

December 18, 2019

Ms. Lynne Barre, Seattle Branch Chief, Protected Resources Division
West Coast Region, National Marine Fisheries Service
7600 Sand Point Way NE, Building 1
Seattle, WA 98115

RE: Southern Resident Killer Whale Critical Habitat (NOAA-NMFS-2014-0041)

Dear Ms. Barre:

Oceana supports the expansion of critical habitat for endangered Southern Resident killer whales (orcas) to the outer coast of Washington, Oregon and as far south as Point Sur, California. Only 73 individuals remain in this distinct orca population (Figure 1) and under status quo conditions this population is likely to go extinct. Given their perilous state, the increasing threats from climate change, and the demands of a rapidly growing human population, bold and courageous actions are needed to prevent further Southern Resident orca decline.

Toward the shared goal of protecting and recovering Southern Resident orcas, Oceana requests the National Marine Fisheries Service (NMFS) expand critical habitat south to Point Sur, California as in the proposed rule.¹ Second, Oceana requests the agency not exempt the Navy training area (Quinault Range Site) off Washington from the final critical habitat designation. Third, we request NMFS explicitly identify which prey species are essential biological features and identify precautionary thresholds for prey quantity, quality and availability for considering impacts to critical habitat. Last, we recommend NMFS include an additional essential feature for critical habitat--sound levels that will not significantly impair the orcas' habitat use or occupancy of critical habitat.

¹ Fed. Reg. 49,214 (September 19, 2019)

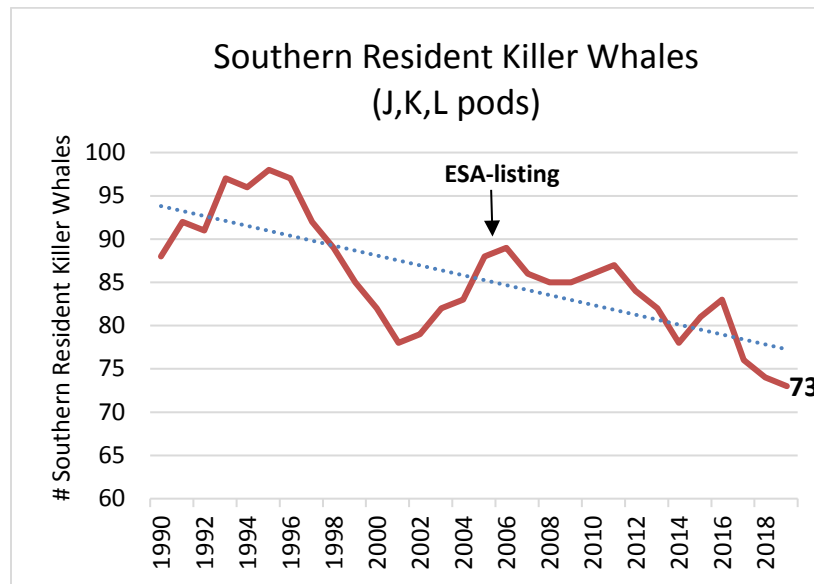


Figure 1. Southern Resident orca population size, 1990 to June 2019 (adapted from Center for Whale Research).

1. Oceana supports designating critical habitat for Southern Resident orcas along the outer coast of Washington, Oregon and south to Point Sur, California (south of Monterey, CA).

Southern Resident orcas need clean ocean waters that are abundant with salmon and free from physical and acoustic disturbance so that they can freely migrate, forage, socialize, rest, grow and reproduce. In the proposed rule,² NMFS identified the following physical and biological features essential to conservation of Southern Resident orcas (essential features):

- a) Water quality to support growth and development;
- b) Prey species of sufficient quantity, quality, and availability to support individual growth, reproduction, and development, as well as overall population growth; and
- c) Passage conditions to allow for migration, resting, and foraging.

