31 December 2019

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

Subject: Scoping of Protective Regulations for Southern Resident Killer Whales in the Inland Waters of Washington State

Dear Ms. Barre:

On 4 October 2019, the National Marine Fisheries Service (NMFS) published a *Federal Register* notice (84 Fed. Reg. 57015) initiating a scoping process "to solicit comments from the public on whether, based on best available information, existing NMFS regulations and other measures adequately protect killer whales from the impacts of vessels and noise in the inland waters of Washington State, and if not, what actions NMFS should take." The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, provides the following comments and recommendations on alternatives and issues that NMFS should address in the National Environmental Policy Act (NEPA) document that it is preparing to identify additional actions for conserving Southern Resident killer whales.

There is broad concern among scientists,[1] managers,[2] conservationists,[3] and the public that Southern Resident killer whales are in peril of extinction unless the current declining population trend is reversed. NMFS asks whether vessel "regulations and other measures adequately protect killer whales." As a threshold issue, the Commission believes the answer to this question is that they are inadequate, and that this may be contributing to or exacerbating the factors driving the decline of the Southern Resident killer whale population. Consistent with the mandates of the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA), NMFS needs to take a precautionary approach by strengthening and supplementing the measures currently in place.

The Commission further notes that the NEPA process, although informative, can be time consuming. Given the precarious status of the Southern Resident killer whale population and its declining trend, the population, and those seeking to conserve it, may not be able to withstand a delay if extinction is to be avoided. The Commission therefore recommends that NMFS, as it balances the requirements of NEPA, the ESA, and the MMPA, either complete the NEPA process expeditiously, or better yet, institute additional conservation measures now, or as quickly as they are

[1] E.g., https://cedar.wwu.edu/ssec/2018ssec/allsessions/112/
[2] E.g., https://www.fisheries.noaa.gov/species/killer-whale, Murray et al. 2019
[3] E.g., https://usa.oceana.org/responsible-fishing/southern-resident-orcas

identified, rather than waiting to act until a comprehensive environmental impact statement (EIS) or assessment (EA) has been completed.

Also, the Commission questions NMFS's decision to limit this review to issues related to impacts of vessels and noise in Washington State inland waters. As discussed below, most experts agree that the primary cause of the observed population trend is nutritional stress. Although vessel activity and associated noise are likely contributing to the problem, directly addressing nutritional stress by increasing prey abundance could be more effective. Further, it is apparent that contaminant loads are impacting the health, reproductive rate, and survival of the whales. The Commission therefore recommends that NMFS expand the scope of its NEPA review to assess actions to increase the abundance and availability[4] of the preferred salmon prey species, such as reducing fisheries removals, improving key runs, increasing release of hatchery fish, and ameliorating competition from other predators, and 2) decreasing the whales' exposure to contaminants.

Population Status, Impacts of Vessels, and Efficacy of Regulations

Many of the issues facing Southern Resident killer whales were discussed in detail at the Commission's May 2018 Annual Meeting in Seattle.[5] Over the past decade, the population's mortality rate has increased, the birth rate has decreased, fewer calves are surviving, and consequently, the population is declining at an alarming rate (NMFS 2019). Scientists have identified three primary drivers of these trends: reduced abundance of prey (especially their preferred prey, Chinook salmon), negative impacts of vessel disturbance and human-generated noise, and bioaccumulated contaminants (e.g., Lacy et al. 2017). While reduced prey availability is likely the most important contributor to the decline, the scientific and management communities believe that all three factors are significant, they act synergistically (e.g., Ayers et al. 2012, Wasser et al. 2017), and all three should be addressed to the fullest extent possible. Research needs to continue to further resolve the roles and relative importance of the three primary drivers, but NMFS also needs to recognize that the time available to save the population is short and additional protective actions must be taken quickly without waiting for full resolution of the outstanding questions.

As discussed in the *Federal Register* notice, there is little evidence that vessel regulations implemented in 2011 (76 Fed. Reg. 20870) have substantially reduced the impacts of vessel disturbance and sound on Southern Resident killer whales (Ferrara et al. 2017, Holt et al. 2017). Ferrara et al. (2017) concluded:

> "While there are *indicators suggesting* the regulations have improved conditions for the whales, others indicate that vessel impacts continue and that some risks may have increased. Based on the above analyses, we believe that there is enough evidence to show value to the whales of the vessel regulations and we support the continued implementation of the regulations, as well as, the future consideration of additional

[4] 'Availability' is abundance synergistically reduced by factors, such as vessel disturbance and sound, that limit the ability of killer whales to find and/or capture the fish that are present. Availability may be limited by low abundance, vessel impacts, or a combination of the two.

