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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[Docket No. FWS-R7-ES-2022-0155; FF07CAMM00-FXES111607MWA07]

Marine Mammal Protection Act; Stock Assessment Reports for the Pacific Walrus Stock and Three Northern Sea Otter Stocks in Alaska

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability.

SUMMARY: In accordance with the Marine Mammal Protection Act and its implementing regulations, we, the U.S. Fish and Wildlife Service, after consideration of comments received from the public have revised the marine mammal stock assessment reports (SARs) for the Pacific walrus (*Odobenus rosmarus divergens*) and for each of the three northern sea otter (*Enhydra lutris kenyoni*) stocks in Alaska. We now make these four final revised SARs available to the public.

ADDRESSES: *Obtaining Documents:* You may view the final revised stock assessment reports at *https://www.regulations.gov* in Docket No. FWS-R7-ES-2022-0155, or you may request copies from the contact in **FOR FURTHER INFORMATION CONTACT**.

FOR FURTHER INFORMATION CONTACT: Charles Hamilton, Marine Mammals Management, by telephone at 907-786-3804; by email at *charles_hamilton@fws.gov*; or by mail at U.S. Fish and Wildlife Service, MS–341, 1011 East Tudor Road, Anchorage, AK, 99503. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION: In accordance with the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq*.), and its implementing regulations in the Code of Federal Regulations (CFR) at 50 CFR part 18, we, the U.S. Fish and Wildlife Service (Service), have developed four final revised marine mammal stock assessment reports (SARs) for species in Alaska. These revised SARs are for the Pacific walrus (*Odobenus rosmarus divergens*) and for each of the three stocks of the northern sea otter (*Enhydra lutris kenyoni*) in Alaska—the Southwest, Southcentral, and Southeast stocks.

Background

Under the MMPA and its implementing regulations, we regulate the taking, possession, transportation, purchasing, selling, offering for sale, exporting, and importing of marine mammals. One of the goals of the MMPA is to ensure that each stock of marine mammals occurring in waters under U.S. jurisdiction does not experience a level of human-caused mortality and serious injury (M/SI) that is likely to cause the stock to be reduced below its optimum sustainable population level (OSP). The MMPA defines the OSP as "the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element" (16 U.S.C. 1362(9)).

To help accomplish the goal of maintaining marine mammal stocks at their OSPs, Section 117 of the MMPA requires the Service and the National Marine Fisheries Service (NMFS) to prepare a SAR for each marine mammal stock that occurs in waters under U.S. jurisdiction. A SAR must be based on the best scientific information available; therefore, we prepare it in consultation with the regional scientific review groups established under section 117(d) of the MMPA. Each SAR must include: (1) a description of the stock and its geographic range; (2) a minimum population estimate, maximum net productivity rate, and current population trend; (3) an estimate of the annual human-

caused M/SI by source and, for a strategic stock, other factors that may be causing a decline or impeding recovery of the stock; (4) a description of commercial fishery interactions; (5) a categorization of the status of the stock; and (6) an estimate of the potential biological removal (PBR) level.

The MMPA defines the PBR level as "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population." (16 U.S.C. 1362(20)). The PBR is the product of the minimum population estimate of the stock (N_{min}); one-half the maximum theoretical or estimated net productivity rate of the stock at a small population size (R_{max}); and a recovery factor (F_r) of between 0.1 and 1.0, which is intended to compensate for uncertainty and unknown estimation errors. This can be written as: PBR = (N_{min})(½ of the R_{max})(F_R).

Section 117 of the MMPA also requires the Service and NMFS to review the SARs (a) at least annually for stocks that are specified as strategic stocks; (b) at least annually for stocks for which significant new information is available; and (c) at least once every 3 years for all other stocks. If our review of the status of a stock indicates that it has changed or may be more accurately determined, then the SAR must be revised accordingly.