It has long been known that Southern Residents frequent the Salish Sea off Washington where critical habitat is currently designated. New science and observations, however, demonstrate Southern Resident orcas travel the outer Pacific Coast from as far north as Southeast Alaska to as far south as central California, likely following the migration of their primary prey, Chinook

² Id.

salmon.³ Just last spring, for example, over 30 Southern Residents were observed and documented in Monterey Bay, California.⁴

The agency proposes to expand critical habitat for Southern Residents to over 15,600 square miles of ocean waters off the outer coast of Washington, Oregon, and California. In terms of the distribution of the orcas' coastal critical habitat, the proposed rule is responsive to the best available science including survey-based visual sightings, satellite tracking, and passive acoustic monitoring.



Designating this area as orca critical habitat will help ensure it is protected from harmful activities that could impact water quality, prey availability and migratory pathways. Federally permitted activities – such as water pollution discharge permits, military sonar activities, and offshore drilling – must not be allowed to damage the orca critical habitat. Because critical habitat protections pertain to federal actions only, this rule will not burden local governments.

Figure 2. Oceana supports the proposed Southern Resident killer whale critical habitat designation off Washington, Oregon and south to Point Sur, California. We request NMFS not exclude the Navy training area off the central Washington coast from this designation.

³ NMFS 2019. Proposed Revision of the Critical Habitat Designation for Southern Resident Killer Whales. Draft Biological Report (September 2019).

⁴ Runwall, P (April 5, 2019). Endangered Killer Whales Make and Appearance in Monterey Bay. Mercury News. Available: <https://www.mercurynews.com/2019/04/05/endangered-killer-whales-make-an-appearance-in-monterey-bay/>

2. Oceana requests NMFS designate the Navy training area off Washington as Southern Resident killer whale critical habitat

The threats and risk levels to Southern Resident orcas are high. Given the low population level and continued decline of Southern Resident orcas, NMFS must protect their critical habitat from disturbance. Therefore, Oceana does not support excluding the Navy training area off the central Washington coast from designation as critical habitat.

Satellite tagging and acoustic data presented in the draft critical habitat biological report indicate the outer Washington coast is a high use area for Southern Residents that is of high conservation value. NMFS, however, proposed to exclude over a third of the outer coast of Washington from the critical habitat designation to accommodate military activities. The proposed exclusion area and the associated buffer are part of the Navy's Northwest Training and Study Testing Area where the Navy conducts "aircraft, ship and submarine maneuvers, weapon discharges, and other activities that may affect the whales and their habitat."⁵ The critical habitat biological report describes that some Navy activities create high intensity underwater sound, such as sonar devices, and pressure waves from explosives (e.g. explosive mines). The NMFS ESA section 4(b)(2) report states the Navy estimates it will conduct 260 testing activities annually in this area in 2020 and beyond.⁶

These activities may adversely impact Southern Resident killer whales, and their habitat, including their prey. Impacts from mid-frequency sonar and explosives are particularly concerning and may be both underestimated and inadequately mitigated. These activities can result in serious injury and even death to Southern Residents and adversely modify their habitat.⁷ In addition to military exercises, this important habitat area may also be affected by shipping, commercial fishing and/or future offshore development projects. Failing to designate this area critical habitat creates a major habitat fragmentation in a key migratory corridor and feeding area within the core of the orcas' range. Designation of this area as critical habitat simply requires the Navy consult with the Fisheries Service on proposed activities that may affect the habitat. There is no indication at this time that designating this important habitat area would curtail Navy operations. Further, many other federal actions that may affect the Southern Resident orcas occur in this habitat area; and excluding the area would preclude NMFS's consultation and mitigation of impacts. Thus, we request NMFS reject this exclusion area and instead designate it as orca critical habitat to ensure the duty to consult on federal activities is implemented.

⁵ Industrial Economics Incorporated (September 2019) Draft Economic Analysis for Proposed Expanded Critical Habitat for Southern Resident Killer Whales, at 2-18

⁶ NMFS 2019. Proposed Revision of the Critical Habitat Designation for Southern Resident Killer Whales Draft ESA Section 4(b)(2) Report. *September 2019*

⁷ NMFS 2019, *supra note 3*, at 67.

