



February 16, 2021

Submitted via www.GOAEIS.com

Naval Facilities Engineering Command Northwest
Attention: GOA Supplemental EIS/OEIS Project Manager
1101 Tautog Circle, Suite 203
Silverdale, WA 98315-1101

Re: Comments on the 2020 Gulf of Alaska Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement

On behalf of the Center for Biological Diversity, Eyak Preservation Council, Native Conservancy, NRDC, and Alaska Marine Conservation Council; we are writing to urge the Navy to ensure robust measures to protect marine mammals, fish, and other wildlife from its testing and training activities in the Gulf of Alaska.

The Navy proposes to conduct air and sea warfare training in the Gulf of Alaska that will include active sonar; vessel and aircraft traffic; weaponry — guns, missiles, torpedoes, rockets; and electronic warfare activities. The proposed activities will harm and harass marine life. Sonar and explosions can deafen, disturb, and displace marine mammals.

While we recognize the importance of national security and the Navy's training needs, we urge the Navy to adopt robust mitigation measures to protect sensitive marine life, fisheries, and subsistence needs.

1. The Navy's Supplemental 2020 EIS/OEIS Is Inadequate

NEPA's fundamental purposes are to guarantee that: (1) agencies consider the environmental consequences of their actions before these actions occur; and (2) agencies make the relevant information available to the public so that it may also play a role in both the decision-making process and the implementation of that decision.¹ NEPA, the nation's "basic national charter for protection of the environment," seeks to "insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken," and to "help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment."² To assure transparency and thoroughness, agencies also must "to the fullest extent possible...[e]ncourage and facilitate public

¹ See, e.g. 40 C.F.R. § 1500.1 (2019). These comments refer to the regulations in effect during the preparation of this draft Supplemental EIS/OEIS; we maintain that the recent revisions to the NEPA regulations are unlawful and are under review pursuant to Executive Order, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (Jan. 20, 2021).

² 40 C.F.R. § 1500.1(a)-(c).

involvement” in decision-making.³ NEPA requires federal agencies to prepare an EIS for all “major federal actions significantly affecting the quality of the human environment.”⁴ The public must be given adequate information about the project and its environmental effects to be able to provide input prior to the issuance of the permits. Moreover, the Navy cannot avoid its obligation to conduct a comprehensive review of the direct, indirect, and cumulative impacts of its action, and to analyze a reasonable range of alternatives and mitigation, by relying on the regulatory amendments recently issued. The new regulations are unlawful and, in any event, cannot trump the agency’s statutory obligations to fully consider the direct, indirect, and cumulative effects of its actions and analyze alternatives and mitigation.

a. The Navy has failed to consider a reasonable range of alternatives

The Navy’s draft EIS/OEIS fails to analyze a reasonable range of alternatives. EISs must include a reasonable range of alternatives,⁵ and provide “a clear basis for choice among options by the decisionmaker and the public.”⁶ NEPA requires a “detailed statement” of “alternatives to the proposed action.”⁷ The purpose of this section is “to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means.”⁸ The alternatives analysis must “rigorously explore and objectively evaluate all reasonable alternatives.”⁹ While an agency is not obliged to consider every alternative to every aspect of a proposed action, the agency must “consider such alternatives to the proposed action as may partially or completely meet the proposal’s goal.”¹⁰ Here, the Navy examined only the preferred alternative and the no-action alternative, which is insufficient to ensure informed decision-making. For example, the Navy should have examined an alternative with additional mitigation that would better protect marine wildlife from active sonar, ship strikes, and weapons use.

b. The environmental impacts analysis fails to take a hard look at the impacts the training activities will have on marine life and habitat and must be revised

These proposed training activities 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. They will also adversely affect fisheries and the communities that depend on the Gulf of Alaska for their livelihoods.

Preparation of a revised draft Supplemental EIS/OEIS is necessary, before a decision can be made, because the EIS/OEIS has not considered new information discussed below, nor has it fully and fairly evaluated certain preexisting information. To proceed without such revision would be a violation of NEPA.

³ 40 C.F.R. §1500.2(d).

⁴ 42 U.S.C. § 4332(2)(C); see also 40 C.F.R. § 1501.4.

