



By Regular and Electronic Mail

April 10, 2009

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Re: Taking and Importing Marine Mammals; U.S. Navy Training in the Northwest Training Range Complex

Dear Mr. Payne:

On behalf of the Natural Resources Defense Council (“NRDC”), International Fund for Animal Welfare, Ocean Futures Society, and Jean-Michel Cousteau, and on behalf of our millions of members and activists, thousands of whom reside in Washington, Oregon and Northern California, I am writing to submit comments and information regarding the U.S. Navy’s (“Navy”) request for authorization to take marine mammals incidental to training, research, development and testing activities in its Northwest Training Range Complex (“NWTRC”). See 74 Fed. Reg. 10557 (Mar. 11, 2009); see also “Request for Letter of Authorization for the Incidental Harassment of Marine Mammals Resulting from Navy Training Activities Conducted within the Northwest Training Range Complex,” available at http://www.nmfs.noaa.gov/pr/pdfs/permits/nwtrc_loa.pdf (Sept. 2008) (“LOA Application”). Please include these comments and attachments in the administrative record.¹

At the outset, we request that the National Marine Fisheries Service (“NMFS”) complete its review of the Navy’s mitigation measures before considering the Navy’s LOA Application. On January 23, 2009, NMFS announced that it would conduct a comprehensive 120-day review of measures to reduce environmental harm from the Navy’s use of mid-frequency sonar in training exercises and then report the results to the Council on Environmental Quality. We strongly urge NMFS to complete this review, and implement additional mitigation measures to ensure the “least practicable adverse impact” on marine mammals as required by the Marine Mammal Protection Act (“MMPA”, 16 U.S.C. § 1361 et seq.), before even considering the Navy’s LOA application.

Activities in the NWTRC would pose significant risk to whales, fish, and other wildlife that depend on sound for breeding, feeding, navigating, and avoiding predators—in short, for their survival. Many of the exercises proposed would employ mid-frequency active sonar, which has been implicated in mass injuries and mortalities

¹ See attached NRDC comment letter on the Navy’s Draft Environmental Impact Statement for the NWTRC dated March 10, 2009 and Appendix D to that letter.

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of whales around the globe.² The same technology is known to affect marine mammals in countless other ways, inducing panic responses, displacing animals, and disrupting crucial behavior such as foraging. The Navy's preferred alternative in the NWTRC would also affect fisheries and essential fish habitat, damage hard-bottom habitat, and release a variety of hazardous materials – such as thousands of rounds of spent ammunition and unexploded ordnance containing chromium, chromium compounds, depleted uranium and other hazardous materials – into coastal waters. The Navy's preferred alternative could also cause entanglements and ship collisions with marine wildlife, increase the risk of oil spills and negatively affect the endangered Southern Resident killer whale.

Given these risks, it is unacceptable that Navy's LOA Application – and the Navy's Draft Environmental Impact Statement ("DEIS") for the NWTRC – suffer from fundamentally flawed science and methodology. Further, the mitigation measures proposed by the Navy do not cure the fundamental defects of its preferred alternative, which cannot be fixed without seasonal and geographic exclusions. The Navy's DEIS should have included meaningful mitigation measures to reduce the harmful impacts of sonar on marine mammals. Unless and until the Navy adopts meaningful mitigation measures, including spatial and temporal exclusions, affected species – particularly the Southern Resident killer whale – will suffer far more than a "negligible impact." When considering the Navy's LOA Application, NMFS must, at a minimum, impose rigorous seasonal and geographic mitigation measures to ensure the "least practicable adverse impact" on marine mammals as required by the MMPA. At a minimum, such measures should include protecting the following areas from sonar use:

- All inshore waters of Greater Puget Sound (including the Strait of Juan de Fuca and Strait of Georgia)
- Lower Continental Slope waters between 500 and 2,000 meter depth contours
- Outer coastal waters between the shoreline and the 100 meter depth contour
- Certain canyons and banks off Northern Washington State and Oregon
- The Olympic Coast National Marine Sanctuary