A strategic stock is defined in the MMPA as a marine mammal stock "(A) for which the level of direct human-caused mortality exceeds the PBR level; (B) which, based on the best available scientific information, is declining and is likely to be listed as a threatened species under the Endangered Species Act of 1973, [as amended] (16 U.S.C. 1531 et seq.) [ESA], within the foreseeable future; or (C) which is listed as a threatened or endangered species under the ESA, or is designated as depleted under the MMPA" (16 U.S.C. 1362(19)).

Summary of Revised Stock Assessment Reports

In accordance with Section 117(c) of the MMPA, the Service reviews the stock assessments for the Pacific walrus and Southwest stock of the northern sea otter annually (strategic stocks) and at least once every 3 years for the Southcentral and Southeast stocks of the northern sea otter (non-strategic stocks). If we determine that new information (such as new abundance estimates) indicates that a revision is warranted, we will propose a revision. In 2021, based on new information that had become available, the Service initiated revisions of these SARs, and once completed, presented them to the Alaska Regional Scientific Review Group (SRG) for their comment and review.

The Service also published a notice in the *Federal Register* informing the public of the availability of these draft revised SARs and seeking public comment (88 FR 7992, February 7, 2023). These final revised SARs incorporate the comments and suggestions provided to the Service by the SRG and the public, as appropriate.

The following table summarizes the final revised SARs for the Pacific walrus and the Southwest, Southcentral, and Southeast stocks of the northern sea otter, listing each stock's N_{min}, R_{max}, F_r, PBR, annual estimated human-caused mortality and serious injury, and status.

SUMMARY OF FINAL REVISED STOCK ASSESSMENT REPORTS FOR THE PACIFIC WALRUS AND FOR THE SOUTHWEST, SOUTHCENTRAL, AND SOUTHEAST STOCKS OF THE NORTHERN SEA OTTER

Stock	**N_{MIN}**	**R_{MAX}**	**F_R**	**PBR**	**M/SI**		**Stock Status**
					Fishery/Other	Subsistence	
Pacific Walrus	214,008	0.06	0.5	3,210	<1	4,210	Strategic
Northern Sea Otter (NSO) Southwest Stock	41,666	0.29	0.38	2,296	<1	176	Strategic
NSO Southcentral Stock	19,854	0.29	0.75	2,159	<1	389	Nonstrategic
NSO Southeast Stock	21,187	0.29	0.75	2,304	<1	851	Nonstrategic

Revisions to Northern Sea Otter, Southeast Stock SAR

On March 31, 2023, the Service released a technical report, "*Northern Sea Otter (Enhydra lutris kenyoni) Population Abundance and Distribution across the Southeast Alaska Stock Summer 2022*." This report provides details of a stock-wide sea otter population survey that was conducted May through June 2022. The collected data was combined with all available prior population survey data from the Southeast stock in an integrated population model, which provided updated assessments of sea otter population abundance, trends through time, and carrying capacity. We have incorporated the results from this technical report into this final revised SAR and included the updates to N_{MIN} and PBR in the chart above. Although these values slightly decreased, the status of the stock has not changed and remains non-strategic.

Our Response to Comments

In addition to comments from the SRG, the Service also received comments on the draft SARs from the Marine Mammal Commission, the Eskimo Walrus Commission, and two members of the public. We present substantive issues raised in those comments that are pertinent to all four SARs first, and then comments pertinent to the Pacific walrus, and then the three stocks of northern sea otters in Alaska, along with our responses below.

Comments Pertinent to All Four Stock Assessment Reports

Comment 1: Final SARs for these four stocks were last published on April 21, 2014 (79 FR 22154). The Service should take all steps necessary to adhere to the schedule set forth in Section 117(c) of the MMPA for revising SARs.

Service Response to Comment 1: The Service conducts timely reviews of the stock assessment reports in accordance with Section 117(c)(1) of the MMPA, which directs the Service to review SARs on an annual basis for "strategic" stocks, an annual basis for stocks "for which significant new information is available," and every three

years for all other stocks. The Service is required to revise SARs only if such review indicates that "the status of the stock has changed or can be more accurately determined." (16 U.S.C. 1386(c)(2). If, as a result of its review, the Service determines that the status of the stock has changed or can be more accurately determined, then the Service will propose a revision.