⁵ 42 U.S.C. § 4332(2)(C)(iii), (E), 40 C.F.R. § 1508.9(b).

⁶ 40 C.F.R. § 1502.14.

⁷ 42 U.S.C. § 4332(2)(c).

⁸ *Environmental Defense Fund v. Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974).

⁹ 40 C.F.R. § 1502.14.

¹⁰ *Nat. Resources Defense Council, Inc. v. Callaway*, 524 F.2d. 79, 93 (2d Cir. 1975).

Take Is Underestimated

The Navy improperly discounts the adverse impacts of behavioral responses to sonar and explosions. Interference with essential marine mammal behaviors can reduce fitness, impede foraging, displacement from preferred habitat, and reduce breeding and reproduction with population level effects. The Navy has likely underestimated the number of behavioral impacts by arbitrarily determining cut-off distances and eliminating those potential takes of marine mammals from the estimated take. EIS/OEIS at Tables 3.8-8 – 3.8-10.

Additionally, in its analysis of marine mammal impacts, the Navy (1) has based its estimates of mortality and non-auditory injury from explosives on an averaging of risk, inconsistent with the probability standards in the Marine Mammal Protection Act; (2) has applied erroneous and non-conservative criteria in its estimation of hearing loss; (3) has largely based its behavioral response estimates for odontocetes on captive studies of a relatively unresponsive species (bottlenose dolphins) and disregarded a number of relevant studies on wild marine mammals; and (4) has failed to account in its behavioral response functions to heightened response to dipping sonar. These problems, including the improper application of “cut-off” distances, are general to the third round of NEPA review that the Navy has undertaken for its offshore range activities. A more detailed response can be found in the Attachment to this comment letter, at 9-18.¹¹

The Navy must also continue to obtain better data about the density of marine mammals in the TMAA, and it should incorporate a conservative approach and address the uncertainty in its modeling. It must also better address group sizes for marine mammal take estimates.

North Pacific Right Whales

The North Pacific right whale is one of the most critically endangered whales in the world. The population hovers around 26–31 individuals.¹² Any removal of one of these animals would be detrimental to the viability of the population. The TMAA is only 16 nautical miles west of critical habitat for the North Pacific right whale. While North Pacific right whales have not been well studied, there is now more information about their habitat from monitoring. North Pacific right whales are present in the Gulf of Alaska year-round,¹³ and monitoring has indicated that they occur in the TMAA.¹⁴

¹¹ Comments from NRDC et al. to Naval Facilities Engineering Command Northwest (June 12, 2019) (comments on the Navy’s Draft Supplemental EIS for Northwest Training and Testing), appended to this comment letter as Attachment A.

¹² Muto, M. et al., Alaska Marine Mammal Stock Assessments, 2019: NORTH PACIFIC RIGHT WHALE, NOAA-TM-AFSC-404 (2020).

¹³ Wright, D.L., et al., Acoustic detection of North Pacific right whales in a high-traffic Aleutian Pass, 2009–2015, 37 *Endang. Species. Res.* 77-90 (2018).

¹⁴ Rice, A.C., et al., Passive Acoustic Monitoring for Marine Mammals in the Gulf of Alaska Temporary Maritime Activities Area September 2017 to September 2019, Interim Report (2019).

The best available science indicates that right whales respond to low levels of acoustic alarms between 133-148 dB re 1 μ Pa by ceasing foraging dives.¹⁵ This will adversely affect right whales through feeding disruption and energetic costs; additionally, by remaining near the surface, they become more vulnerable to a collision with vessels. Right whales in the North Atlantic are known to experience substantial mortality from ship strikes, and the training activities include vessel traffic that would cut through the North Pacific right whale's range habitat.¹⁶ The serious injury or death of even one whale from this population—particularly if it is a reproductive-aged female—would have catastrophic consequences for species survival and recovery.¹⁷

The Navy must also consider the risks of vessel noise on the species. Chronic stress in North Atlantic right whales is associated with exposure to low frequency noise from ship traffic. Specifically, “the adverse consequences of chronic stress often include long-term reductions in fertility and decreases in reproductive behavior; increased rates of miscarriages; increased vulnerability to diseases and parasites; muscle wasting; disruptions in carbohydrate metabolism; circulatory diseases; and permanent cognitive impairment.”¹⁸ These findings have led researchers to conclude that “over the long term, chronic stress itself can reduce reproduction, negatively affect health, and even kill outright.”¹⁹ North Pacific right whales likely suffer in the same ways.