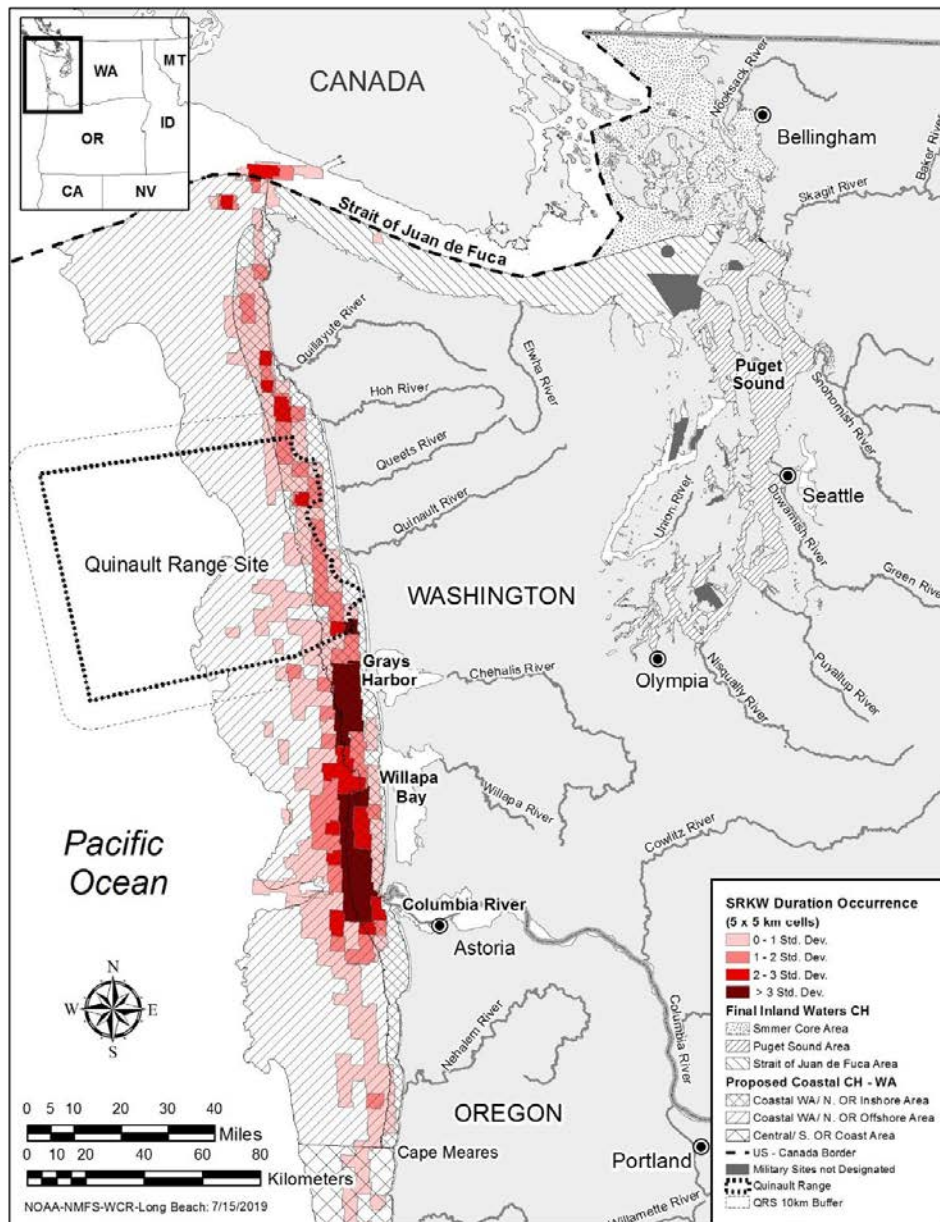


Figure 3. Showing areas of high Southern Resident killer whale use, proposed critical habitat and the location of the Navy training area (Quinault Range Site) that would be excluded from the Southern Resident critical habitat under the proposed rule.⁸

⁸ Figure 3 from: NMFS 2019. Proposed Revision of the Critical Habitat Designation for Southern Resident Killer Whales Daft ESA Section 4(b)(2) Report. *September 2019*