[5] https://www.mmc.gov/events-meetings-and-workshops/marine-mammal-commission-annual-meetings/2018-annual-meeting/

measures to protect Southern Residents from harmful vessel effects" (emphasis added).

Recent research provides compelling support for the hypothesis that physical disturbance by whale watching vessels and masking of whale communications by the sound generated by small vessels reduces the time available for whales to forage, interferes with their ability to communicate and coordinate behavior, and may reduce their foraging effectiveness and efficiency (Erbe 2002, Williams et al. 2002a, b, Au et al. 2004, Williams et al. 2006, Holt et al. 2008, Clark et al. 2009, Lusseau et al. 2009, Noren et al. 2009, Williams et al. 2009, Ayers 2012, Williams et al. 2014, Houghton et al. 2015, Erbe 2016, Tollit et al. 2017). Ferrara et al. (2017) stated: "Although it is unknown if … short-term behavioral changes affect the population dynamics, it is likely that because Southern Residents are exposed to vessels the majority of daylight hours they are in inland waters, there may be biologically relevant effects at the population-level." In addition, there is concern that ensonifying major shipping channels by large vessels in Washington and British Columbia inland waters interferes with the whales' ability to communicate and forage (Foote et al. 2004, Veirs et al. 2016, Cominelli et al. 2018). The compromised nutritional and health status of several individuals in the population that has been documented by researchers is believed to be due to reduced prey availability, which, in part, is associated with vessel impacts (Holt et al. 2015, Fearnbach et al. 2018). Further, vessel traffic puts the whales at risk of being struck and seriously injured or killed, as has been documented in several studies (Williams and O'Hara 2010, Ferrara et al. 2017, Matkin et al. 2017, Murray et al. 2019).

Following the 2005 listing of the Southern Resident killer whale 'distinct population segment' (DPS) as endangered under the ESA (70 Fed. Reg. 69903), NMFS issued a final recovery plan for the population in 2008 (NMFS 2008). Although one goal of the plan was to minimize disturbance from vessels, because of uncertainties about impacts from vessel disturbance and sound, the plan only proposed to expand research, monitoring, impact evaluation, and conservation-needs assessment. It did not include more immediate actions to reduce vessel disturbance or sound levels from vessels.

In 2006, also stemming from the ESA listing of the DPS, NMFS proposed to designate critical habitat for the Southern Resident killer whale in Washington inland waters. The proposed designation identified primary constituent elements, including prey, passage and contaminants, but not sound. Despite recommendations from the Commission[6] and others, NMFS declined to include sound as a primary constituent element of the final critical habitat designation. NMFS recently proposed to designate critical habitat for Southern Resident killer whales in the nearshore waters of Washington, Oregon, and California (84 Fed. Reg. 49214), but again did not include sound as a primary constituent elements in the proposal.

In 2009, NMFS proposed three regulations to protect Southern Resident killer whales from vessel impacts in Washington's inland waters (74 Fed. Reg. 37674). It proposed to prohibit vessels from: 1) approaching killer whales to within 200 yards, 2) 'parking' in the path of killer whales within 400 yards of the whales, and 3) entering a conservation area on

[6] http://www.mmc.gov/wp-content/uploads/081406KWcriticalhabitat.pdf

the west side of San Juan Island between May 1 and September 30. In 2011, NMFS issued the final rule, which included the first two prohibitions, but not the third one, despite strong support from the Commission[7] and many others.[8]

In 2016, NMFS identified the Southern Resident killer whale as one of its "Species in the Spotlight," and released a five-year priority action plan for 2016-2020. The first of its "Key Actions Needed 2016-2020" was: "Protect killer whales from harmful vessel impacts through enforcement, education, and evaluation." Again, however, no new protective measures were proposed. Rather, NMFS announced its intention to focus on enforcement, education, and evaluation of the 2011 vessel regulations.

In 2016, NMFS received a petition to establish a whale protection zone for Southern Resident killer whales along the southwestern shore of San Juan Island, a key foraging area, and sought public comment in early 2017. The Commission, along with many others who commented, supported the establishment of the zone and provided a number of recommendations for its design.[9] However, nearly three years later, NMFS has taken no further action on the petition. The Commission understands that NMFS may have been awaiting the recommendations and actions of the State of Washington's Southern Resident Orca Task Force before acting, to avoid duplication of effort and to coordinate regulatory efforts. However, the State has taken no action to establish any whale protection zones since the release of the Governor's recommendations, and NMFS has yet to act on the 2016 petition.