Blue Whales

The EIS/OEIS underestimates the behavioral responses and discounts the potential impacts on blue whales. There are fewer than 2,000 blue whales in the affected population. The National Marine Fisheries Service estimates that the removal of 2.1 blue whales would impede its conservation, and this stock is already in excess of that level between entanglements in fishing gear and ship strikes.²⁰

The endangered blue whale is adversely affected by military sonar and other mid-frequency and low-frequency anthropogenic noise. Blue whales exposed to mid-frequency sonar (with received levels of 110 to 120 dB re 1 μ Pa) are less likely to produce calls associated with feeding behavior.²¹ The Goldbogen et al. 2013 study, described in the EIS/OEIS, is particularly concerning because of the potential impacts of sonar on the essential life functions of blue whales. It found that mid-frequency sonar can disrupt feeding and displace blue whales from high-quality prey patches, significantly impacting their foraging ecology, individual fitness and

¹⁵ Nowacek, D., Johnson, M., and Tyack, P., North Atlantic right whales (*Eubalaena glacialis*) ignore ships but respond to alerting stimuli, 271 Proc. R. Soc. Lond. B 227 (2004).

¹⁶ Wright, Dana L. et al. Acoustic detection of the critically endangered North Pacific right whale in the northern Bering Sea. 35 Marine Mammal Science 311 (2019).

¹⁷ Wright 2018 (“A single death of a NPRW (especially a reproductive female) from ship strike would be a major blow to this small population.”).

¹⁸ Rolland, R. et al., Evidence that ship noise increases stress in right whales, 279 Proceedings of the Royal Society B. 2363 (2012).

¹⁹ Rolland, R. et al., The inner whale: hormones, biotoxins and parasites. In: Kraus S.D. and R.M. Rolland, (eds.). The Urban Whale: North Atlantic Right Whales at the Crossroads. Harvard University Press, Cambridge, MA (2007).

²⁰ Carretta, J. et al. Stock Assessment Report 2019: Eastern North Pacific Blue Whale (2020).

²¹ Melcón, M. L., et al., Blue Whales Respond to Anthropogenic Noise, 7 PLoS ONE e32681 (2012); Southall, B. et al., Marine Mammal Behavioral Response Studies in Southern California: Advances in Technology and Experimental Methods, 46 Marine Technology Society Journal 48–59 (2012).

population health.²² Even fairly low-received levels can have an adverse impact.²³ Mid-frequency sonar has been associated with several cases of blue whale stranding events.²⁴ Additionally, low-frequency anthropogenic noise can mask calling behavior, reduce communication range, and damage hearing.²⁵ A subsequent study with a larger data set confirmed the findings of Goldbogen that blue whales disrupt deep diving foraging behavior in response to sonar.²⁶ The researchers noted that since the acoustic disturbance interrupts foraging it can have effects on the fitness of the whales and potential population level impacts.²⁷ A new study highlights that the adverse effects depend on the context, and some blue whales exposed to brief or even weak sonar can lose an entire day of foraging.²⁸ Finally, a passive acoustic study demonstrated that exposure to mid-frequency sonar suppresses blue whale vocalizations, including, potentially, vocalizations used in foraging, over large areas of ocean.²⁹ These impacts from sonar on blue whales suggest that the action's impacts would have long-term impacts on the blue whale population.

