



MARINE MAMMAL COMMISSION

31 May 2022

Mr. Jon Kurland
Assistant Regional Administrator for Protected Resources
Alaska Regional Office, National Marine Fisheries Service

ATTN: Records Office

Dear Mr. Kurland;

The Marine Mammal Commission (the Commission) has reviewed the National Marine Fisheries Service's (NMFS) request for information (87 Fed. Reg. 17991) on the North Pacific right whale (*Eubalaena japonica*) for use in a 5-year review of the species' status under the Endangered Species Act (ESA) of 1973, as amended. The announcement requests information on status, threats and recovery that has become available since the last North Pacific right whale status review (NMFS 2017). The Commission herein responds by addressing how the listing criteria relate to the status of the North Pacific right whale. In addition, the Commission, in the publications cited herein, points NMFS to relevant studies that have been published in the last five years. Finally, the appendix to this letter lists recent and ongoing right whale studies funded by the Commission.

As discussed below, the status review of the North Pacific right whale should be straightforward. NMFS has recognized western and eastern populations of North Pacific right whales, with different histories, population sizes and exposure to anthropogenic threats. The 2017 review identified small population size, lack of critical information and several potential threats to the species as the reasons for retaining the species' 'endangered' status, with the eastern population considered to be "critically endangered." Several factors spelled out in Section 4(a)(1) of the ESA are particularly germane to making an 'endangered species' determination for the North Pacific right whale. As little has apparently changed with respect to what is known about North Pacific right whales and the threats they face, the Commission expects that NMFS will continue again to retain the species' 'endangered' status.

In the Commission's estimation, the small number of individuals in the two populations, and especially the very small number of known females in the eastern population, is the greatest risk to the species. Ship strikes and entanglements, although poorly documented, are likely the most immediate serious anthropogenic threats. Lesser or less immediate potential direct and indirect anthropogenic threats include noise from ships, climate change, energy development, pollution, and harmful algal blooms. In addition, the Commission has concluded that existing regulatory mechanisms are inadequate as they fail to provide precautionary mitigative measures that would reduce the likelihood of deaths and serious injuries due to entanglements and ship strikes.

Background

Historical whaling, primarily in the 19th century (Brownell et al. 2001, Scarff 2001, Josephson et al. 2008a, b), and illegal whaling by the Soviet Union in the 1960s (Ivashchenko and Clapham

2012, Ivashchenko et al. 2017) killed tens of thousands of North Pacific right whales. Today, remnant populations can be found on feeding grounds during the summer and fall. In the western North Pacific, right whales are found in the Sea of Japan and Sea of Okhotsk, and off eastern Kamchatka and the Kuril and Commander Islands (Matsuoka et al. 2014; Ovsyanikova et al. 2015; Sekiguchi et al. 2014; Matsuoka et al. 2018; Filatova et al. 2019, 2022; Matsuoka et al. 2022). In the eastern North Pacific, they occur primarily in the southeastern Bering Sea and northern Gulf of Alaska, mostly near Kodiak Island (Mellinger et al. 2004, Zerbini et al. 2006, Wade et al. 2006, 2011a, b; Rone et al. 2012, Širović et al. 2015, Rone et al. 2017, Matsuoka et al. 2021, Rice et al. 2021). Based on photo-ID, genetic, and historical and current distribution data, it appears that the right whales in the western and eastern North Pacific belong to separate populations (Brownell et al. 2001, Clapham et al. 2004, Gregr 2011, LeDuc et al. 2012). Estimates of the abundance of the western population range from 100 to 900 (Brownell et al. 2001). Considering the uncertainty associated with these estimates, Brownell et al. (2001) suggested that western North Pacific right whales “may number at least in the low hundreds.” In the late 2000s, following three surveys, abundance in the eastern Bering Sea was estimated at 25-31 whales (Marques et al. 2011, Wade et al. 2011b), with a few more occurring in the Gulf of Alaska (Wade et al. 2011a, Rone et al. 2017). Occasional recent sightings, occurring mostly from January to May, in the Hawaiian Islands and off the western and eastern North Pacific south of 40°N (Salden and Mickelson 1999, Brownell et al. 2001, Kennedy et al. 2012) suggest that North Pacific right whales still migrate between high-latitude summer/foraging grounds and low-latitude wintering grounds. However, a lack of presence of calves in the whaling records or sightings in these more current records leaves the location of their calving/nursery grounds a mystery (Scarff 1986, 1991; Brownell et al. 2001; Clapham et al. 2004; Sheldon et al. 2005, Josephson et al. 2008a). Given that so little is known about the western population and because NMFS is primarily responsible for the conservation and recovery of the eastern population, the comments below are confined to the latter.