Comments Pertinent to the Pacific Walrus

Comment 2: Given the future uncertainty of the Pacific walrus' viability due to the effects of climate change, the Fish and Wildlife Service should be required to enforce the PBR number for the Pacific walrus and allow no more than that number to be taken.

Service Response to Comment 2: The most recent population information suggests that subsistence walrus harvests are occurring at sustainable levels. We acknowledge that climate change is impacting walrus sea ice habitats, which could lead to a future population decline. If the population starts to decline due to environmental conditions, managers and subsistence users will need to work closely together to ensure that harvest levels remain sustainable. The Service is in the process of developing a projection model based on the best available estimates of population size, growth rate, and carrying capacity to help inform harvest management decisions under an array of potential climate change and anthropogenic disturbance scenarios. Section 119(a) of the MMPA provides for the development of co-management agreements with Alaska Natives for the subsistence use of marine mammals, and tribally based hunting ordinances provide a potential mechanism for self-regulation of harvest.

Comment 3: The draft SAR states: "By the 1980s, walrus researchers were concerned that the population had exceeded its natural carrying capacity…". The draft SAR also notes that "in 1980 the population was estimated to be 254,890 with a 95%

confidence level for 184,000 – 344,000". The latest estimate in 2017 has very similar numbers, 257,193 and 171,138 – 366,366. Is there a similar concern that the natural carrying capacity has been reached or exceeded?

Service Response to Comment 3: Fluctuations in density-dependent vital rates over the past several decades suggest that the carrying capacity of the ecosystem has likely shifted over time. Declining reproductive and calf survival rates in the 1980s suggest that the population may have approached or exceeded carrying capacity. Population models suggest a decline in abundance may have occurred through the 1980s and 1990s, which lessened over time as reproductive and calf survival rates rose in a density-dependent manner. The most recent information on walrus vital rates does not indicate that the population is in a food limited status at the present time.

Comment 4: The harvest reporting correction factor for Pacific walrus is over 30 years old and the struck and lost is based on data collected over 50 years ago; these are not reliable for calculating current harvest data. These should be studied with the cooperation of the Eskimo Walrus Commission and its communities.

Service Response to Comment 4: We agree that the harvest reporting correction factor and the struck and lost rates should be studied with the cooperation of the Eskimo Walrus Commissions and its communities. Imperfect harvest reporting and unknown struck and lost rates associated with modern hunting practices create uncertainty with respect to true harvest removal levels. For the purpose of the SAR, we use the best available information to account for these factors. We have also applied a conservative (0.5) recovery factor in our PBR calculation to account for these uncertainties. Improving harvest removal estimates is a top management priority for this species that can only be addressed through a collaborative effort with subsistence hunters and leaders.

Comment 5: There is considerable overlap between commercial fisheries and walrus as their use of terrestrial haulouts and foraging by swimming longer distances increase. Commercial fisheries and shipping disturbances in both U.S. and Russian waters must be considered more carefully.

Service Response to Comment 5: While direct mortality or injury associated with interactions with commercial fishing gear is rare, marine (and air) traffic occurring near coastal walrus haulouts is an emerging conservation and management concern. Disturbances associated with marine vessels and other human activities can disrupt resting and foraging patterns and lead to trampling related injuries and mortalities. The Service and partners conduct annual outreach and education campaigns to raise awareness about the sensitivity of walruses to disturbances and distribute guidance to commercial fishermen, mariners and aircraft pilots about how to avoid disturbances to walruses. The Service has provided clarifying language in the final revised SAR for the Pacific walrus recognizing the potential future impacts of commercial fisheries and shipping on the stock.

Comment 6: The statement that "Although subsistence harvest rates are declining and appear to be within a sustainable range at present" should be explained because it exceeds the PBR.

