

Lynne Barre, Branch Chief
West Coast Regional Office, Seattle Branch
7600 Sand Point Way NE
Seattle, WA 98115

Re: Endangered and Threatened Species: 5-year status review for Southern Resident killer whales:

Dear Ms. Barre,

On behalf of the groups and individuals signed below, please accept the following comments for consideration by NMFS regarding the 5-year review of Southern Resident killer whales (SRKW) under the Endangered Species Act of 1973. Also attached are current, relevant scientific studies demonstrating not only the need for continued listing of the SRKW on the ESA; they also provide evidence for taking immediate actions in order to provide the SRKW with a steady supply of Chinook salmon.

Since their listing in 2005, the numbers of the Southern Residents have decreased. In 2005 the total number of the combined pods was 14 more than the combined total now. Currently there are only 74 members remaining (Center for Whale Research, 2020).

Threats already identified include lack of prey, toxicants in their environment, and noise pollution. All of these threats are anthropogenic and NMFS and NOAA must lead out more forcefully, taking every opportunity by using the best science to create a recovery plan that leads to actual recovery of the orcas. Actions thus far have not achieved sustained growth in the numbers of orcas remaining. Functional extinction looms closer, and inbreeding is already occurring due to not enough animals remaining (Ford et al, 2018).

This group recommends that NMFS and NOAA scientists review the following articles – all are attached:

A cumulative effects model for population trajectories of resident killer whales in the Northeast Pacific

A "cumulative model incorporating all threats predicted demographic rates closest to those observed for both populations." "The cumulative effects population viability analysis model projected a mean increase in the modelled Northern Resident Killer Whale population to the carrying capacity within 25 years. In contrast, the mean modelled Southern Resident Killer Whale population trajectory was projected to decline under current conditions, with a 26% probability of population extinction, and in those projections, extinction was estimated to occur after 86 (\pm 11) years. Our results highlight the importance of considering the collective impact of multiple threats to imperilled species and the necessity of testing management and mitigation measures aimed at recovery using a holistic, validated model."

Seasonal Occurrence of Cetaceans along the Washington Coast from Passive Acoustic Monitoring

Emmons et al (2021), using passive acoustic monitoring, attempted to monitor cetacean abundance along the Washington Pacific Coast. Sites included inshore and offshore Cape Flattery (northern sites) and Westport and the Columbia River (southern sites). They reported, “At both southern sites, fish-eating “resident” killer whales were most frequently detected between the months of January and June. All these resident detections were of the southern resident community”. They further noted that, “Killer whale occurrence at the two southern sites was highest from January to June. This is primarily due to the increased presence of southern resident killer whales, which is likely driven by the timing of Chinook salmon, *Oncorhynchus tshawytscha*, returning to the Columbia River.”

Endangered predators and endangered prey: Seasonal diet of Southern Resident killer whales

“Understanding diet is critical for conservation of endangered predators. Southern Resident killer whales (SRKW) (*Orcinus orca*) are an endangered population occurring primarily along the outer coast and inland waters of Washington and British Columbia. Insufficient prey has been identified as a factor limiting their recovery, so a clear understanding of their seasonal diet is a high conservation priority.” “Chinook salmon were identified as an important prey item yearround, averaging ~50% of their diet in the fall, increasing to 70–80% in the mid-winter/early spring, and increasing to nearly 100% in the spring.” “Although outer coast Chinook samples included 14 stocks, four rivers systems accounted for over 90% of samples, predominantly the Columbia River.”

Nez Perce Salmon Extinction Analysis

“Fisheries staff from the Nez Perce Tribe will present the results of their study on Snake River Basin spring/summer Chinook and steelhead population extinction risk to the Fish and Wildlife Committee at the May Committee meeting. This presentation is relevant to recent updates on salmon and steelhead return abundance, forecasts for 2021 and the status of ocean growth and survival conditions.”

Actions Needed

Based on the science, the undersigned respectfully request that NMFS and NOAA take the following actions. After our careful review of attached articles, we believe these actions need to be taken in order to fully recover the SRKWs to their historic numbers instead of the continued managing of this Distinct Population Segment (DPS) on the brink of extinction. These actions include:

- Writing a BiOp that clearly, and accurately, reflects the impact of the four lower Snake River dams on Chinook salmon, especially spring Chinook which is vital for pregnant and nursing orcas.
- Setting aside a portion of Chinook salmon for the SRKWs by ensuring that the Pacific Fishery Management Council approves Amendment 21.
- Labeling Columbia River salmon and Alaskan salmon correctly. Most salmon harvested from and labeled as Alaskan salmon is actually from the Columbia River Basin.

- Insisting fisheries upgrade to newer and better methods of fishing and equipment that limits by-catch.

Respectfully,

Pam Conley, Chair
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References

Emmons, C., Hanson, M., & Lammers, M. (2021). Seasonal Occurrence of Cetaceans along the Washington Coast from Passive Acoustic Monitoring.

M. J. Ford, K. M. Parsons, E. J. Ward, J. A. Hempelmann, C. K. Emmons, M. Bradley Hanson, K. C. Balcomb, L. K. Park. Inbreeding in an endangered killer whale population. *Animal Conservation*, 2018; DOI: [10.1111/acv.12413](https://doi.org/10.1111/acv.12413)

Hanson MB, Emmons CK, Ford MJ, Everett M, Parsons K, Park LK, et al. (2021) Endangered predators and endangered prey: Seasonal diet of Southern Resident killer whales. *PLoS ONE* 16(3): e0247031. [https://doi.org/ 10.1371/journal.pone.0247031](https://doi.org/10.1371/journal.pone.0247031)

Murray, C. C., Hannah, L. C., Doniol-Valcroze, T., Wright, B. M., Stredulinsky, E. H., Nelson, J. Locke, A., & Lacy, R. C. (2021). A cumulative effects model for population trajectories of resident killer whales in the Northeast Pacific. *Biological Conservation*, 257, 109124. <https://doi.org/10.1016/j.biocon.2021.109124>

Johnson, D., Hesse, J., & Kinzer, R. (2021). Nez Perce Tribe staff presentation on their analysis of Snake River Basin Chinook and Steelhead – Quasi-Extinction Threshold and Call to Action