Extinction Risk and Factors Impeding Recovery

The extremely small size of the eastern population puts it at a high risk of extirpation due to demographic and genetic effects, as well as, catastrophic events. Biopsy sampling of individuals encountered during surveys in the Bering Sea found a highly skewed sex ratio (LeDuc et al. 2012, Wade et al. 2011b). Of 28 known-sex whales, just eight were females (Wade et al. 2011b). Thus, the population is likely at the edge of extirpation, and the loss of even a single female would have serious consequences for the population. The potential biological removal level (PBR) for eastern North Pacific right whales is 0.05, which indicates that the population cannot recover if more than one whale dies from anthropogenic causes every 20 years (NMFS 2021).

Experience with the North Atlantic right whale (*Eubalaena glacialis*) demonstrates that right whales are particularly susceptible to ship strikes, which often result in serious injury or death (Vanderlaan and Taggart, 2007). Based on what is known concerning the seasonal movements of other right whale species and populations, eastern North Pacific right whales would be expected to migrate to lower latitudes in winter (Brownell et al. 2001, Scarff 2001), although it is possible that they remain, and even give birth and nurse their young, far from land (Scarff 1991, Brownell et al. 2001, Clapham et al. 2004). To leave and return to the Bering Sea, the whales must use the Aleutian Island passes or transit between the western end of the Aleutians and the Commander Islands. Unimak Pass, the eastern most pass, may be an important route for migrating right whales (NMFS

2017). Because this pass is just 18.5 km wide at its narrowest point and is on a heavily trafficked great-circle shipping route between North America and Asia, it creates a ‘choke-point’ that may be especially risky for migrating large whales (Silber et al. 2021). Acoustic sampling has determined that eastern North Pacific right whales are present in Unimak Pass during December, January, and February (Wright et al. 2018), and a fisherman reported at least two right whales foraging near the surface just to the northeast of the pass in February 2022.¹ In 2012, roughly 4,600 deep draft, high-speed commercial vessels transited Unimak Pass on the North Pacific Great Circle Route (Fletcher et al. 2016). Another 1,700 local vessels, mostly fishing boats, used the pass during that same period. Totalling these gives an average of nearly 17 vessels transiting the pass per day. Regardless of whether the whales transit Unimak Pass or other Aleutian passes, or instead pass round the western end of the Aleutian Chain, they must cross multiple large-vessel shipping routes that run between North America and Asia. With the global increase in commercial shipping, combined with the loss of sea ice and increased human activities in the Arctic (Hauser et al. 2018), vessel traffic through Unimak Pass has increased since 2012 and can be expected to increase substantially in the foreseeable future. There is no reason to believe that eastern North Pacific right whales are any less susceptible than North Atlantic right whales to ship strikes.

North Atlantic right whales also are highly susceptible to entanglement in gillnet and trap fishing gear. Knowlton et al. (2012) found that 83 percent of all known North Atlantic right whales bear scars indicative of entanglement. During the period 2014-2018, 30 North Atlantic right whales are known to have been killed or seriously injured due to entanglement in trap/pot or gillnet gear out of a population of 383-473, or 1.3-1.5 percent of the population per year (Henry 2022). Because most deaths at sea are not detected, the actual number killed is likely three times greater (Pace et al. 2021), or 3.8-4.7 whales per year. Several cases of entanglement of North Pacific right whales have been reported since the early 1900s (Brownell et al. 2001, Burdin et al. 2004), with a few, mostly from the western North Pacific, in recent years (NMFS 2017). In addition, 12 percent of bowhead whales (*Balaena mysticetus*), which partially overlap in range with the distribution of eastern North Pacific right whales in the northern Bering Sea, have scarring indicative of entanglement in fishing gear (George et al. 2017). Several gillnet and trap/pot fisheries operate in the Bering Sea and Gulf of Alaska, including within the eastern North Pacific right whale critical habitat areas.

The risks faced by the population and how they affect its probability of extirpation have to be estimated quantitatively. NMFS has stated in its responses to Commission recommendations regarding stock assessments of eastern North Pacific right whales that it does not have the information necessary to conduct risk assessments relative to ship strikes and entanglements.² Nonetheless, the Commission continues to believe that an exploratory risk assessment based on reasonable assumptions, and using data from eastern North Pacific right whales augmented with data from surrogate populations of North Atlantic and southern right whales (*Eubalaena australis*), could establish useful bounds on the risk experienced by eastern North Pacific right whales from these threats.