Service Response to Comment 6: Indigenous harvest rates are declining and harvest rates have not prohibited the Pacific walrus population from being "at or near its OSP range." The language in the final revised SAR has been edited to explain that harvest sustainability was determined by other analyses rather than the PBR formula, based on a Bayesian Belief Network model by MacCraken et al. (2017). We also note that the PBR formula includes a conservative correction factor (F_R value) due to uncertainty associated with estimates of human caused mortality.

Comment 7: Please provide a clearer explanation of how the value of the recovery factor (F_R) was selected when calculating Potential Biological Removal (PBR).

Service Response to Comment 7: The final revised SAR includes additional language explaining that a conservative F_R value of 0.5 has been adopted in consideration of uncertainty associated with estimates of human caused removals and a petition to consider listing walruses under the ESA.

Comment 8: Incomplete harvest reporting and potentially high rates of strike-and-loss during subsistence harvest of Pacific Walrus should be addressed in more detail.

Service Response to Comment 8: The final revised SAR includes additional language acknowledging the issue of under-reporting of harvest and tentative plans to engage in a collaborative effort in key walrus harvest communities to refine harvest estimates.

Comments Pertinent to Northern Sea Otter Stocks

Comment 9: The Service used a recovery factor (F_R) for the Southwest stock that was reduced by 20% (reduced from 0.5 to 0.4) to account for uncertainty around human-caused removals. However, the F_R for the Southeast and Southcentral stocks was reduced by 25% (reduced from 1 to 0.75). Are there differences in uncertainty surrounding human-caused removals across the three stocks are or are they similar? If similar, the Service should use the same F_R across the stocks for standardization.

Service Response to Comment 9: The uncertainty in human-caused mortality is similar across all three stocks. In the final revised SAR, we have updated the Southwest SAR to reduce the F_R value in the Southwest stock to match the reduction in the Southcentral and Southeast stocks by 25%. The updated Southwest stock F_R is 0.38. We

have updated the Potential Biological Removal (PBR) calculation based on this change, which resulted in an updated PBR of 2,296 sea otters for the Southwest stock.

Comment 10: The Service makes statements about sea otter population trends in the five management units (MU) of the Southwest stock, but this is problematic given the relatively limited historical data, overlapping confidence intervals for population estimates, and differences in the frequency, methods, and timing of population surveys within each MU. Additionally, in many of the surveys listed, the Service does not clearly indicate if the survey was aerial or boat-based, the time of year the survey was conducted. We recommend the Service add more survey details in each MU section, limit conclusions about stock abundance and status, and add statements of how the Service plans to address these concerns to provide more consistency across the five MUs in the Southwest stock.

Service Response to Comment 10: We have edited each of the sections summarizing population surveys for the five Management Units (MU) to provide additional details on the season, month the survey was conducted, survey platform, and analytical approach. We provide additional details about differences in methodology and how this affects our ability to accurately describe the magnitude of increases or decreases in each MU. The Service plans to develop integrated population models to incorporate the various population surveys across the five MUs in a single analytical framework, following a similar approach developed for the Southeast stock of northern sea otters (Eisaguirre et al. 2021, 2023, Schuette et al. 2023). This approach will allow the Service to better account for methodological differences across the five MUs to provide a more comprehensive view of sea otter population abundance, distribution, and trends through time.

Comment 11: The estimates of human-caused mortality and serious injury (M/SI) in the SARs for the Southwest, Southcentral, and Southeast Alaska stocks of northern sea otters are based almost entirely on subsistence harvest data collected by FWS's marking, tagging, reporting program (MTRP). However, it is unclear whether or not all subsistence harvests are reported, and some M/SI of sea otters from other sources (e.g., illegal and unreported hunting) likely occurs. We recommend the Service develop a method for quantifying unreported harvest and include that information in the SARs.

