the standard established in the NMFS 2012 policy 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 FKW, and therefore, the resulting abundance estimate. Further, because the entire stock range of pelagic FKW 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 necessarily lead to a population decline. PBR was designed to provide a benchmark, in the face of great uncertainty about marine mammal populations, below which humancaused mortalities would not reduce the population beyond its OSP. (OSP 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 27: The HLA recommends that NMFS revise the population trend information in the insular FKW stock SAR and repeats its comment that the high abundance in 1989 claim lacks good scientific backing and that the population has been stable since 2000.

Response: NMFS responded to a similar comment from the Council on the 2012 SARs (comment 52 in 78 FR 19446, April 1, 2013). NMFS has added language to the Final 2013 SAR clarifying the outcome of the Population Viability Analysis modelling effort- that some two-stage models did allow for a different growth rate around the year 2000- and that some of those models suggested a lower rate of decline in recent years.

Comment 28: The HLA maintains that the deep-set fishery does not interact with the insular FKW stock and objects to NMFS's allocation of a prorated portion of the "blackfish" deep-set fishery interaction to the insular stock. The best available science and information dictate that NMFS conclude in its final SAR that there are no interactions between the deep-set fishery and the insular stock of FKW.

Response: NMFS has responded to these comments previously (see 78 FR 19446, April 1, 2013, Comment 52). The referenced 2011 take near the offshore boundary of the Main Hawaiian Island insular stock is still within the Main Hawaiian Island insular stock boundary and is appropriately treated within the established proration framework. The framework allocates a larger percentage of that take to the pelagic stock given its location. The majority of FKW interactions are not genetically sampled; and therefore, assignment to a specific stock is rarely possible. The GAMMS allows for proration of take based on density information (the current approach) or allocating take in an overlap zone to both stocks, which in this case would result in allocation to pelagic and Main Hawaiian Island insular FKW, as well as to Hawaii short-finned pilot whales given the "blackfish" identification.

Comment 29: The HLA disagrees with the conclusion in the insular FKW SAR that the annual M/SI from longline fisheries is "not approaching zero mortality and

serious injury rate because it exceeds 10% of PBR."

Response: The MMPA mandates that commercial fisheries reduce incidental M/SI of marine mammals to insignificant levels approaching a zero M/SI rate (16 U.S.C. 1387(b)). NMFS has defined this "insignificance threshold" in regulation as 10% of PBR (50 CFR 229.2). Annual M/SI in longline fisheries exceed this level; and thus, the statement is warranted.

Comment 30: The HLA recommends that NMFS re-evaluate how it assigns fisheries interactions to FKW in the absence of data. The HLA cites two examples and suggests that prorated interactions were unfairly counted against the fisheries: an interaction was categorized as a serious injury based on little to no data and a "blackfish" interaction was assigned to FKW.

Response: Both proration approaches used- 1) for injury status when observer records are inadequate to determine whether an injury is serious or not, and 2) for allocation of blackfish, a category used to encompass interactions known to be short-finned pilot whales or FKW- are data based. The proportion of injuries categorized as serious versus non-serious is used to inform injury classification for those cases where injury severity is unclear. There is a clear record of the types of injuries that FKW typically suffer. Applicability of that information to inform those cases that are unclear due to the inability of the observer to completely view the animal, or accurately describe the degree of entanglement or location of hooking, is appropriate and supported within GAMMS. Similarly, when a species group such as "blackfish" is used to assign interactions in cases where species identification can only be resolved to within two species (short-finned pilot whales and FKW), it is appropriate to evaluate the interaction

rates of each of those species to inform an appropriate proration scheme. Ignoring those interactions would create a bias in M/SI estimates, thereby under-representing total M/SI of each species. Both proration schemes are updated annually to reflect the most recent data on serious versus non-serious injury rates and the occurrence of pilot whale and FKW interactions.

Comment 31: The HLA recommends that NMFS re-evaluate its stock delineations of FKW and asserts that NMFS rushed judgment when declaring the NWHI stock, which has overlapping range with the insular and pelagic stocks.

Response: NMFS disagrees that the designation of new stocks is not scientifically justified. 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 mtDNA and nucDNA, photo identification 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 32: The HLA recommends that NMFS explain its rationale in prorating a serious injury of Hawai'i stock of sperm whales and the circumstance surrounding an interaction with the deep-set fishery. The comment states that in the absence of conclusive information, the interaction must be designated as "non-serious."

Response: The details of this and all other interactions are provided in the cited Bradford and Forney (2013), and the justification and rationale for use of 75% proration

is discussed within NMFS' Policy for Distinguishing Serious from Non-Serious Injuries of Marine Mammals (NMFS 2012), which employed a data-based approach of assigning serious injury proration based on the known outcomes of individual whales suffering those injuries. This results in a more informed determination than the "more likely than not" standard used for other serious injury determinations when information on the survival of individuals suffering those types of injuries is unknown. The cited references provide the necessary detail. While NMFS does not believe it is necessary or practical to detail the circumstances of every injury within the text of the SAR, some additional information on this particular injury was added to the 2013 SAR.

Comment 33: The HLA recommends that NMFS remove the sentence: "Large whales have been observed entangled in longline gear in the Hawai'i EEZ in the past (Forney 2010)" from the blue whale (CNP stock), fin whale (Hawai'i stock), sei whale (Hawai'i stock), and minke whale (Hawai'i stock) SARs. The cited report does not document a single interaction between the longline fisheries (dating back to 1994) and any of the listed stocks.