In 2018, based on the recommendations of the State of Washington's Task Force, the Governor of Washington released a 2019-2020 budget proposal with over $1B for Southern Resident killer whale restoration projects and actions. Included in the proposal were an increase in approach distances, a permanent "go-slow" zone for all vessels within one-half nautical mile of killer whales, a three-year suspension of all Southern Resident killer whale watching, a limited-entry permit system for commercial whale-watching vessels, and added resources for enforcement. The budget did not propose funding to implement many other Task Force recommendations, and neither the Task Force nor the Governor's budget proposed establishing any "no-go" protection areas. To date, legislation enacted by Washington has increased the approach distance, created the "go-slow" zone, and added whale-watching guidelines to the boater safety education program.

Despite the conclusions of Ferrara et al. (2017) concerning impacts from vessels on Southern Resident Killer whales, the whale protection zone petition, numerous unfulfilled recommendations of the State of Washington's Task Force, and repeated calls from a wide range of stakeholders for increased protections; NMFS has not implemented any additional protective regulations since 2011. Since its listing under the ESA in 2005, the number of Southern Resident killer whales has declined from 91 to 73 individuals, a 20 percent decline

[7] http://www.mmc.gov/wp-content/uploads/killerwhalewatch_reg_11510.pdf
[8] https://archive.fisheries.noaa.gov/wcr/publications/protected_species/marine_mammals/killer_whales/recovery/prop-cmnts-summ.pdf
[9] http://www.mmc.gov/wp-content/uploads/17-03-31-Barre-Petition-to-Establish-Whale-Protection-Zone-for-SRKWs.pdf

in just 14 years, during which time NMFS enacted just the two vessel regulations described above, and that was eight years ago in 2011. In light of the worsening status of the Southern Resident killer whale population, the Commission believes that regulatory actions designed to reduce the impacts of vessels are long overdue and urgently needed. The current regulations are inadequate and NMFS needs to take additional actions promptly to reverse the decline of the population.

Needed Measures

NMFS should adopt a precautionary and adaptive approach to mitigating vessel impacts. If monitoring and research demonstrate that such measures are overly conservative, then they can be relaxed over time. Drawing on its past recommendations and those of the Task Force, the Commission recommends that NMFS, at a minimum, consider and evaluate as part of the planned NEPA review the following actions to protect Southern Resident killer whales—

1. Institute an indefinite suspension of 'on-the-water' watching of Southern Resident killer whales until a permit system is in place.
2. Require commercial whale-watching vessels to be permitted, which would include mandatory education, training, and reporting. Research and monitoring have shown that Southern Resident killer whales are followed not only by substantial numbers of commercial whale watching vessels, but also by large numbers of private whale-watching vessels when they are in Washington's inland waters. The Commission suggests that NMFS also consider mechanisms for including private vessels in a permit system.
3. Restrict the amount of time available for whale watching, for example by allowing whale watching only on certain days or at certain times, in combination with closures of certain areas.
4. Limit the number of vessels and the amount of time that each vessel can be within a specified distance (e.g., 0.5 nm) of whales.
5. Substantially increase federal and state surveillance and enforcement of vessel regulations, and investigate community surveillance systems and mechanisms to promote or reward good behavior.
6. Require commercial whale-watching vessels to be equipped with AIS, so that their activities and movements can be monitored.
7. Require vessels within a specified distance of the animals to turn off depth sounders that could interfere with killer whale communications, to put engines in neutral if it is safe to do so, and to accelerate slowly when leaving the vicinity of killer whales.
8. Consider further reductions in the current seven-knot, "go slow bubble" speed limit adopted by Washington for vessels in the proximity of killer whales, consistent with other maritime requirements.
9. Designate key foraging areas (e.g., the west side of San Juan Island) as mandatory, "no-go" protection zones during specified seasons or when killer whales are present, with exceptions for required transit, and with monitoring to identify shifts in those areas or the use of new foraging areas by the whales.

10. Create an independent, fully funded, and robust education program targeting both the whale-watching industry and the public, capitalizing on the designs of programs such as "Be Whale Wise" and "Sound Watch".
11. Cooperate with all relevant jurisdictions, including with Canadian authorities, to monitor and reduce shipping noise in the vicinity of Southern Resident killer whales in the Salish Sea.
12. Consider broad vessel speed restrictions in the proximity of killer whales to minimize the risk of vessel strikes.
13. Although not the focus of the *Federal Register* notice and request for comments, assess additional actions that can be taken to increase the abundance and availability of preferred prey species.

We hope these comments and recommendations are helpful. Please contact me if you have questions regarding the Commission's recommendations.

Sincerely,

Peter O. Thomas, Ph.D.,
Executive Director

Cc: Chris Yates, Assistant Regional Administrator, Protected Resources Division, West Coast Region, NOAA Fisheries
Shannon Bettridge, Chief, Marine Mammal and Sea Turtle Conservation Division, Office of Protected Resources, NOAA Fisheries

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