I. The NWTRC Activities Will Have Significant Impacts on Species and Habitat

The Navy's NWTRC provides an arena for intensive, year-round exercises that employ active sonar as well as a battery of other acoustic sources and explosives detonations. Over 122,440 square nautical miles, the range engulfs the waters off Washington, Oregon and northern California, including the Olympic Coast National Marine Sanctuary and critical habitat for the endangered Southern Resident killer whale. The Navy's preferred alternative would dramatically increase the amount of training in the NWTRC, including "range enhancements" such as the development of an underwater training minefield, Portable Undersea Tracking Range, and air and surface target services. A battery of acoustic sources would be used in NWTRC training exercises, deployed from surface ships, submarines, aircraft, training targets, and range sources. See LOA Application at Table 1-1. Among the high-intensity active sonars to be employed are the two systems that caused 16 whales to strand in the Bahamas in 2000 following a Navy exercise and are believed to have been involved in several other mass mortalities.³ Those two systems, known as SQS-53 and SQS-56, would emit sound on the proposed range at nominal source levels of 235 dB and 225 dB re 1 μ Pa respectively.

That same sonar caused an incident in Haro Strait in May 2003 when the U.S. Navy vessel USS *Shoup* conducted a mid-frequency sonar exercise while passing between Washington's San Juan Islands and Canada's Vancouver Island. According to one contemporaneous account, "[d]ozens of porpoises and killer whales seemed to stampede all at once . . . in response to a loud electronic noise echoing through" the Strait.⁴

² Military sonar generates intense sound that can induce a range of adverse effects in whales and other species – from significant behavioral changes to injury and death. The most widely reported and dramatic of these events are the mass strandings of beaked whales and other marine mammals that have been associated with military sonar use. A brief summary of the stranding record appears in Appendix B of the attached NRDC letter on the Navy's NWTRC DEIS.

³ Department of Commerce & Secretary of the Navy, Joint Interim Report: Bahamas Marine Mammal Stranding Event of 15-16 March 2000 at iii, 16, 23 (2001).

⁴ Christopher Dunagan, [Navy Sonar Incident Alarms Experts](#), Bremerton Sun, May 8, 2003.

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Several field biologists present at the scene reported observing a pod of endangered Southern Resident killer whales bunching near shore and engaging in very abnormal behavior consistent with avoidance, a minke whale “porpoising” away from the sonar ship, and Dall’s porpoises fleeing the vessel in large numbers.⁵ Eleven harbor porpoises—an abnormally high number given the average stranding rate of six per year—were found beached in the area of the exercise.⁶

Despite these documented effects on Southern Resident killer whales, porpoises and other marine mammals, the Navy claims that “the incidental harassment of marine mammals associated with the proposed Navy action will have no more than negligible impacts.” LOA Application at ES-3. Completely ignoring the Haro Strait incident, the Navy disingenuously claims that “the physical factors believed to contribute to the likelihood of beaked whale strandings are not present, in their aggregate, in the NWTRC.” LOA Application at ES-4. The Navy’s blithe analysis also ignores the importance of essential habitat, such as the Olympic Coast National Marine Sanctuary and critical habitat for the endangered Southern Resident killer whales.

A. Olympic Coast National Marine Sanctuary

The NWTRC almost completely engulfs the Olympic Coast National Marine Sanctuary (“NMS”), a region of extraordinary biological diversity. Twenty-nine species of marine mammals occur in the Olympic Coast NMS, including eight threatened or endangered species of whales, otters and pinnipeds. The sanctuary provides important regular foraging habitat for humpback and killer whales, including the endangered Southern Resident killer whale population (see below). Gray whales use the sanctuary during biannual migrations between calving and feeding areas, and a small, possibly distinct, group of gray whales known as “summer residents” use the area for feeding every summer. Additional cetacean species that have been observed in the waters of the sanctuary include: minke whales, fin whales, sei whales, sperm and pygmy sperm whales, blue whales, Hubb’s beaked whales, Cuvier’s beaked whales, Baird’s beaked whales, Stejneger’s beaked whales, Risso’s dolphins, false killer whales, common dolphins, northern right whale dolphins, Pacific white-sided dolphins, Dall’s porpoises, and harbor porpoises. Sea otters and pinnipeds such as Steller and California sea lions, harbor seals and elephant seals use near-shore areas within the sanctuary, haul out on land at a number of locations along the coast, and use deeper waters for foraging.