Response: The statement was removed from each of the referenced SARs.

Comment 34: The HLA recommends that NMFS remove the statement in the Hawaiian monk seal SAR that reads: "[1]ongline hooks have also been recovered from Hawaiian monk seals, but these were not observed during longline fishing operations." The HLA states that no interactions have been documented since 1991 when waters within 50 miles of the NWHI were closed to longline fishing. The statement in the SAR refers to pre-1991 amendment information and inaccurately implies that longline fisheries may interact with monk seals.

Response: This outdated text appears in the Description of U.S. Fisheries

Appendix, not in the monk seal SAR. It has been removed. The existing SAR text
reflects the current management plan implemented to protect monk seals.

Comment 35: The Organizations recommend that NMFS remove the sentence from the harbor seals, OR/WA coast stock that reads: "[t]he stock is within its Optimum Sustainable Population (OSP) level," noting that more recent data are needed before that claim can be made. The Organizations also recommend that NMFS update abundance estimates for this stock and expressed frustration that despite numerous recent abundance surveys no published data are yet available.

Response: NMFS has updated the OSP language in this SAR (and in the WA state inner waters SARs) to reflect that in the absence of recent abundance estimates, the status of this stock relative to OSP is unknown. NMFS will not reduce an outdated estimate of N_{min} at this time, as the proposed guidelines for applying such reductions in the absence of new abundance estimates have not been finalized. In addition, because abundance estimates are outdated, there is no valid estimate of N_{min} to reduce. The lack of recent abundance estimates is due to incomplete surveys within the range of these stocks, owing to both weather and funding challenges.

Comment 36: The Organizations noted that, as with the OR/WA coast stock of harbor seals, there is no recent published research available to update abundance and distribution information on the Washington inland waters stocks of harbor seals, despite ongoing research activities. Additionally, the fishermen self-reported deaths of harbor seals suggest that harbor seals are being killed in fishery interactions and NMFS should undertake an observer program.

Response: See response to Comment 35 regarding research activities. Observer programs exist for tribal gillnet fisheries in the region that self-report takes. Additional observer programs for fisheries that interact with harbor seals are detailed in the fishery tables of the respective SARs.

<u>Comment 37</u>: The Organizations recommend that NMFS include the threats posed by ciguatoxins and potent algal neurotoxins in the Hawaiian monk seal SAR.

Response: NMFS responded to this comment in the 2012 draft SAR public comment process. Regarding ciguatoxin, the Bottein et al. (2011) paper represents an advance in detection of these compounds. However, whether and to what degree they may influence monk seal mortality is not known.

<u>Comment 38</u>: The Organizations recommend that NMFS consider a limited observer program in the gillnet fishery to monitor for harbor porpoise (various stocks) interactions.

Response: Commercial gillnet fisheries in the range of these harbor porpoise stocks are largely limited to tribal fisheries that provide self-reporting of takes. NMFS agrees that additional observer programs are needed to better document gillnet bycatch, but funding for such observer programs is limited.

Comment 39: The Organizations recommend that NMFS obtain an incidental take statement (ITS) for scientific research trawls for sardines and rockfish because from 2007 to 2011, there were 26 mortalities and 4 serious injuries of Pacific white-sided dolphins in scientific research trawls. The ITS should address mitigation measures or gear modifications.

Response: The NMFS Southwest Fisheries Science Center (SWFSC) applied for a

Letter of Authorization (LOA) under the MMPA in 2013 for takes that may occur incidental to its fisheries research surveys. In its application, SWFSC describes a suite of mitigation measures it has implemented with the aim of minimizing future takes. For threatened or endangered marine mammals, NMFS will conduct separate but parallel ESA section 7 consultations, which could result in authorized incidental take of threatened or endangered marine mammals, if warranted.

Comment 40: The Organizations recommend that NMFS re-evaluate the population trend for the Southern Resident killer whale using the 1987-2011 timeframe as in Velez-Espino (2012). Limiting the time frame results in a 0.91 per year declining trend. The Organizations also recommend that NMFS incorporate new evidence of winter habitat for Southern Resident killer whales from Hanson (2013).

Response: NMFS responded to the population trend and prey availability comments in the draft 2012 SAR public comment process. Since the first complete census of this stock in 1974 when 71 animals were identified, the number of Southern Resident killer whales has fluctuated annually. There have been periods of increases and declines over this time, and there is no justification in choosing any particular starting year in determining if this stock is declining or growing. The commenters state that only the time period 1987-2011 should be evaluated for trends in abundance. In 1987, the population count was 84 animals, which increased to 99 animals by 1995. In 2012, the count had declined to 85 animals, one animal more than was counted in 1987. Regarding prey availability, the SAR currently contains language and references regarding potential effects of limited prey availability on this population of killer whales.

New information on the winter habitat of this population will be included in the draft 2014 report.

<u>Comment 41</u>: The Organizations recommend that NMFS add a vessel strike involving a sperm whale, CA/OR/WA stock from a 2007 observer report.

Response: NMFS did not revise the CA/OR/WA sperm whale SAR in 2013. However, the SAR will be revised in 2014 and will include updated information on vessel strikes.