Humpback Whales

In its SEIS/OEIS, the Navy has underestimated the potential harm to the relevant distinct population segments (DPS) of humpback whales. The stock definitions for humpback whales are woefully outdated and should match the DPSs as defined under the Endangered Species Act (ESA). In its 2016 listing determination, the National Marine Fisheries Service identified 14 DPSs— because they occur in the area, relevant here are the threatened Mexico DPS and the unlisted Hawaii DPS.³⁰ Moreover, ship-strikes and entanglements in fisheries are impeding their recovery.³¹ Additionally, new science signals that the Hawaii DPS population, which migrates to Alaska in the summer, is declining.³² Researchers report that mother-calf encounter rates dropped by more than 76 percent between 2013 and 2018.³³ Acoustic monitoring also indicated that vocalizations off Maui declined 50 percent between 2014 and 2019.³⁴

²² Goldbogen, J., et al., Blue Whales Respond to Simulated Mid-Frequency Military Sonar, 280 Proceedings of the Royal Society 20130657 (2013).

²³ Id. at 1,6.

²⁴ Id. at 2.

²⁵ Id. at 1.

²⁶ DeRuiter, S.L. et al., A multivariate mixed hidden markov model for blue whale behaviour and responses to sound exposure, 11 Annals of Applied Statistics 362–392 (2017)

²⁷ Id.

²⁸ Pirotta, E. et al., Context-dependent variability in the predicted daily energetic costs of disturbance for blue whales, 00 Conservation Physiology 1 (2021).

²⁹ Melcon, M.L. et al., Blue whales respond to anthropogenic noise, 7 PLoS ONE e32681 (2012)

³⁰ National Marine Fisheries Serv., Endangered and Threatened Species; Identification of 14 Distinct Population Segments of the Humpback Whale (*Megaptera novaeangliae*) and Revision of Species-Wide Listing, 81 Fed. Reg. 62259 (Sept. 8, 2016).

³¹ National Marine Fisheries Serv., 2019 West Coast Whale Entanglement Summary (Spring 2020).

³² Cartwright R., et al., Fluctuating reproductive rates in Hawaii's humpback whales, *Megaptera novaeangliae*, reflect recent climate anomalies in the North Pacific, 6 R. Soc. open sci.181463 (2019).

³³ Id.

³⁴ Kügler, A, et al. Fluctuations in Hawaii's humpback whale *Megaptera novaeangliae* population inferred from male song chorusing off Maui, 43 Endangered Species Research 421 (2020).

Beaked Whales

Beaked whales, which are highly sensitive to sonar, occur in the TMAA. Beaked whale strandings have a highly significant co-occurrence with military active sonar use.³⁵ The densities of beaked whales, including their groupings and locations, must be carefully considered and conservative.³⁶ The EIS/OEIS may underestimate take of these animals. Beaked whales are also sensitive at large distances. A study of Cuvier's beaked whales in Southern California exposed to mid-frequency sonar, including both hull-mounted and air-deployed, "dipping" systems, confirmed that they modify their diving behavior up to 100 km away.³⁷ This science disproves the Navy's assumption that beaked whales will find suitable habitat nearby within their small range.

Moreover, this modified diving behavior indicates disruption of feeding.³⁸ Accordingly, impacts on beaked whales could include interference with essential behaviors that will have more than a negligible impact on the species. In addition, lookouts and shutdowns do not protect beaked whales from Navy sonar because this is a deep-diving species that are difficult to see from ships. For example, "only 23 % of Cuvier's beaked whales . . . are estimated to be seen on ship surveys if they are located directly on the survey trackline."³⁹ Moreover, a recent study indicated that displacement of beaked whales from good foraging habitat could have detrimental population consequences, and researchers recommended locating sonar exercises outside of key foraging habitat and avoiding activities that disperse beaked whales into sub-optimal foraging areas.⁴⁰

Other Marine Mammals

The Gulf of Alaska hosts and maintains an additional array of vertebrate marine mammals including: sea otters, sea lions, harbor seals, Dall's, white-sided and harbor porpoises, and dolphins. The Navy must update and consider recent data regarding the impacts to these marine mammals during and after the Northern Edge military trainings in the Gulf of Alaska.

Sea Turtles

Leatherback sea turtles are critically imperiled in the Pacific. Leatherback sea turtles are sensitive to noise between 50 and 1200 Hz, responding to received levels as low as 84 dB re 1

³⁵ Simonis AE, et al., Co-occurrence of beaked whale strandings and naval sonar in the Mariana Islands, Western Pacific, 287 Proc. R. Soc. B: 20200070 (2020).