A recent NOAA report specifically identified both military activities and underwater noise pollution as two of several emerging threats to the Olympic Coast NMS.⁷ The report recognizes that noise pollution has the potential to compromise habitat quality for the marine mammals, fish and other wildlife that inhabit the sanctuary. In particular, it finds that “an increase in Navy activity or areas of operation, if not properly controlled, could have potential to disturb the seabed, introduce pollutants associated with test systems, and produce sound energy that could negatively alter the acoustic environment within the sanctuary.”⁸ Indeed, there is a long history of incompatibility between increased naval exercises in the Olympic Coast NMS and preservation of the unique characteristics and species that led to its designation. In the mid-1990’s, the Navy finally ended its bombing exercises at Sea Lion Rock after a protracted battle with wildlife advocates. Neither the LOA Application nor the DEIS recognize that episode. Further they do not include any specific mitigation measures or details about the Navy’s planned operations within the sanctuary that would prevent a similar

⁵ NMFS, Assessment of acoustic exposures on marine mammals in conjunction with USS Shoup Active Sonar Transmissions in the Eastern Strait of Juan de Fuca and Haro Strait, Washington, 5 May 2003 at 6, 9 (2005).

⁶ NMFS, Preliminary Report: Multidisciplinary Investigation of Harbor Porpoises (*Phocoena phocoena*) Stranded in Washington State from 2 May – 2 June 2003 Coinciding with the Mid-Range Sonar Exercises of the USS Shoup 53-55 (2004) (conclusions unchanged in final report). Unfortunately, according to the report, freezer artifacts and other problems incidental to the preservation of tissue samples made the cause of death in most specimens difficult to determine; but the role of acoustic trauma could not be ruled out. Id.

⁷ NOAA, Olympic Coast National Marine Sanctuary, Condition Report 2008 (September 2008), available at http://sanctuaries.noaa.gov/library/national/oc_conditionreport08.pdf.

⁸ Id. at 31.

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situation from developing in the future.

In addition to marine mammals, the Olympic Coast NMS includes habitat for abundant fish and invertebrate species, including many commercially important fish and shellfish. Thirty species of rockfish (including 13 species of concern in Washington state), as well as Pacific halibut, herring, Pacific cod, Pacific whiting, lingcod, sablefish, Dungeness crab, razor clams, and five species of Pacific salmon (Chinook, sockeye, pink, chum and coho) inhabit sanctuary waters.⁹ Threatened species in the sanctuary include the Olympic Coast populations of Ozette sockeye salmon and bull trout. Unique assemblages of cold-water corals and sponges, including gorgonians, stony corals and giant cup corals, have been found in the deeper waters of the sanctuary.

Despite the abundance of marine mammals, fish and invertebrates, as well as habitat for those species, the LOA Application and DEIS dismiss or improperly minimize any significant risk to marine mammals and fish in this area. Given the federally-protected status of the sanctuary and its importance to a host of endangered and threatened wildlife, the Olympic Coast NMS should be excluded from training exercises.

B. Southern Resident Killer Whales

Despite the Navy's claims otherwise, sonar training exercises in the NWTRC will have far more than a negligible impact on the Southern Resident killer whale. LOA Application at 162. The NWTRC overlaps with critical habitat designated for Southern Resident killer whales in Puget Sound, as well as those coastal waters vital to the whales' survival and recovery that were improperly excluded from NMFS' critical habitat designation. This population is recognized as a Distinct Population Segment and protected under the Endangered Species Act. To that end, we must protest the Navy's combining all stocks of killer whales for modeling exposures. LOA Application at 162.