<u>Comment 42</u>: The Marine Mammal Commission (Commission) recommended that the PBR for monk seal be zero.

Response: Appropriate treatment of PBR for Hawaiian monk seals has long been a controversial issue within the NMFS stock assessment community. Below is background and explanation of how NMFS arrived at "undetermined" PBR for monk seals. As the Commission noted, this issue was thoroughly discussed at the GAMMS III workshop. Some participants maintained that for consistency and compliance with the MMPA, the PBR equation should be calculated for all stocks, including the monk seal. They further made the point that PBR does not itself authorize take. Others maintained, consistent with the Commission's position, that PBR should be set to zero. This was not recommended in the GAMMS III workshop report. A PBR of zero using the PBR formula would require that either the Recovery Factor or R_{max} would be zero. Some thought that "setting Fr to zero would require a change to the MMPA, and that it would be difficult to defend setting R_{max} to zero for any stock."

Following the GAMMS III workshop, NMFS decided to continue reporting monk seal PBR as undetermined, consistent with what had been done since the issue was

previously considered at GAMMS II. Reporting a PBR calculated using the PBR formula would not be consistent with the intent of PBR in that there is clearly no surplus production of monk seals that could be removed while allowing the population to return to OSP. While GAMMS III allows for PBR in such cases to be qualified by additional text, it seems ineffective to present a value then explain that it is not valid. Setting PBR to zero would contradict the current GAMMS III guidance and could be construed that either R_{max} or the Recovery Factor were zero, raising the complications noted above.

NMFS appreciates the Commission's concern that "with PBR undetermined there is no reference point against which the magnitude of human-caused mortality and serious injury can be evaluated, which makes it difficult to focus management and public attention on eliminating human-caused mortality and serious injury." NMFS believes that in practice, the public and managers are more influenced by the monk seal's ESA status (and associated Recovery Plan and Critical Habitat designation), National Environmental Policy Act compliance and public outreach efforts of NOAA, partner agencies and NGOs, than by the PBR. As such, NMFS believes that an "undetermined" PBR poses no real risk to monk seal recovery.

Comment 43: The Commission noted that "This section (of the monk seal SAR) describes the decline in population size in the Northwestern Hawaiian Islands as if it was monotonic at 3.4% per year. However, examination of the data points in Figure 1 suggests that the rate of decline was much faster from 2004 to 2008, and much slower, perhaps even near zero, from 2008 to 2011. We suggest that the report contain some discussion and evaluation of the possibility that the rate of decline has changed over time."

Response: The monk seal trend is based on a regression fitted to the 10 most

recent years' estimates. This is a compromise between precision (having enough years to obtain an estimate with low error) and accuracy. As the Commission noted, the monk seal decline appeared to cease during 2008-2011; however, it may have proven premature to include this in the text. Preliminary data from 2012-2013 indicate lower abundance estimates consistent with a continuing decline (demonstrating the potential pitfall of making strong inferences on just a few years' data).

On this same subject, NMFS has two main concerns about estimating monk seals trends. First, and this is noted in the SAR, the trend is based only on 6 NWHI sites, which excludes Necker, Nihoa and the MHI. NMFS is working to obtain reliable abundance estimates for these excluded sites, so that the analysis better reflects total stock trends. Second, in 2012-2013, budget shortfalls resulted in very short NWHI field seasons, so that the apparent drop in abundance in those years could be real or may simply reflect inadequate surveillance. Indications are that funding will allow for adequate surveillance in 2014. NMFS believes it is likely that the rate of decline has been reduced in the NWHI, but wishes to be more certain this is a sustained trend before reporting it in the SAR.

Comment 44: The Commission noted that in the Human-caused Mortality and Serious Injury section of the monk seal SAR the statement "[t]his second decline ... appear[s] to have been driven by ... and by human disturbance from military or U.S. Coast Guard activities (Baker et al. 2012 ...)" was revised by deleting "military or U.S. Coast Guard activities." While Baker et al. (2012) do dismiss the potential impact of military activities, they cite Gilmartin et al. (2011) as supporting the potential impact of Coast Guard activities.

Response: The monk seal SAR states that the decline apparently was driven both by variable oceanic productivity and human disturbance. The reference to human disturbance is meant to identify this generic cause regardless of whether the people involved were civilians, federal employees or members of any uniformed service.

<u>Comment 45</u>: The Commission suggested that some discussion of the risk to monk seals posed by Fukushima debris might be included in the SAR.

Response: Despite public concerns after the Fukushima disaster, no tsunami debris has been documented to have harmed or contacted a monk seal.

Comment 46: The Commission wanted to know why the trend figure in the Morro Bay harbor porpoise SAR was removed and noted it should be updated to include the 2012 survey estimate. The Commission asked why the finding that the population was increasing was deleted. An explanation, beyond simply noting the wide confidence limits on individual estimates, should be provided for why further analyses are required to establish if the population is increasing.

Response: The trend figure was removed because the most recent abundance estimates used different methods and results cannot directly be compared to past estimates. Thus, the figure would be misleading. A more sophisticated Bayesian trend analysis is planned in the future, and results will be included in the next revision of this SAR. This response applies to other harbor porpoise reports where current trend analyses are lacking.