³⁶ Rone, B.K., et al., Report for the Gulf of Alaska Line-Transsect Survey (GOALS) II: Marine mammal occurrence in the Temporary Maritime Activities Area (TMAA) (2014); Yack, T.M., et al., From clicks to counts: Using passive acoustic monitoring to estimate the density and abundance of Cuvier's beaked whales in the Gulf of Alaska (GoA) (2015).

³⁷ Falcone, E.A. et al., Diving behaviour of Cuvier's beaked whales exposed to two types of military sonar, Royal Society Open Science 4(8) (2017).

³⁸ Id.

³⁹ Barlow J., Trackline detection probability for long-diving whales, Marine Mammal Survey and Assessment Methods 209-22 (1999).

⁴⁰ Benoit-Bird KJ, et al., Critical threshold identified in the functional relationship between beaked whales and their prey, 654 Mar. Ecol. Prog. Ser. 1-16 (2020).

$\mu\text{Pa-rms}$ at 300 Hz.⁴¹ Additionally, leatherback sea turtles are vulnerable to vessel strikes. The National Marine Fisheries Service completed a status review of the worldwide listing of leatherback sea turtles under the federal Endangered Species Act and found that Pacific leatherbacks are at a high risk of extinction.⁴² Importantly, the new estimate of western Pacific leatherback sea turtle abundance includes 1,277 adult female leatherbacks nesting on Bird’s Head Peninsula, the largest nesting beaches.⁴³ This estimate provided a benchmark by which to measure the continuing decline of leatherbacks, comparable to the 2007 estimate of 2,025 adult female leatherbacks nesting on Bird’s Head Peninsula.⁴⁴ This means the population has declined by a third in just under 15 years, which underscores the detrimental impact that removal of even a single turtle could have on the population.

Sea Birds

The Navy’s analysis of the activities on seabirds is deficient. The “habitat found within the TMAA supports a wide diversity of resident and migratory seabirds and waterfowl.” EIS/OEIS at 3.9-4. While the EIS/OEIS acknowledges a lack of information, it unreasonably concludes that impacts are unlikely. EIS/OEIS at 3.9-10. It must provide additional analysis of the adverse impacts on seabirds and their prey. For example, the Navy should consider new science that demonstrates seabird behavioral responses, such as startle and cessation of feeding, to underwater sonar.⁴⁵ A study of mid-frequency sonar demonstrated that murre had behavioral responses to received levels from 110 to 137 dB re 1 μPa .⁴⁶

The Navy must minimize its harm to migratory birds. The Migratory Bird Treaty Act, 16 U.S.C. § 703 et seq., makes it illegal for any person, including any agency of the Federal government, —by any means or in any manner, to pursue, hunt, take, capture, [or] kill any migratory birds except as permitted by regulation. 16 U.S.C. § 703. Congress’ exemption to the incidental take of seabirds for military activities requires the Navy to consult with the Secretary of Interior to “minimize and mitigate, to the extent practicable, any adverse impacts of authorized military readiness activities on affected species of migratory birds.” National Defense Authorization Act (Authorization Act) § 315 (2003); *see also* 50 C.F.R. §21.15 (“for those ongoing or proposed activities that the Armed Forces determine may result in a significant adverse effect on a population of a migratory bird species, the Armed Forces must confer and cooperate with the Service to develop and implement appropriate conservation measures to minimize or mitigate such significant adverse effects”). Accordingly, the Navy must comply with these directives.

⁴¹ Dow Piniak, W.E. et al. Underwater hearing sensitivity of the leatherback sea turtle (*Dermochelys coriacea*): Assessing the potential effect of anthropogenic noise (2012).

⁴² *Endangered and Threatened Wildlife; 12-Month Finding on a Petition To Identify the Northwest Atlantic Leatherback Turtle as a Distinct Population Segment and List It as Threatened Under the Endangered Species Act*, 85 Fed. Reg. 48332, (Aug. 10, 2020).

⁴³ 85 Fed. Reg. at 48387.

⁴⁴ *Id.* at 48388.