Service Response to Comment 11: The Service acknowledges there is an information gap pertaining to unreported harvest of sea otters. MTRP harvest reporting data collection was initiated in 1989 and is ongoing. MTRP data is the most comprehensive data set available for legal harvest. The Service is considering options for accounting for unreported harvest in future population models. The Service has little empirical data to quantify the amount of illegal take associated with fisheries conflict. The Service is considering options for accounting for illegal takes in future population models.

Comment 12: FWS discusses "illegal" takes of sea otters (including possession, transport, and sale of sea otter hides) in the SARs for the Southeast and Southwest stocks in the subsections on "Alaska Native Subsistence Harvest Information." However, referencing illegal takes of sea otters and illegal handling of sea otter hides in that subsection is inappropriate, given that taking of sea otters and other marine mammals by Alaska Natives for subsistence purposes and to create and sell authentic articles of handicrafts and clothing is not illegal as long as the taking is not conducted in a wasteful manner. We suggest the Service move the discussion of illegal takes of sea otters to a separate subsection within the "Annual Human-Caused Mortality and Serious Injury" section of the SARs (i.e., not the subsection on "Alaska Native Subsistence Harvest

Information").

Service Response to Comment 12: We agree that these statements do not belong in this section. We have moved the statements related to illegal take to a new heading, 'Illegal Take' under 'Annual Human-Caused Mortality and Serious Injury' in all of the northern sea otters SARs to make it clearer that there is a difference between legal take by Alaska Native peoples and the various forms of illegal take.

Comment 13: In the "Fisheries Information" subsections, the draft SARs note that the National Marine Fisheries Service (NMFS) maintains an observer program to detect and estimate M/SI of marine mammals. The Alaska Marine Mammal Observer Program was designed specifically to collect data on marine mammal M/SI in nearshore salmon drift gillnet and set gillnet fisheries, where sea otters are at relatively high risk of entanglement. However, that program has not operated since 2013 and, when it was operating, observer coverage was low. As such, although the Service concludes that M/SI from fisheries is likely low, there are actually no reliable estimates of sea otter M/SI in the commercial fisheries that pose the highest entanglement risk to sea otters. We recommend that the Service coordinate with NMFS to ensure sufficient levels of observer coverage in all nearshore fisheries that may pose a significant entanglement risk to any of the three stocks of sea otters in Alaska. Observer coverage should be sufficient to (1) generate reliable estimates of serious injury and mortality, as required under section 118 of the MMPA, and (2) provide a basis for introducing measures to reduce sea otter bycatch if and as necessary.

Service Response to Comment 13: As we state in the final revised SARs, the reported level of incidental take of sea otters from fisheries is very low, and it is difficult to state the total combined effect of fisheries, including whether the total fishery mortality and serious injury rate is insignificant and approaching a zero mortality and serious injury

rate. The Service obtains fisheries related information from NMFS. The Service is supportive of initiatives to obtain more reliable information on incidental take from fisheries managed by NMFS, the State of Alaska, and local stakeholders. This will include strategies to gather information associated with State managed shellfisheries and mariculture activities, which are increasing across the State of Alaska.

Comment 14: In the draft SARs, the discussion of Flannery et al. 2021 suggests genetic information could be important for stock differentiation. Does Flannery et al. 2021 suggest a stock delineation different than that of the three stocks currently used by FWS?

Service Response to Comment 14: No, this study does not suggest a different delineation, rather it recognizes that the inclusion of genetic variation among sea otter populations is important to define stock delineations and indicates that genetic differentiation among northern sea otters is clinal across their range (Larson et al. 2021, Flannery et al. 2021).

Comment 15: In the draft SARs, a few different R_{max} values from the scientific literature are described; the reports should clearly state which value for R_{max} was selected and why.

Service Response to Comment 15: We agree, the Service added language to all three final revised sea otter SARs to clarify that we used 0.29 as the value for R_{max}, which is the maximum intrinsic rate of growth achievable by northern sea otters.

Comment 16: Why is unknown subsistence harvest considered to be negatively biased when there are similar unknown mortalities associated with oil spills, boating, and mariculture?