Comment 47: The Commission noted that in the Current and Maximum Net Productivity Rates section of the harbor porpoise SARs, the statement that "[t]his maximum theoretical rate [9.4% per year from Barlow and Boveng (1991)] may not be

achievable for any real population." As it is not apparent how this conclusion was reached, the report should contain an explanation and justification for the statement. The Commission noted that this comment applies also to the other harbor porpoise stocks.

Response: This statement has been included in the harbor porpoise SARs since 1995 and is based on conclusions from the Barlow and Boveng (1991) paper. The 9.4% theoretical rate uses a human survivorship curve, which represents a maximum survival in a protected environment and is expected to be the absolute limit to the likely survivorship of any wild population. NMFS has modified the text to clarify this statement.

 $\underline{\text{Comment 48}}\text{: The Commission noted that the Ward (2012) reference used to}$ justify the value of R_{max} used in the Southern Resident killer whale SAR was unpublished and not available to assess the suitability of the R_{max} value used in the SAR.

Response: An updated Ward (2013) reference is cited in the final 2013 SAR. Ward (2013) summarizes a distribution of growth rate estimates for Southern Resident killer whales (Figure 7), ranging from approximately 0.98 (a negative growth rate) to the value of 1.032 cited in the SAR. The value of R_{max} used in the SAR represents the best estimate of maximum population growth rate over the period 1979-2010, which is less than the default value used for most cetaceans.

Comment 49: The Commission recommended reducing the recovery factors for stocks of CA/OR/WA Cuvier's beaked whales and Mesoplodont beaked whales, given the observed declines for these stocks.

Response: NMFS used a default recovery factor of 0.5 for these two stocks, which have shown evidence of decline. The GAMMS allow for lowering default recovery

factors when the precision of human-caused mortality levels (coefficient of variation or CV) is known. For example, recovery factors may be lowered from the 0.5 default to 0.4 for a stock of unknown status or a depleted stock when the human-caused mortality CV exceeds 0.8 (Wade and Angliss 1997). In the case of U.S. west coast stocks of Cuvier's beaked whale and Mesoplodont beaked whales, there are no estimates of human-caused mortality. Changes to default recovery factors for reasons other than adjustments related to mortality CV should be reviewed by regional SRGs. NMFS agrees that the recovery factors could be adjusted downward, but there is no justification for choosing any particular recovery factor value less than the default for these beaked whale stocks at present. NMFS will consult with the Pacific SRG regarding the recovery factors for these stocks prior to the next revision of these reports.

Comment 50: The Commission noted that ship strikes of unidentified large whales (such as Eastern North Pacific blue whales) were not prorated to species in the SARs, similar to what is done when unidentified blackfish are prorated in the FKW and short-finned pilot whale Pacific Islands reports.

Response: Proration of unidentified blackfish in the Pacific Islands SARs is based on a distance-from-shore model developed from observer program data and in consultation with the Pacific SRG. In contrast, no systematic proration scheme has been developed for U.S. west coast serious injury records of unidentified whales. NMFS has added text to the appropriate large whale SARs indicating that some of the unidentified large whale serious injury records may represent the species at hand. NMFS will also consult with the Pacific SRG on developing proration schemes for unidentified whale records in future stock assessments.

Comment 51: The Commission suggested adding language to the OR/WA coast harbor seal SAR that acknowledges negative biases in bycatch and mortality estimates resulting from the failure of observers to detect all events.

Response: NMFS has added language to the SAR, acknowledging that bycatch mortality estimates likely represent minimum values, especially for fisheries where observer coverage is low and bycatch events are infrequent. For fisheries with adequate observer coverage (the definition of "adequate" will vary depending on the rate of bycatch and associated observer coverage), bycatch estimates should be unbiased if methods are sound and sample sizes are sufficient.

Comment 52: The Commission noted that mortality levels in the harbor seal OR/WA coast stock Status of Stock section attributed to unknown hook and line fisheries was 0.4 seal per year, but the value reported in the Fisheries Information section was 0.6.

Response: The two values represent different sources of mortality and injury. The 0.6 per year listed in Table 1 is from stranding data, excluding hook and line fishery interactions that may be from recreational fisheries, and is not included in commercial fishery cases listed in the Fisheries Information section and Table 1. The 0.4 mean annual mortality (from stranding data) caused by unknown hook and line fisheries is not listed in Table 1 or included in the calculation of mean annual commercial fishery mortality because it is not known if these deaths were caused by commercial or recreational fisheries. However, this mortality is included in the calculation of total mean annual human-caused mortality.

Comment 53: In the OR/WA coast harbor seal SAR (and for other west coast harbor seal SARs), the Commission noted that text states "[t]he stock is within its

Optimum Sustainable Population (OSP) level" and provides two supporting references. Given that recovering and maintaining populations at OSP is a primary goal of the MMPA, a summary of the findings of those references should be provided.

Response: OSP for the Oregon/Washington Coast stock of harbor seals is discussed in the Population Size section of the SAR, under the Current Population Trend heading, and illustrated in Figure 2. The SAR text states: "The population remained relatively low during the 1960s, but since the termination of the harbor seal bounty program and with the protection provided by the passage of the MMPA in 1972, harbor seal counts for this stock have increased from 6,389 in 1977 to 16,165 in 1999 (Jeffries et al. 2003; ODFW, unpublished data). Based on the analyses of Jeffries et al. (2003) and Brown et al. (2005), both the Washington and Oregon portions of this stock have reached carrying capacity and are no longer increasing (Fig. 2)." However, the abundance surveys from which the OSP statements were based in the draft SAR are from abundance surveys that are outdated. Also, no formal OSP designation was ever made for these stocks by NMFS. NMFS has added text to the Status of Stock section as follows: "The stock was previously reported to be within its OSP range (Jeffries et al. 2003, Brown et al. 2005), but in the absence of recent abundance estimates, this stock's status relative to OSP is unknown."