⁴⁵ Hansen, K.A., et al., The common murre (*Uria aalge*), an auk seabird, reacts to underwater sound, 147 J. Acoust. Soc. Am. 4069 (2020).

⁴⁶ *Id.*

Fish and Invertebrates

The EIS/OEIS discounts the potential impact of the training activities on fish and fisheries. High-intensity noise can harm fish and invertebrates,⁴⁷ which can impede prey availability and foraging for marine mammals and seabirds. Fish and invertebrates use sound for their life functions. A review of 42 studies on the effect of noise on fish suggested that the majority of fishes are sensitive to noise, including alarming impacts on foraging, predation risk, and reproductive success.⁴⁸ Another review recently determined that 81 and 82 percent of relevant studies have found significant impacts of noise on invertebrates and fish.⁴⁹ Seismic air gun surveys have been found to damage fish ears at distances of 500 m to several kilometers from seismic surveys, with no recovery apparent 58 days after exposure.⁵⁰ Even under moderate levels of noise exposure, some fish experience temporary hearing loss, with fish occasionally requiring weeks to recover their hearing.⁵¹ Noise has been shown to produce a stress response and behavioral reactions in some fish that include loss of coherence, dropping to deeper depths, milling in compact schools, “freezing,” or becoming more active.⁵² While it is unclear whether such effects are generalizable to other noise sources, lobsters exposed to seismic surveys experienced physiological damage to their statocyst sensory hairs and exhibited impaired ability to right themselves for up to a year post-exposure.⁵³

Studies of seismic surveys on fish demonstrate that at least some types of anthropogenic noise can have detrimental effects on fisheries. Some fish species, including cod, have been reported to flee as inferred from decreased catch rates for both long lines and trawler fisheries near operating airguns.⁵⁴ Reduced catch rates of 40%–80% and decreased abundance of some fish species have been reported near seismic surveys.⁵⁵ In one study, fish presence declined by 78 percent during seismic surveys.⁵⁶ Recent science shows that seismic surveys are also detrimental to zooplankton, which could have damaging effects up the food chain. The study found that a single airgun blast caused an abundance decline of at least 50 percent in 58 percent of the zooplankton species observed,⁵⁷ raising questions about the effects of the Navy’s acoustic and explosive sources. The Navy’s conclusion that “training activities do not compromise productivity of fishes or impact their habitats,” EIS/OEIS 3.6-72, fails to provide the hard look required by NEPA.

⁴⁷ Popper, A.N. & Hastings, M.C. Effects of Anthropogenic Sources of Sounds on Fishes, 75 *Journal of Fish Biology* 455 (2009); Weilgart, L. *The Impact of Ocean Noise Pollution on Fish and Invertebrates*, (2018).

⁴⁸ Cox, K., et al., Sound the alarm: A meta-analysis on the effect of aquatic noise on fish behavior and physiology, 24 *Global Change Biology* 3105 (2018).

⁴⁹ Duarte CM, et al., The soundscape of the Anthropocene ocean. 371 *Science* 6529 (2021).

⁵⁰ Weilgart, L, A review of the impacts of seismic airgun surveys on marine life, Submitted to the CBD Expert Workshop on Underwater Noise and its Impacts on Marine and Coastal Biodiversity, 25-27 (2014), available at: <http://www.cbd.int/doc/?meeting=MCBEM-2014-01>.

⁵¹ *Id.*

⁵² *Id.*

⁵³ Day, R.D., et al., Seismic air guns damage rock lobster mechanosensory organs and impair righting reflex, 286 *Proc. R. Soc. B* 20191424 (2019).

⁵⁴ Slabbekoorn, H. *et al.* A noisy spring: the impact of globally rising underwater sound levels on fish, 25 *Trends in Ecology and Evolution* 419-427 (2010).

⁵⁵ Weilgart 2013.

⁵⁶ Paxton, A. B. et al, Seismic survey noise disrupted fish use of a temperate reef, 78 *Marine Policy* 68-73 (2017).

⁵⁷ McCauley, D. et al., Widely used marine seismic survey air gun operations negatively impact zooplankton, 1 *Nature Ecology and Evolution* 195 (2017).