In fact, the Distinct Population Segment of Southern Resident killer whales declined by nearly 20% between 1996 and 2001. The Southern Residents remain at high risk. Since they were listed as endangered, the population has declined further to a mere 87 individuals in 2007 and another 7 whales died in 2008.¹⁰ Several anthropogenic factors have been implicated in the decline, including high contaminant loads of PCBs, PBDEs and other toxics detected in blubber samples; declining prey availability as salmon (the whales' primary food source) have been decimated by freshwater habitat destruction, harmful hatchery practices, and historically poor harvest management; effects from vessels; and noise pollution.¹¹ NMFS recognizes acoustic effects and oil spills as among the principle potential threats facing this population, and in its Final Recovery Plan proposed to "continue agency coordination and use of existing ESA and MMPA mechanisms to minimize potential impacts from anthropogenic sound."¹²

Because of the considerable uncertainty regarding the relative impacts of noise, as well as other threats, any additional anthropogenic stressors to the population must be drastically reduced. Further, due to these anthropogenic factors, the Southern Residents are under tremendous stress and cumulative impacts must be fully evaluated. In particular, any additional incursions or increased activity both within and outside designated critical habitat must be carefully evaluated for impacts to the extinction probability and recovery prospects for this population. As demonstrated by the events of May 5, 2003 in the Strait of Juan de Fuca and Haro Strait, exposure to military sonar is known to disrupt the behavior of Southern Resident killer whales, and thus

⁹ Notably, habitat degradation is a contributing factor in salmon decline, making the protection of the Olympic Coast NMS all the more important.

¹⁰ See, NMFS, Summary information on 2008 Southern Resident Killer Whale births and deaths (October 28, 2008); Robert McClure, Are the orcas starving?, seattlepi.com (Oct. 24, 2008), available at http://seattlepi.nwsourc.com/local/384854_orcas25.html (noting that as salmon numbers decline, seven killer whales have died).

¹¹ NMFS, Recovery Plan for Southern Resident Killer Whales (*Orcinus orca*), (Jan. 17, 2008); See also NMFS, Draft Biological Opinion for the Long-Term Central Project and State Water Project Operations Criteria and Plan (Dec. 11, 2008).

¹² Id. at v.

particular attention is warranted to the location of any exercises involving sonar. As a recent NMFS Draft Biological Opinion noted, “observations from an event that occurred in the Strait of Juan de Fuca and Haro Strait in 2003 illustrate that mid-frequency sonar can cause behavioral disturbance.”¹³ NMFS further concluded that “[i]mpacts from [sonar] can range from serious injury and mortality to changes in behavior.”¹⁴

Yet the Navy improperly dismisses the potential impacts of Navy sonar on the endangered Southern Resident killer whale community and their endangered salmonid prey.¹⁵ In addition, the expected increase in vessel traffic and training actions raises the risk of oil or hazardous waste spills both from Navy vessels and from accidents involving other vessels.

To ensure the least practicable adverse impact, NMFS should exclude critical habitat for the Southern Resident killer whales (i.e., the waters of Greater Puget Sound) from Navy training exercises.

For the reasons set forth above, we strongly urge NMFS to complete its review of the Navy’s mitigation measures before considering the Navy’s LOA Application. However, should NMFS move forward with the Navy’s LOA Application, it must ensure that take estimates, cumulative impacts analysis, and mitigation measures are implemented to effect the least practicable adverse impact on marine mammals and other marine life.