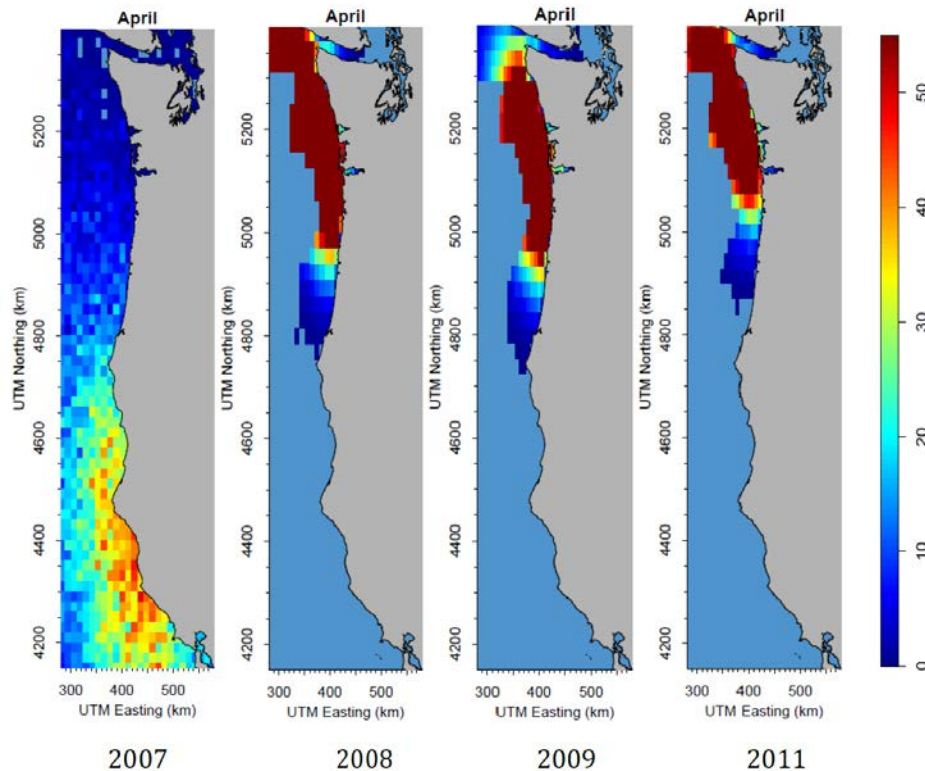


Figure 4. Showing that the entire outer Washington coast is a high use area for Southern Resident orcas, including in the Navy training area proposed for exclusion from the critical habitat designation. Estimated Southern Resident orca spatial distribution for April 2007-2011, using simulated movement tracks from tagged animals, acoustic detections and confirmed sighting reports as data. Scale colors are proportional to the maximum counts.⁹

3. Clearly identify which prey species are essential biological features for Southern Resident orcas and identify thresholds for the prey element of critical habitat.

NMFS “must clearly articulate, in proposed and final rules designating critical habitat for a particular species, which physical or biological features are essential to the conservation of the species and the basis for that critical habitat.”¹⁰ In the proposed rule, NMFS identifies, “prey species of sufficient quantity, quality and availability to support individual growth, reproduction and development, as well as overall population growth” as one of three essential features for Southern Resident orca conservation.¹¹ The preamble to the proposed rule describes that Southern Residents have an “overall preference for Chinook salmon (*Oncorhynchus tshawytscha*),” but that

⁹ Figure 4 from: Hanson, M.B., E.J. Ward, C.K. Emmons, and M.M. Holt. 2018. Modeling the occurrence of endangered killer whales near a U.S. Navy Training Range in Washington State using satellite-tag locations to improve acoustic detection data. Prepared for: U.S. Navy, U.S. Pacific Fleet, Pearl Harbor, HI. Prepared by: National Oceanic and Atmospheric Administration, Northwest Fisheries Science Center under MIPR N00070-17-MP-4C419. 8 January 2018. 33 p.

