

National Marine Fisheries Service, Alaska Region

Occurrence of Western Distinct Population Segment Steller Sea Lions East of 144° W. Longitude

December 18, 2013

Purpose

This document provides information on the occurrence of endangered western distinct population segment (WDPS) Steller sea lions within areas east of 144° W. longitude (Cape Suckling). This brief summary has been developed to help federal agencies meet their obligations to consult with the National Marine Fisheries Service (NMFS) under section 7 of the Endangered Species Act (ESA), and to provide guidance for permitted take of WDPS animals east of 144° W. longitude during NMFS authorized research and stranding response activities.

Background

NMFS recognizes two DPSs of Steller sea lions: an eastern DPS, which consists of Steller sea lions from breeding colonies located east of 144° W. longitude, and a western DPS, which consists of Steller sea lions from breeding colonies located west of 144° W. longitude. Until recently, both of these DPSs were listed under the ESA. On November 4, 2013, NMFS published a final rule (78 FR 66140) to remove the EDPS of Steller sea lions from the list of threatened species under the ESA, effective December 4, 2013. Due to the delisting, federal agencies are no longer required to consult under section 7 of the ESA when activities they authorize, fund, or carry out may affect the EDPS. Since WDPS sea lions occur in some locations east of 144° W longitude, we provide information in this document to help action agencies and others determine where those animals may be present and thus could potentially be affected by coastal development or other actions. Users should be aware that our understanding of sea lion movements is incomplete and western DPS animals may occasionally be encountered in other locations.

Jemison et al. (2013) analyzed over 22,000 photo-confirmed sightings of 4,172 sea lions that were branded as pups from 2000-2010 to estimate probabilities of a sea lion born in one DPS being seen within the range of the other DPS. In order to describe individual movements, these data were supplemented by additional photo-confirmed records obtained from January 2011 through August 2012 of individual animals that crossed to the opposite DPS. By limiting the analysis to photo-confirmed sightings, the authors improved the confidence they could have in their conclusions, but may have underestimated the absolute level of movement. The authors indicated that most of the resighting effort was during the May-July breeding season, with much less effort during the non-breeding season (August-April).

Jemison et al. (2013) found that there is regular movement of WDPS Steller sea lions across the 144° W. longitude boundary. The majority of the cross-boundary movements are temporary with individuals returning to their natal DPS for breeding, but some females from the WDPS have likely emigrated permanently and have given birth to pups at White Sisters and Graves Rocks rookeries. The vast majority of confirmed sightings of WDPS animals have been in northern areas of Southeast Alaska, north of Frederick Sound (Jemison et al. 2013); “quite a few” confirmed sightings have been recorded at haulouts in Frederick Sound; and there are few

confirmed observations of WDPS animals south of a line from Hazy Island, through Sumner Strait, to the northern tip of Wrangell Island (L. Jemison, ADF&G personal communication to L. Rotterman, NMFS). Jemison et al. (2013) reported that only one photo-confirmed WDPS animal had been observed south of Alaska, and one more has been observed since their paper was completed (L. Jemison, ADF&G, personal communication to L. Rotterman, NMFS).

Fritz et al. (2013) estimated an average annual breeding season movement of WDPS Steller sea lions to southeast Alaska of 917 animals. Movements are largely thought to be in response to spatial/temporal variability in prey resources, but it is not currently possible to estimate the number of WDPS animals that are present east of 144° W. longitude at any particular time.

Conclusions

Based on the findings presented in Jemison et al. (2013), Fritz et al. (2013), and on additional details (L. Jemison, personal communication to L. Rotterman, NMFS) or references cited, we conclude that:

1. WDPS Steller sea lions occur east of 144° W. longitude year-round, but the probability decreases with latitude. We define two regions based on known levels of occurrence: common and rare. We lack detailed information on seasonal variability in movement.
2. WDPS Steller sea lions are common from Cape Suckling through Yakutat and northern southeast Alaska to Sumner Strait (see Figure 1).
3. WDPS Steller sea lions are found rarely in Sumner Strait or further south (especially south of Dixon Entrance where their presence is extremely unlikely).
4. Steller sea lions also occur west of Southeast Alaska in the North Pacific Ocean (Himes Boor and Small 2012). Lacking data to indicate otherwise, we assume that WDPS animals may occur in these offshore habitats in a frequency similar to their occurrence at terrestrial habitats in the same general region.

The use of habitat east of 144° W. longitude by WDPS Steller sea lions may change over time and new information may support different conclusions in the future. NMFS will update its conclusions on this issue if new information indicates modification is appropriate.

REFERENCES CITED

- Fritz, L., K. Sweeney, D. Johnson, M. Lynn, T. Gelatt, and J. Gilpatrick. 2013. Aerial and ship-based surveys of Steller sea lions (*Eumetopias jubatus*) conducted in Alaska in June-July 2008 through 2012, and an update on the status and trend of the Western Distinct Population Segment in Alaska. NOAA Technical Memorandum NMFS-AFSC-251. Available at: <http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-251.pdf>.
- Himes Boor, G.K. and R.J. Small. 2012. Steller sea lion spatial-use patterns derived from a Bayesian model of opportunistic observations. *Marine Mammal Science* 28(4): E375–E403.
- Jemison, L.A., G.W. Pendleton, L.W. Fritz, K.K. Hastings, J.M. Maniscalco, A.W. Trites, T.S. Gelatt. 2013. Inter-population movements of Steller sea lions in Alaska with implications for population separation. *PLOS ONE* 8:1-14.