¹ <https://www.fisheries.noaa.gov/feature-story/new-photos-may-be-first-visual-evidence-north-pacific-right-whales-feeding-bering-sea>

² For example: <https://www.govinfo.gov/content/pkg/FR-2015-08-20/pdf/2015-20502.pdf>

Inadequacy of Existing Regulatory Mechanisms

Despite urging by the Commission,³ NMFS has not yet taken significant action to mitigate the threats that shipping and fishing pose to eastern North Pacific right whales. The Commission understands that it is difficult for the agency to allocate resources when there is such limited direct evidence that eastern North Pacific right whales are dying or being seriously injured by ship strikes or entanglement in fishing gear. Because of the remoteness of the waters occupied by the whales, carcasses or injured whales would rarely be detected. This however should not be an excuse for inaction given that the eastern population could be extirpated without either of these types of events ever being observed or detected within US waters. Occasional surveys are conducted, and acoustic data are collected, but survey coverage is so sparse and there are such long delays in the recovery and analysis of the acoustic data, that a population decline could easily be missed. With fewer than ten females remaining, the population's reproductive potential could dwindle to near zero in a decade without being detected. Thus, the Commission believes that NMFS should act on the reasonable assumption that, by analogy to the North Atlantic right whale, eastern North Pacific right whales are at a greater than negligible risk from fatal ship strikes and entanglements, and take steps to mitigate those threats based on the best available science and expert assessment.

In summary, the Commission supports NMFS reaffirming the 'endangered' status of the North Pacific right whale under the ESA because, at a minimum, 1) the species' abundance is dangerously low, especially for the eastern population, and 2) measures designed to mitigate the impacts of ship strikes and entanglements in fishing gear, which could jeopardize the continued existence of the eastern population, are lacking. The Commission is aware that the Alaska Region and Fisheries Science Center are working to understand the risks faced by eastern North Pacific right whales and to promote their recovery, but are severely hampered by insufficient funding. The Commission urges NOAA Fisheries to adequately fund critical research on eastern North Pacific right whales, and the precautionary mitigation of the most important anthropogenic threats they likely face. Based on data collected by the Commission's [Survey of Federally Funded Research](#), from 2019 through 2021 NOAA Fisheries allocated 1.1 million dollars for research on eastern North Pacific right whales, which is a small fraction of what is called for in the species' recovery plan (NMFS 2013), and only 8.7 percent of what was allocated to work on North Atlantic right whales. Funding for other 'endangered' species or species with an 'endangered' population, such as the beluga, the humpback whale and the killer whale, exceeded that for the eastern North Pacific right whale by factors of 5.5, 4.6 and 2.2 respectively. Funding for the harbor seal, which is not ESA listed, was 4.6 times greater than that for eastern North Pacific right whales. These data suggest that the problem is not a lack of funds, but rather a prioritization of other species/stocks, some of which are experiencing a much lower risk of extinction, ahead of eastern North Pacific right whales.

³ See recommendations pertaining to eastern North Pacific right whales in the following Commission letters commenting on annual stock assessment reports:

http://www.mmc.gov/wp-content/uploads/sars_comments_112211.pdf,
http://www.mmc.gov/wp-content/uploads/2012SARs_111412.pdf,
http://www.mmc.gov/wp-content/uploads/2014SARs_042915.pdf

Current Research

The references cited in this letter contain some of the most important findings to have emerged since the last 5-year review. In addition, the details of several Commission-funded projects relevant to eastern North Pacific right whales are provided in an Appendix to this letter. While many of these projects are in progress and findings have yet to be finalized, the Commission encourages NMFS to contact the principal investigators to learn more about the projects and any preliminary findings that may assist the agency in its 5-year review.

I hope this information will be helpful. Please contact me if you have questions.

Sincerely,



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

cc: Ms. Janet Coit, Assistant Administrator for Fisheries, NOAA Fisheries
Dr. Jon Hare, Director of Scientific Programs and Chief Science Advisor, NOAA Fisheries
Mr. Samuel Rauch III, Deputy Assistant Administrator for Regulatory Programs, NOAA Fisheries
Ms. Kimberly Damon-Randall, Director – Office of Protected Resources, NOAA Fisheries
Dr. Shannon Bettridge, Division Chief – Marine Mammals and Sea Turtles, Office of Protected Resources, NOAA Fisheries
Ms. Angela Somma, Division Chief – Endangered Species Conservation, Office of Protected Resources, NOAA Fisheries
Dr. Kevin Werner, Director – Alaska Fisheries Science Center, NOAA Fisheries
Dr. John Bengtson, Division Director – Marine Mammal Laboratory, Alaska Fisheries Science Center, NOAA Fisheries

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MARINE MAMMAL COMMISSION

Appendix – Commission-funded projects with relevance to North Pacific right whales. This list includes projects directly or indirectly focused on all *Eubalaena* spp., as technologies, research design, and findings may be relevant across species. A list and a brief summary of projects funded by fiscal year are available on the Commission’s [website](#).