¹⁰ 81 Fed. Reg. 7,414 (February 11, 2016)

¹¹ Fed. Reg. 49,214, 49,223 (September 19, 2019)

“chum (*O. keta*), coho (*O. kisutch*), and steelhead (*O. mykiss*) may also be important” in their diet “at particular times and in specific locations.”¹² Oceana recommends that these prey species be clearly listed as essential biological features of the orcas’ critical habitat. Further, we recommend NMFS specify which salmon runs are important prey for Southern Residents and identify which Chinook runs are essential prey, similar to what was included in the 2018 NOAA Fisheries and Washington Department of Fish and Wildlife Southern Resident Killer Whale Priority Chinook Stocks Report.¹³

Next, we recommend NMFS identify indices of salmon abundance, size (length and weight) and density for determining when prey species quality, quantity and availability are sufficient for individual Southern Resident orca growth, reproduction and development and population level growth. For example, Ward et al. 2009 linked Southern Resident orca population growth to the West Coast Vancouver Island Chinook salmon abundance index (dominated by salmon from Puget Sound, the Columbia River and Fraser River) and found that “when the WCVI Chinook salmon abundance is equal to the 1980–2006 mean, killer whale population growth remains positive in >99% of all simulations.”¹⁴ Similarly, Velez-Espino linked Southern Resident orca population growth to the ocean abundance and terminal run size of several Chinook runs including, West Coast Vancouver Island, Columbia Upriver Brights, Fraser Late, Oregon Coastal, and Puget Sound Chinook.¹⁵ These essential biological features and prey thresholds should be included in this critical habitat designation.

4. Designate sound as an essential element of Southern Resident orca critical habitat

Lack of prey, particularly Chinook salmon; vessel noise and interactions; and bioaccumulation of toxins are the three major threats facing Southern Residents. NMFS appropriately identifies water quality and prey as essential features of the habitat needed by Southern Resident killer whales. Water quality with low levels of contaminants and abundant food resources are essential habitat elements necessary to support orca growth, reproduction and development. To the third major threat, however, vessel noise and interaction, NMFS considered but rejected the designation of sound as an essential habitat feature. With limited prey, vessel noise and interactions make it harder for orcas to forage successfully and subsequently toxin loads become more immediately dangerous as starvation releases chemical compounds stored in the orcas’

¹² Id. at 49,215.

¹³ Available:

https://archive.fisheries.noaa.gov/wcr/publications/protected_species/marine_mammals/killer_whales/rec/over/srkw_priority_chinook_stocks_conceptual_model_report_list_22june2018.pdf

¹⁴ Ward, EJ, EE Holmes, and KC Balcomb. 2009. Quantifying the Effects of Prey Abundance on Killer Whale Reproduction. *Source Journal of Applied Ecology*, 46(46), 632–640. <http://doi.org/10.1111/J.1365-2664.2009.01647.X>

¹⁵ Velez-Espino, L. A., J. K. B. Ford, H. A. Araujo, G. Ellis, C. K. Parken, and R. Sharma. 2014. Relative importance of Chinook salmon abundance on resident killer whale population growth and viability. *Aquatic Conservation: Marine and Freshwater Ecosystems*. 25(6): 756-780.

blubber. Oceana, therefore, disagrees with NMFS decision to exclude this element and we request NMFS reconsider this point.

The existing and proposed critical habitat overlaps with major global shipping routes and ports. With a rapidly expanding U.S. and global economy and international trade, vessel traffic in Southern Resident critical habitat – and corresponding noise impacts - are predicted to significantly increase in the coming decades. Sounds from vessels transiting near Southern Residents can disturb and displace them from preferred areas, mask their communication, decrease their foraging efficiency and create hearing damage and stress.¹⁶ Vessels emit both low and high frequency noises that can significantly mask or impair orca echolocation and communication. The critical habitat biological report states, “Noise from vessels may mask or partially or completely prevent the perception of clicks, calls, and whistles made by killer whales, including echolocation used to locate prey and other signals the whales rely on for communication and navigation.”¹⁷

Designating sound as a feature of critical habitat for endangered marine mammals would not be without precedent. NMFS states in the proposed rule that sound is considered as an essential critical habitat feature for both Cook Inlet beluga whales and Main Hawaiian Islands false killer whales. For false killer whale critical habitat, NMFS designated “sound levels that will not significantly impair false killer whales’ use or occupancy” as a characteristic of the whale’s critical habitat.¹⁸ Even if NMFS cannot quantify a threshold noise level that may alter the orcas’ habitat to the extent they would abandon an area, the Endangered Species Act does not require quantifiable thresholds be known before a habitat attribute may be considered an essential feature.