II. NMFS Must Prescribe “Methods and Means” of “Effecting the Least Practicable Adverse Impact” on Marine Mammals

If NMFS decides to commence rulemaking before completing its review of the Navy’s mitigation measures, it must take several steps when developing its proposed rule to satisfy its obligations under the MMPA. As an initial matter, NMFS must reject the Navy’s take analysis, relying instead on estimates developed from a review and understanding of *all* the scientific literature on behavioral and other impacts to marine mammals from intense sound, not just the scientific literature that supports the Navy’s position. For example, in its development of thresholds for physiological and behavioral effects, the Navy disregards a great deal of relevant information adverse to its interests, uses approaches and methods that are unacceptable in the scientific community, and ignores whole categories of impacts. Instead, NMFS should formulate its own estimates of the impacts from the Navy’s proposed activities and ensure that those estimates are not at odds with underlying data. Unlike the Navy, NMFS should also subject its marine assessment data and analytical procedures used to estimate risks to expert peer review. Only with an accurate understanding of the impacts of the Navy’s proposal can NMFS adequately designate the means of effecting the least practicable adverse impact on marine mammals from the proposed range.

Rejecting the Navy’s analysis, which cursorily dismisses cumulative impacts, NMFS should also analyze and include the cumulative impacts from the training activities when formulating the means of effecting the least practicable adverse impact on marine mammals from the training range. In its DEIS, the Navy concludes that the sum of the various environmental impacts from the NWTRC will not be significant, but fails to provide support for this assertion or even to explain what the sum of these impacts is expected to be. Its LOA Application is equally lacking in its analysis of cumulative impacts. Spending two short paragraphs on “long-term effects” (LOA Application at 107), the Navy admits that there may be effects that occur as a result of

¹³ See NMFS, Draft Biological Opinion for the Long-Term Central Project and State Water Project Operations Criteria and Plan at 111 (Dec. 11, 2008).

¹⁴ Id. at 110.

¹⁵ Declines in salmon abundance have contributed to the decline of the Southern Resident killer whale. As a recent NMFS draft Biological Opinion acknowledges, “When prey is scarce, whales must spend more time foraging than when it is plentiful. Increased energy expenditure and prey limitation could lead to lower reproductive rates and higher mortality rates. Food scarcity could cause whales to draw on fat stores, mobilizing contaminants stored in their fat and affecting reproduction and immune function.” See NMFS, Draft Biological Opinion for the Long-Term Central Project and State Water Project Operations Criteria and Plan at 107 (Dec. 11, 2008).

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repeated use of sonar, but nonetheless asserts that all impacts are short-term in nature and would not result in long-term significant impacts. The Navy's claims have been disputed by NMFS itself, which characterized the behavioral response during the Haro Strait incident as "profound," and by the scientific community, which noted zero sightings for nearly two years of one species of beaked whales in an area of the Bahamas where sonar caused a mass stranding.¹⁶ NMFS must account for the cumulative impact of sonar activity per year before allowing any incidental take of marine mammals.

Finally, NMFS should require the Navy to utilize significant protective measures when conducting exercises. In its comments on the Navy's DEIS, NRDC identified spatial and temporal exclusions as well as 29 measures that the Navy should adopt to help protect marine mammals from sonar's harmful impacts. NMFS similarly should analyze and require these measures as means of effecting the least practicable adverse impact on marine mammals from the Navy's activities. The measures range from operational requirements to adequate monitoring, with the most important measures being the following geographic and seasonal exclusions:

- All inshore waters of Greater Puget Sound (including the Strait of Juan de Fuca and Strait of Georgia)
- Lower Continental Slope waters between 500 and 2,000 meter depth contours
- Outer coastal waters between the shoreline and the 100 meter depth contour
- Certain canyons and banks off Northern Washington State and Oregon
- The Olympic Coast National Marine Sanctuary

III. Conclusion

For the reasons detailed above, we urge NMFS to finish its review of the Navy's mitigation measures before considering the Navy's LOA Application. Alternatively, if NMFS commences rulemaking, it should properly analyze estimated take numbers, account for cumulative impacts, and impose meaningful mitigation measures such as seasonal and geographic exclusions.

Sincerely,



Taryn Kiekow
Staff Attorney

Encl.: NRDC comments to the Navy on its NWTRC DEIS

¹⁶ Parsons, E.C., et al., Navy sonar and cetaceans: just how much does the gun need to smoke before we act?, 56 Marine Pollution Bulletin 1248-1257 (2008).