



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**

National Marine Fisheries Service  
P.O. Box 21668  
Juneau, Alaska 99802-1668

October 16, 2019

MEMORANDUM FOR: Chris Oliver  
Assistant Administrator for Fisheries

FROM: *for* *Robert Balsiger*  
James W. Balsiger, Ph.D.  
Administrator, Alaska Region

SUBJECT: Western Distinct Population Segment Steller Sea Lion 5-Year  
Status Review - DECISION MEMORANDUM

I recommend that you approve the attached 5-Year Status Review for the endangered western distinct population segment (WDPS) Steller sea lion. This document was prepared by the Alaska Region's Protected Resources Division, with reviews by the Alaska Fisheries Science Center's Marine Mammal Laboratory and five external reviewers. The best available data and information was used in the development of this document, which recommends that the classification of the western DPS Steller sea lion remain as endangered.

#### BACKGROUND

The WDPS of Steller sea lion decreased from an estimated 220,000 to 265,000 animals in the late 1970s to less than 50,000 in 2000. Data indicate that the decline began in the 1970s in the eastern Aleutian Islands, western Bering Sea/Kamchatka, and the Kuril Islands, and then, in Alaska, spread both east and west of the eastern Aleutians in the 1980s. By 1990, trends indicated that populations in the eastern Aleutians and western GOA were relatively stable while those to the east and west continued to decline.

The Steller sea lion was listed under the Endangered Species Act (ESA) as threatened throughout its range in 1990 and critical habitat was designated in 1993. In 1997, the ESA listing of the Steller sea lion was divided into two distinct population segments, the WDPS and the eastern distinct population segment (EDPS) with a dividing line at 144°W longitude. The DPS classification and corresponding Marine Mammal Protection Act stock structure were based on the phylogeographic method considering genetic, morphological, population dynamics, and distributional data. At that time, the WDPS was recognized and listed as endangered and the eastern DPS remained listed as threatened. The two Steller sea lion DPSs meet the requirements of the 1996 DPS policy (61 FR 4722, February 7, 1996) for discreteness and significance. The level of differentiation indicates long-term reproductive isolation resulting from four glacial refugia events 60,000 to 180,000 years before present.

The 2008 Steller sea lion recovery plan refers to sub-regions within which population trends should be observed to determine whether biological recovery criteria have been met. These sub-regions were based on the documented variation in the rate of population decline across decades and among regions within the WDPS, demonstrating a need to employ a recovery strategy that



accounts for spatial and temporal differences. Four population viability analyses (PVAs) indicated the WDPS Steller sea lions have a high probability of declining to a low level if they are considered as a single homogeneous population (by combining all rookery counts and assuming an overarching population trend). The recovery team considered the results of the PVAs and determined that recovery should also involve maintenance of multiple widespread metapopulations that are independently viable because it is less likely that future singular threats will endanger widely separated multiple metapopulations than a single population with the same abundance.

The Recovery Plan indicates that the WDPS will be considered for reclassification to threatened when two demographic criteria are met: (1) the population for the U.S. region has increased (statistically significant) for 15 years on average, based on counts of non-pups (i.e., juveniles and adults), and (2) the trends in non-pups in at least 5 of the 7 sub-regions are consistent with that overall trend, with the population trend in any two adjacent sub-regions not declining significantly. Reclassification would also require evaluation of the factors specified by section 4(a)(1) of the ESA (16 U.S.C. § 1533(a)(1)).

Based on an increasing population trend for non-pups in Alaska of  $2.14\%y^{-1}$  (95% credible interval<sup>1</sup> of  $1.49 - 2.78\%y^{-1}$ ) over the past 15 years, Recovery Plan downlisting criterion #1 has been met. However, because there are decreasing trends in three contiguous subregions (western and central Aleutians and Russia/Asia) during that same 15-year period, Recovery Plan downlisting criterion #2 has not been met. Moreover, there was a sharp drop in pup production in the eastern and central Gulf of Alaska (GOA) subregions from 2015-2017, and the total number of pups born at Chiswell Island in the eastern GOA in 2018 declined more than 40% below the 2015 high. Estimates of adult female annual apparent survival also dropped from 90% to 81% in 2016 and further to 62% in 2017 at Chiswell Island, indicating either some of these females left the area or their survival was impacted by recent ecosystem changes in the GOA. The drop in pup production and female survival estimates may suggest that WDPS Steller sea lions are not resilient to environmental variability that results in large changes to prey distribution and abundance.

The ESA requires completion of periodic reviews of species that are listed as threatened or endangered to ensure that the listing of these species remains accurate. Specifically, section 4(c)(2) of the ESA (16 U.S.C. § 1533(c)(2)) states that the Secretary shall:

- A. conduct, at least once every five years, a review of all species included in a list..., and
- B. determine on the basis of such review whether any such species should
  - i. be removed from such list;
  - ii. be changed in status from an endangered species to a threatened species; or
  - iii. be changed in status from a threatened species to an endangered species.

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<sup>1</sup> A credible interval is the interval in which an (unobserved) parameter has a given probability. It is the Bayesian equivalent of the confidence interval. However, unlike a confidence interval, it is dependent on the prior distribution.

To remove a species from the list (i.e., delist), NMFS must determine based on the best scientific and commercial data available whether the species is extinct, the species does not meet the statutory definition of a species, or the species does not meet the definition of an endangered or threatened species (based on the five-factor analysis that informs a listing determination) (see 50 CFR 424.11(c) & (e) & 16 U.S.C. § 1533(a)(1)). The determination to downlist a species is also based on the five-factor analysis (see 50 CFR 424.11(c)).

In this five-year review, NMFS considered the best scientific and commercial information and data available, which does not support downlisting or delisting the WDPS Steller sea lion. Threats to the population are not well understood, and thus we are not reasonably confident that management or protective actions will reverse the decline in the western portion of the range, even though the U.S. has jurisdiction over many human activities affecting that region. There is high uncertainty about the cumulative threats that continue to cause declines in the central and western Aleutian Islands and Russia/Asia. We have concerns about the potential for contaminants to impede recovery, following multiple studies that indicate that pups in the western Aleutian Islands have relatively high levels of mercury burdens, including levels of mercury that are known to cause serious health effects in other mammals. We have uncertainty about levels of take in State fisheries, since there are no recent data about levels of take in such fisheries, including fisheries within 3 nm of rookeries and fisheries in which take has been documented in the past. We also anticipate some continued degree of conflict with economic activities, such as commercial fishing and vessel-related disturbance near unprotected rookeries. Many of the recovery criteria for downlisting have not been fully met. Neither the demographic nor the listing factor (threats-based) criteria for downlisting have been satisfied fully, and the best available information indicates that threats to this DPS remain. Moreover, the five-factor analysis outlined in the review does not support downlisting or delisting the WDPS Steller sea lion at this time.

#### RECOMMENDATIONS

I recommend that you concur with my determination under section 4(c)(2) of the ESA that the classification for the WPDS Steller sea lion be maintained as endangered.

1. I concur Chris Ohio 3/11/20  
Date

2. I do not concur. \_\_\_\_\_  
Date

Attachment: WDPS Steller sea lion 5-year review