Comment 54: The Commission suggested adding/clarifying text in the California northern fur seal SAR related to correction factors, trends, recovery, maximum net productivity rates, carrying capacity and OSP.

Response: NMFS appreciates this suggestion and has added clarifying text to the California northern fur seal SAR.

Comments on Alaska Regional Reports

Comment 55: The Organizations recommend that NMFS update the estimates of Alaska Native harvest. Many SARs (e.g. bearded seals and ringed seals) note that subsistence harvest data have not been collected since 2009, and the Organizations would like to see this remedied.

Response: NMFS responded to this comment previously in 78 FR 19446, April 1, 2013, Comments 56, 63, and 74. NMFS continues to work with its Alaska Native Organization (ANO) co-management partners on prioritizing harvest monitoring programs within the annual ANO co-management funding program.

<u>Comment 56</u>: The Organizations recommend that NMFS consider management of sub-stocks within the Western stock of Steller sea lions to better manage portions of the range that are still in decline.

Response: Stocks serve as the unit for management of species of marine mammals managed by NMFS. NMFS will continue to monitor the trends in portions of this stock throughout the range in order to make appropriate management decisions for the conservation of the stock of western Steller sea lions.

Comment 57: The Organizations recommend that NMFS start an observer program to monitor gillnet interactions with the Western stock of Steller sea lions.

Additionally, the Cook Inlet drift gillnet fishery has data from 1999 that are stated in a footnote to be "preliminary," however they are 15 years old.

Response: NMFS is not operating the Alaska Marine Mammal Observer Program in 2014 due to a lack of available resources, and its future is uncertain. The footnote regarding "preliminary" Cook Inlet data from 1999 is erroneous and appears to be an

inadvertent carryover from 2001 when the data were first inserted into the table. The data are not preliminary and are the best available. NMFS has modified the SAR accordingly.

<u>Comment 58</u>: The Organizations recommend that NMFS revise the Eastern stock of Steller sea lion SAR to account for immigration from the Western stock.

Response: NMFS is updating the draft 2014 SAR to better address movements and colonization of western Steller sea lions into the northern portion of the range of the eastern distinct population segment (DPS). The observations of marked sea lion movements corroborate extensive genetics research findings suggesting a strong separation between the two currently recognized stocks. Permanent movements between the western and eastern Steller sea lion stocks represent a very small percentage of the total count of sea lions in either stock and would have a negligible impact on non-pup trend estimates for either stock.

<u>Comment 59</u>: The Organizations recommend that NMFS better account for the decline in the California portion of the eastern stock of Steller sea lions' range.

Response: NMFS has noted a decline in the numbers of Steller sea lions in California, the southern portion of the Steller sea lion's range. However, the eastern stock is increasing throughout the northern portion of its range (Southeast Alaska and British Columbia) and is stable or increasing slowly in the central portion (Oregon through central California). These trends are summarized in the Habitat Concerns section of the SAR, and it is suggested that environmental changes, particularly warmer temperatures, may not be favorable for Steller sea lions in the southern portion of the Steller sea lion's range. There has been no known increase in human-caused or natural mortality of Steller sea lions in the southern portion of their range.

<u>Comment 60</u>: The Organizations recommend that NMFS revise the SAR for the Eastern stock of Steller sea lions to include up-to-date management information (e.g. status review and de-listing notice).

Response: The final rule to delist the eastern Distinct Population Segment of Steller sea lion under the Endangered Species Act was released 04 November 2013, subsequent to SRG review and release of the SARs for public comment. This rule became effective 04 December 2013. NMFS will revise the draft 2014 eastern Steller sea lion SAR to reflect this decision and update the information provided in the SARs.

<u>Comment 61</u>: The Organizations recommend that NMFS lower the recovery factor in the PBR estimate for most of the harbor seal stocks.

Response: Some of the estimates that are cited in the SAR do not include information from the most recent survey as those data have not yet been fully analyzed. NMFS is in the process of analyzing an extensive data set from recent surveys of harbor seals throughout their range in Alaska, including the significant extensions of statistical theory and methods. As soon this analysis can be completed, the abundance, trends, and appropriate recovery factors will be updated in the SAR.

Comment 62: The Organizations recommend that NMFS remove the citation Bengtson et al. (2010) from the ringed seal SAR because the data used in the abundance estimate in that paper are 15 years old. It is not appropriate to generate "new" estimates of abundance based on this paper.

Response: There is no citation of "Bengtson et al. (2010)" in the ringed seal SAR. The section on population size acknowledges that current, comprehensive, and reliable abundance estimates or trends for the Alaska stock are not available. All appropriate

sections have been modified to indicate that the estimates are unavailable given the age of the survey data.

<u>Comment 63</u>: The Organizations recommend that NMFS highlight acoustic threats to Cook Inlet beluga whales in the Habitat Impacts section. The Organizations applaud NMFS for being cautionary and for not making a PBR estimate for this stock.