Service Response to Comment 16: The Service agrees with this comment, and we have removed this statement from all three final revised sea otter SARs.

Comment 17: The draft SARs mention that there is uncertainty in the rate of human-caused mortality associated with increased development in the mariculture industry. Is there conflict between the northern sea otter stocks and the mariculture industry?

Service Response to Comment 17: A recent report (Rehberg and Goodglick 2023) to the Service provides information on potential conflicts between sea otters and certain types of mariculture; however, negative interactions have only been reported in Kachemak Bay. The Service revised all three final sea otter SARs to reflect this information and promote awareness of mariculture as another source of uncertainty and potential conflict.

Comment 18: Figures 2 and 3 in the Southcentral SAR should be revised to add clarity in the following ways: (1) remove the point-to-point trend lines because abundance estimates with lines implies that we know for a fact what the population trajectory is between the points, and if a trend line is drawn, typically it should be a regression trend line. Although the trend lines would not be different from what is already there, this is more problematic in Figure 3, especially for Western Prince William Sound, because it seems to suggest that the ups and down of the abundance in the time series are real when, given the confidence intervals, they are most likely sampling variance; (2) clearly identify the name of the regions illustrated so that it is easier to match with previous tables and figures; and (3) do not use the same blue and green colors in Figures 2 and 3 because they do not represent the same regions, and it is confusing.

Service Response to Comment 18: We agree with all of the comments made about

Figures 2 and 3 in the Southcentral SAR. We have created a single, revised figure that illustrates the same data originally presented in Figures 2 and 3, but in a simpler and easier to follow format. This new figure (Figure 2) now presents the three sub-regions as a series of independent estimates (not a line plot) from each survey area. This figure is in black and white (rather than in color) and now more closely matches the figure style used in the Southwest and Southeast Sea Otter SARs.

Comment 19: The description of the contours of the critical habitat designated for the Southwest stock under the ESA is confusing because it is not clear which marine waters are included in the critical habitat designation.

Service Response to Comment 19: The Service has revised this SAR by adding the following clarification: "As part of the ESA listing decision, the Service designated 15,164 km^2 (5,855 mi^2) of nearshore waters as Southwest stock critical habitat, which occurs in nearshore marine waters ranging from the mean high tide line seaward for a distance of 100 meters or to a water depth of 20 meters (65.6 ft) (74 FR 51988)."

Comment 20: In the Southwest SAR, consider whether there was an actual decline and then increase in the Bristol Bay MU because although the coefficients of variation (CVs) overlap across all three Southwest stock surveys, there are also differences among the survey methods.

Service Response to Comment 20: The Service agrees that there may not have been an initial decline, and we have revised our discussion regarding this MU in the final revised SAR.

Comment 21: The Southwest stock SAR states that: "The best available information indicates that the Southwest stock in the Aleutian archipelago declined by up

to 90 percent in the 1990s." What is the citation for the scientific literature that support this statement?

Service Response to Comment 21: The Service has added the citation Doroff et al. 2003 as reference to support this statement in the final revised SAR.

Comment 22: In the Southwest stock SAR, the Service should add a description of how mortality is distributed across the management units (MUs) (e.g., ~90% of the human-caused M/SI occurred around Kodiak, the MU with the largest abundance), or a qualitative sentence saying that distribution of mortality across MUs is something that the Service considered but that it does not seem to be a concern.

Service Response to Comment 22: The Service added language to this final revised SAR to explain that 96% of the harvest occurs in the Kodiak, Kamishak, Alaska Peninsula MUs, where most people and sea otters are located.

References

The complete list of references used for each of these revised SARs is available at *https://www.regulations.gov* under Docket No. FWS-R7-ES-2022-0155 and upon request from the Alaska Marine Mammals Management Office (see **FOR FURTHER INFORMATION CONTACT**).

Authority

The authority for this action is the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 *et seq*.).

Martha Williams,

Director,

U.S. Fish and Wildlife Service.

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