Principal Investigator	Affiliation	Project Title	Year/Status	Output
Berchok, Catherine	Alaska Fisheries Science Center	Analysis of Existing Acoustic Data to Assess the Occurrence and Distribution of North Pacific Right Whales	2015 Closed	Associated publications: 1) Wright et al. 2018 . Acoustic detection of North Pacific right whales in a high-traffic Aleutian Pass, 2009-2015. 2) Wright et al. 2019. Acoustic detection of the critically endangered North Pacific right whale in the northern Bering Sea - Wright - 2019 - Marine Mammal Science - Wiley Online Library
Glickson, Deb	National Academies of Science	Assessment of the Cumulative Effects of Anthropogenic Stressors on Marine Mammals	2015 Closed	Report available at: Assessment of the Cumulative Effects of Anthropogenic Stressors on Marine Mammals National Academies
Rone, Brenda	Alaska Fisheries Science Center	North Pacific Right Whale Visual and Acoustic Survey in the Northwestern Gulf of Alaska	2015 Closed	Associated publication: Abundance and distribution of cetaceans in the Gulf of Alaska SpringerLink
Werner, Tim	New England Aquarium	Rope-less fishing: Testing an innovative prototype for preventing whale entanglements	2016 Closed	Final report available upon request to the Marine Mammal Commission.

Crance, Jessica	Alaska Fisheries Science Center	Acoustic detection of North Pacific right whales combined with biophysical sampling using a Sairdrone	2016 Closed	Report available at: Sairdrone-2017-MMC-Final-Report.pdf Associated publication: Song production by the North Pacific right whale, <i>Eubalaena japonica</i>. The Journal of the Acoustical Society of America: Vol 145, No 6 (scitation.org)
Parks, Susan	Syracuse University	Southern right whales as a model system to investigate the vocal behavior of North Pacific right whale mother-calf pairs	2017 Closed	Associated publication: Animal-borne tags provide insights into the acoustic communication of southern right whales (<i>Eubalaena australis</i>) on the calving grounds: The Journal of the Acoustical Society of America: Vol 147, No 6 (scitation.org)
Siemann, Liese	Coonamessett Farm Foundation, Inc.	Development and testing of an inexpensive GPS radio buoy system for early notification of marine mammal entanglements	2017 Closed	Final report available upon request to the Marine Mammal Commission.
Wilson, Robert	Greater Farallones Association	Reducing Whale Strikes through Industry Engagement	2018 Closed	Final report available upon request to the Marine Mammal Commission.
Werner, Tim	New England Aquarium	New and Immediate research priorities to inform gear modification proposals for the 2019 North Pacific Right Whale Take Reduction Team Meeting	2019 In-progress	Final report pending completion of project.
Carver, Michael	Greater Farallones Association	Best Management Practices for Reducing Ship Strikes in the San Francisco Bay Region	2020 Closed	Final report available upon request to the Marine Mammal Commission.
Knowlton, Amy	New England Aquarium Corporation	New England Aquarium: Evaluating the efficacy of using broad-scale ship speed restrictions in the U.S. East Coast Exclusive Economic Zone for reducing large whale mortalities	2020 In-progress	Final report pending completion of project.

Redfern, Jessica	New England Aquarium Corporation	Evaluating the utility of Protected Species Observer data to address cetacean management and conservation	2020 In-progress	Final report pending completion of project.
Cubaynes, Hannah	British Antarctic Survey	Whales from space: Designing a standardized workflow to annotate whales and confounding features in very high resolution satellite images to assist the development of automated whale detection systems	2021 In-progress	Final report pending completion of project.
Johnson, Hansen	New England Aquarium	Advancing whale conservation and outreach with sustainable infrastructure for WhaleMap	2021 In-progress	Final report pending completion of project.
Newsome, Seth	University of New Mexico	Migratory patterns and overwintering areas of the world's rarest whale, the North Pacific right whale (<i>Eubalaena japonica</i>)	2021 In-progress	Final report pending completion of project.
Sawicki, Kim	Sustainable Seas Technology, Inc.	Design for an International Virtual Fishing Gear Marking System to Reduce Whale Entanglements	2021 In-progress	Final report pending completion of project.
Wells, Greg	National Marine Sanctuary Foundation	Preventing Whale Entanglements through Gear Innovations in the California Commercial Dungeness Crab Fishery	2021 In-progress	Final report pending completion of project.