Response: NMFS updated the Habitat Concerns section of the Cook Inlet beluga SAR with a statement regarding the consideration of acoustics threats in the NMFS Recovery Plan for Cook Inlet Beluga Whales. This section will be updated, as appropriate, once the Recovery Plan is available. Furthermore, NMFS, in collaboration with the Alaska Department of Fish and Game and Scripps Institution of Oceanography, is currently completing a study to characterize the background noise, including anthropogenic sources, in Cook Inlet and its potential displacement effect on Cook Inlet belugas. A final report of this study will be available in summer of 2014, and the SAR will be updated as appropriate.

Comment 64: The Organizations recommend that NMFS observe gillnet interactions with harbor porpoises in other portions of their range outside Southeast Alaska.

Response: NMFS is not operating the Alaska Marine Mammal Observer Program in 2014 due to a lack of available resources, and its future is uncertain. NMFS acknowledges that the observations of the 1990-1991 Prince William Sound, 1991 Aleutian Islands, 2002 and 2005 Kodiak and 1999-2000 Cook Inlet salmon set and drift gillnet fisheries are dated and reflect between 0.16 and 6 percent observer coverage. The mean annual mortality rate incidental to all U.S. commercial fisheries is 71.4. Incidental

take of the Bering Sea stock of harbor porpoise could occur in the Aleutian Islands set and drift gillnet fisheries. The set gillnet fishery has not been observed. The drift gillnet fishery was observed in 1991. In 1992, two interactions were reported in logbooks in the Alaska Peninsula/Aleutian Island salmon set gillnet fishery, resulting in an estimated annual mortality of 0.5. Allen et al. (2014) report one harbor porpoise from the Gulf of Alaska stock taken in either the Cook Inlet set or drift gillnet fishery in 2008 and one mother and one calf from the Bering Sea stock taken in the Norton Sound Salmon set gillnet subsistence fishery in 2007.

Comment 65: The Organizations recommend that NMFS add clarity to the statements in the harbor porpoise, Southeast Alaska stock SAR. The statement: "[t]he estimated minimum mean annual mortality of harbor porpoises in Southeast Alaska based on incidental catch reported to the stranding network is 0.6 for the 5-year period from 2007-2012." And the statement: "[t]he average minimum annual human-caused mortality and serious injury of Southeast Alaska harbor porpoises based on unconfirmed incidental catch and other human-caused activity reported to the stranding network is 0.2 for the 5-year period from 2007-2011." The discrepancy between these two statements requires further explanation as to why there are 2 separate estimates.

Response: NMFS has clarified the language to reflect that one estimate is the summary of confirmed incidental take reports from stranding records and thus summarized in the Fisheries Information section of the SAR, whereas the other estimate is a summary of unconfirmed (but likely) incidental take reports that are certainly human-caused M/SI, and therefore reported in the Other Mortality section of the SAR.

Comment 66: The Organizations recommend that NMFS consider how to

apportion the mortality to the Southeast Alaska/Northern British Columbia, Aleutian Islands, and Gulf of Alaska management units of the CNP stock of humpback whales.

Response: NMFS estimates the annual human-caused M/SI of marine mammal stocks by source as required under the MMPA. The Southeast Alaska/ Northern British Columbia, Aleutian Islands, and Gulf of Alaska humpback whales are feeding aggregations and not considered management units at this time. The central North Pacific stock is the management unit for this stock of humpback whales. The status and population structure of humpback whales in the North Pacific and elsewhere is currently under review by NMFS as part of a global status review of the species. If this result in any changes to existing management units, M/SI data for stocks will be apportioned to align with any new units.

<u>Comment 67</u>: The Organizations recommend that NMFS make a precautionary abundance estimate for fin whales based on known minimums within the range and/or prioritize additional effort to ascertaining abundance.

Response: The stock assessment report for fin whales reports the best information available on fin whales. Given that this estimate derives from data gathered from only part of the likely range of this stock, it is likely to represent a very conservative minimum.

<u>Comment 68</u>: The Organizations recommend that NMFS classify the Iliamna Lake seal as a separate stock of harbor seals.

Response: The analysis of genetic and other information that supports the discreteness of harbor seals in Iliamna Lake was completed in late autumn, 2013, which was too late for incorporation into the current SAR. NMFS will determine whether those seals should be designated as a stock under the MMPA through the appropriate process,

including consultation under its co-management agreement with the Alaska Native Harbor Seal Commission.

Comment 69: To improve stock assessment efforts in Alaska, the Commission recommends that NMFS provide an explanation as to why the 2014 priority activities recommended in the recovery plan for the critically endangered eastern population of the North Pacific right whale were not considered an agency priority for funding, and indicate when the agency expects to allocate the roughly \$2.5M in funding required to implement the first two years of the recovery plan activities.

Response: NMFS is currently seeking modest funding for small projects from outside sources (including the Commission) to analyze acoustic data to examine the occurrence of right whales in the Bering Sea. However, because of the remote nature of right whale habitats in the North Pacific, conducting surveys or any other field work requires considerably more resources than are available.

Comments on Atlantic Regional Reports

<u>Comment 70</u>: The Ocean Conservancy recommends that NMFS fund a restoration project to use high-definition video to assess marine mammal, sea turtle, and pelagic bird abundance in the Gulf of Mexico.