It is known Southern Resident killer whales need a relatively quiet ocean habitat free from disturbance. Failing to designate sound as an essential feature for Southern Resident killer whales will diminish the conservation value of this critical habitat designation.

¹⁶ Tollit et al. 2017 Estimating the effects of noise from commercial vessels and whale watch boats on Southern Resident Killer Whales. Available at: <https://www.portvancouver.com/wp-content/uploads/2017/01/2017-07-ECHO-Program-Estimating-the-effects-of-noise-from-commercial-vessels-and-whale-watch-boats-on-SRKW.pdf>

¹⁷ NMFS 2019, *supra* note 3, at 17.

¹⁸ 83 Fed Reg. 35,062 (July 24, 2018)

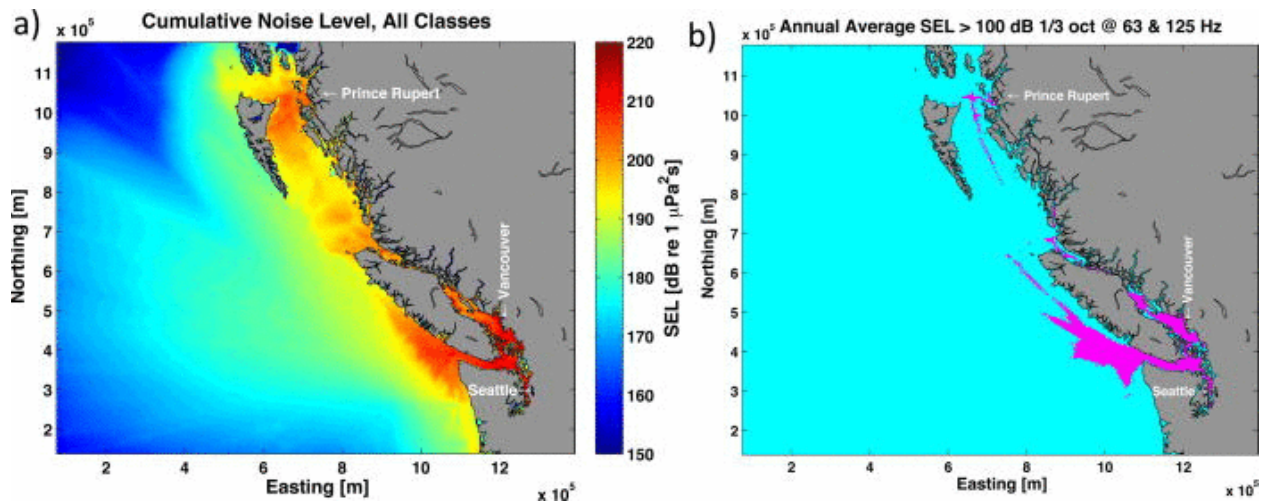


Figure 5. (a) Cumulative sound exposure level from vessel traffic from Jan to Dec 2008. (b) Areas where the estimated annual average sound pressure level (*SPL_{rms}*) exceeded the European Union Marine Strategy Framework Directive of 100 decibels (*SPL_{rms}*) in 1/3-octave bands centered on 63 or 125 Hz.¹⁹

5. Conclusion

In finalizing this rule, NMFS must consider the highly endangered status and continuing decline of the endangered Southern Resident orcas, including the population-level effects and harm to orcas from a lack of prey, vessel noise, and contaminants. It is imperative comprehensive actions are taken quickly to recover Southern Residents and their primary prey, Chinook salmon. Conservation actions taken today, including expanded critical habitat, will not only benefit the orcas, but a healthy ocean ecosystem, salmon fisheries, and communities throughout the region.

We urge NMFS to do everything it can now to protect Southern Resident orcas including expanding critical habitat off the outer coast. Given the status of Southern Resident orcas and threats to them, we urge you to consider the above recommendations to strengthen this rule.

Sincerely,

Ben Enticknap
Pacific Campaign Manager and Senior Scientist

¹⁹ Published in: Christine Erbe; Alexander MacGillivray; Rob Williams; *The Journal of the Acoustical Society of America* 132, EL423-EL428 (2012) DOI: 10.1121/1.4758779 Copyright © 2012 Acoustical Society of America