Response: NMFS is one of the Federal and state partners that are involved in recommending restoration projects as part of the follow-up to the 2010 BP oil spill in the Gulf of Mexico. Currently NMFS does not use high-definition video as one of its standard tools for assessing marine mammals and sea turtles in the Gulf of Mexico. The role of high-definition video in future NMFS assessments in the Gulf of Mexico is being evaluated, and it could be considered as part of restoration if it is appropriate.

Comment 71: Organizations recommend updating some of the citations regarding sightings of large whales. They also recommend that NMFS add Gulf of Mexico sightings of North Atlantic right whales from the New England Aquarium's report card to the SAR, and add Jordan Basin as a major habitat for North Atlantic right whales.

Response: Following advice from the reviewer, NMFS has added a reference to Cole et al. (2013), as well as inserting mention of sightings in the Gulf of Mexico and the 2013 calving in Cape Cod Bay.

Comment 72: The Organizations recommend that NMFS re-calculate the PBR estimate for North Atlantic right whales using a 2.8% growth rate instead of the 4% default R_{max} .

Response: R_{max} is not the same as the observed population growth. In theoretical demographic models, R_{max} is the maximum that a population could grow (birth and survival are largely unconstrained by carrying capacity pressures). Although we have no definitive data to suggest that North Atlantic right whales have in their evolutionary history ever achieved the 4% default value, we do know that the extant population suffers considerable mortality (largely from anthropogenic sources) that has nothing to do with forage limitations or social conflicts. Therefore, it is highly unlikely that the observed growth rate of 2.8% is R_{max} .

Comment 73: The Organizations recommend that NMFS revise Table 2 in the North Atlantic right whale SAR. The old format was clearer and information has been omitted. The 01 February 2011 mortality was left off the new table. A gear type was not assigned to the 31 March 2007 entanglement mortality despite it being documented at U.S. origin.

Response: It was our intention that the SAR table would be a summary of the detailed information presented in the Serious Injury and Mortality reports. However, at the request of the reviewer, NMFS has reinstated the comments column. The 01 February 2011 event was not omitted. It is the animal originally sighted alive and entangled on 25 December 2010 (Eg #3911). In the 2007-2011 reports, we classified this animal as a Serious Injury due to entanglement because the cause of death was technically exsanguination due to shark predation. So, it was included in the Cole and Henry Serious Injury report (and counts as 1 against PBR; Cole, T. V. N., and A. G. Henry 2013). We acknowledge that this is confusing and it will be corrected to and reported as a morality with proximate cause of death = entanglement and ultimate cause of death = shark predation in the 2008-2012 mortality report.

The Serious Injury and Mortality reports detail how an event is attributed to a country even without recovered gear. The 31 March 2007 event was determined to be a US event based on the fact that it was a 2-3 month old calf and most likely encountered the entanglement between Florida and North Carolina.

Comment 74: The Organizations recommend that NMFS add that there are a notable number of entanglements of minke whales in gillnets to the Fisheries Interaction section of the SAR.

Response: Text has been added in the Other Fisheries section to mention the prevalence of gillnet entanglements.

Comment 75: The Organizations recommend that NMFS revise the 2008 sperm whale, Gulf of Mexico oceanic stock longline interaction to include an extrapolated serious injury to the calf that was with the mother that was entangled.

Response: Section 117 of the MMPA directed that strategic stocks be reviewed every year, and updated if there is any significant new information. There is no significant new information in this case. Based on the limited information on the 2008 sperm whale entanglement case, even if the serious injury determination changed for this animal and its calf, the conclusion about the status of this stock does not change. For this reason, NMFS will defer the update and will likely be revising this SAR for 2015 drafts to include any published conclusions about the impacts of the Deepwater Horizon oil spill on sperm whales.

<u>Comment 76</u>: The Organizations recommend that NMFS develop distinct text for the dwarf sperm whales and pygmy sperm whales as they are separate SARs.

Response: Dwarf and pygmy sperm whales can be difficult to differentiate at sea and in much of the limited literature on at-sea distributions, they are treated as a group. Based on stranding locations of the two species, the distributions of the two species are very similar. The text in the SARs reflects this lack of distinct knowledge of each species. For future SARs, NMFS will review the recent literature on dwarf and pygmy sperm whales to determine whether text specific to each species is now appropriate. Recent work by Staudinger et al. (2013) reported that feeding ecologies are similar for both species, and both species occupy equivalent trophic niches in the U.S. mid-Atlantic.

Comment 77: The Organizations recommend that NMFS not lump the undifferentiated complex of beaked whales (Ziphius and Mosoplodon spp.) in the Atlantic Ocean. The stocks have been separated with individual SARs, yet most assessments remain lumped. They also strongly urge NMFS to insert text similar to that in the Pacific SARs acknowledging challenges to stocks of beaked whales and other

acoustically sensitive species from the expected increase in impacts from intense sound sources.

Response: Beaked whale species are hard to differentiate at sea so separate abundance estimates and bycatch estimates for each species are not feasible. As a result, for bycatch of undifferentiated beaked whales we have been applying the risk-averse strategy recommended by Atlantic SRG assuming that any beaked whale stock which occurred in the U.S. Atlantic EEZ might have been subject to the observed fishery-related mortality and serious injury. We have added the following text from the Pacific SAR to the Status of Stock section: "...questions have been raised regarding potential effects of human-made sounds on deep-diving cetacean species, such as [species] beaked whales (Richardson et al. 1995)."

<u>Comment 78</u>: The Organizations recommend that NMFS not combine mortality reports for long-finned and short-finned pilot whales.

Response: Mortality reports for cetaceans including long-finned and short-finned pilot whales from the pelagic longline fishery were not combined. The draft 2014 SARs will address breakdowns for additional fisheries.

<u>Comment 79</u>: The Organizations recommend that NMFS expand the bycatch estimates for 2011 for pilot whales.

Response: Trawl estimates were delayed due to issues with stock separation. In the 2014 draft SARs the estimates will be provided and the species differentiated.

Comment 80: The Organizations recommend that NMFS clarify when data from beyond the most recent five-year period (e.g. 2011 for the 2013 SARs) will be used, as the harbor porpoise SAR includes information about a 2013 Take Reduction Team

meeting, which seems superfluous. They also recommend NMFS work with Canadian authorities to better define gillnet impacts in Canada.

Response: NMFS has contacted Canadian officials and received information on sink gillnet effort in the Bay of Fundy. While this fishery is less active in the area than in the past, and there is no observed reporting of harbor porpoise bycatch, NMFS believes it is still more conservative to use the outdated estimates of interactions than to assume no interactions are happening. Text describing the TRT meeting has been removed.

Comment 81: The Organizations recommend that NMFS include information about the harbor seal Unusual Mortality Event from 2011 that some of the animals tested positive for a virus (Influenza A H3N8). The Organizations applaud NMFS for using 2012 survey information in the harbor seal SAR.

Response: Text has been added to indicate that some of the seals tested positive for influenza.

Comment 82: The Organizations recommend that NMFS consider adding that a Unusual Mortality Event was declared in 2013 for common bottlenose dolphins on the Atlantic coast.

Response: The 2013 draft SARs cover the time period 2007-2011, and they were drafted during 2012. NMFS believes it is appropriate to use consistent time periods for reporting in each of the SARs. The cut-off point for including information under Annual Human-Caused Mortality and Serious Injury for the 2013 SAR was the end of 2011. Other information that is available and pertinent at the time of drafting will be included.

Comment 83: The Organizations recommend that NMFS remove the "pre- and post-Take Reduction Plan (TRP)" table of mortality from the Atlantic common

bottlenose dolphin SARs since it only goes through 2006.

Response: The table includes information through 2008, so it is appropriate to include the "pre- and post- TRP" table in the 2013 SAR. The most recent five-year period included in the 2013 SAR is 2007-2011.

Comment 84: The Organizations recommend that NMFS update the Gulf of Mexico bottlenose dolphin stocks with the significant new information from Deepwater Horizon research and Unusual Mortality Event strandings.

Response: Information that is available and pertinent at the time of drafting will be included. The 2013 draft SARs cover the time period 2007-2011.

Comment 85: The Commission recommends that NMFS include in the North Atlantic right whale stock assessment report: 1) an evaluation of the current population size relative to the carrying capacity of the environment, 2) a discussion of the possible reasons for the low population growth rate relative to that estimated for southern right whale populations, and 3) the reasons why the recent estimate of net population growth rate was rejected in favor of the default rate.

Response: With existing data, and given our limited understanding of the structure and dynamics of the current ecosystem, it is not possible to reliably estimate carrying capacity for right whales. Given the early and largely undocumented history of whaling on this species in the North Atlantic (including off the coast of North America), it is impossible to derive a reliable (i.e. precise), baseline for pre-exploitation population size, and anyway use of such a number as a proxy for carrying capacity relies upon various assumptions, the validity of which is debatable. Likewise, genetic-based estimates of pristine population size are not currently available, and even if they were these usually

represent a harmonic mean over evolutionary time which has little or no relevance to the situation and to management today; this is particularly true in light of the extensive perturbations introduced into the marine environment by human overfishing, which may well have rendered the current ecosystem (and thus carrying capacity) radically different from one in a pristine state.

Use of the default rate for the maximum productivity rate (R_{max}) in calculation of PBR for the North Atlantic right whale stock is in accordance with GAMMS guidelines. We attempted to use the maximum observed growth rate in a previous stock assessment, arguing that the population is low and therefore not likely under "abundance pressure." We argued that this was the highest rate ever documented for this species, and it represents the capacity to rebound from additional human caused mortality (very risk averse). However, the Atlantic SRG noted that this variance was without precedence, and that we should revert back to the default value. In total, it matters little because the calculated PBR is <1 for both the maximum observed (depressed) and default values of R_{max} .

Comment 86: The Commission recommends that NMFS make every effort to identify pilot whale serious injury and mortality data that can be apportioned to one or the other species, and, in the stock-assessment reports, attribute serious injury and mortality data to one of the two species, but only to an "unidentified pilot whale" category if the former cannot be achieved.

Response: In the 2013 SARs pilot whale mortality for the Atlantic pelagic longline fishery, the fishery with the highest observed interaction rate with pilot whales was apportioned to species. All of the pilot whales involved with longline interactions

were determined to be short-finned pilot whales, and therefore, the estimate for longline

bycatch was only attributed to short-finned pilot whales. The draft 2014 SARs will

apportion to species pilot whale interactions with the other fisheries with observed pilot

whale takes.

Dated: August 13, 2014.

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National Marine Fisheries Service.

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48