Vessel Strikes

The Navy relies on the flawed 2016 OEIS for its analysis of vessel strikes of marine mammals. Ship strikes are one of the overarching threats to large whales. New scientific information suggests that for imperiled populations, “death from vessel collisions may be a significant impediment to population growth and recovery.”⁵⁸ Ship strike mortality is “thought to be the number one killer of blue and fin whales and the second greatest cause of death for humpback whales along the U.S. West Coast.”⁵⁹ Rockwood et al. 2017 reports a best conservative estimate of 18 blue and 22 humpback whale deaths from ship strikes per 6-month season. Based on these predictions and the average annual strike reports from 2006-2016 (1.0 for blue and 1.4 for humpback whale), they calculated that 95 percent of blue whale and 94 percent of humpback whale strike deaths go undocumented. Given the uncertainty in accounting for whale collision avoidance, they also calculated strike mortality in the case of no avoidance, producing estimates of 40 blue and 48 humpback whale deaths. The EIS/OEIS fails to account for this greater estimate of ship-strike risk, including the probability that previous Navy ship-strikes have gone undocumented, in its analysis.

Aircraft Noise

A new study that monitored military aircraft noise for 28 days in Washington State detected concerning noise levels 30 meters below the sea surface.⁶⁰ The researchers noted that the noise exceeded thresholds that can trigger behavioral responses in marine mammals, fish and sea birds. The study demonstrates that the sea surface does not serve as an acoustic barrier to military aircraft noise, and that the Navy must re-examine the impacts of the aircraft noise based on this new information.

c. The environmental justice analysis is woefully outdated and deficient

The proposed training activities will adversely impact Alaska Native fishing communities in the Gulf of Alaska. The Navy’s environmental justice analysis must be revised to thoroughly evaluate and avoid adverse impacts on Alaska Native peoples. Executive Order 12,898 directs that, “[t]o the greatest extent practicable and permitted by law,” all agencies “shall make achieving environmental justice part of its mission by identifying and addressing . . . disproportionately high and adverse human health or environmental effects of [their] activities on minority populations and low-income populations.” 59 Fed. Reg. 7629 (Feb 11, 1994), at § 1-101. Moreover, President Biden has made environmental justice a priority of all agencies.⁶¹ A

⁵⁸ Rockwood, R.C., J. Calambokidis, & J. Jahncke. Correction: High mortality of blue, humpback and fin whales from modeling of vessel collisions on the U.S. West Coast suggests population impacts and insufficient protection, 13 PLoS ONE e0201080 (2018).

⁵⁹ Rockwood RC, Calambokidis J, Jahncke J, High mortality of blue, humpback and fin whales from modeling of vessel collisions on the U.S. West Coast suggests population impacts and insufficient protection, 12 PLoS ONE e0183052 (2017).

⁶⁰ Kuehne, Lauren, et al. Above and below: Military Aircraft Noise in Air and under Water at Whidbey Island, Washington, 8 J. Mar. Sci. Eng. 923 (2020).

⁶¹ Executive Order on Tackling the Climate Crisis at Home and Abroad (Jan. 27, 2021).

2021 Executive Order makes the Secretary of Defense part of the White House Interagency Council charged with increasing the Federal Government's efforts to address current and historic environmental injustice.

The Navy relies on its analysis from 2016, which in turn relies on its analysis from 2011. That 10-year-old document's cursory analysis stated that no fishing resources would be impacted and concluded that "[n]o effects are anticipated from training activities and overflights; no disproportionately high and adverse effects on any low-income or minority groups would occur." 2011 EIS/OEIS at 3.13-4. However, that analysis is woefully outdated and inadequate. There is no confirmed or available public data that confirms that "no fishing resources would be impacted" nor that they have been in subsequent trainings.

Fishing is central to subsistence and identity to some of the region's Alaska Natives. Changes to the Gulf of Alaska environment and fisheries impacts the cultural resources and lifeways of Alaska Natives.⁶² The ability of fishing communities to adapt to changes is limited.⁶³ According to researchers already "fishing families throughout the Gulf of Alaska [are] struggling to find new ways to maintain not just their livelihood but their overall well-being."⁶⁴ The Copper River and Prince William Sound salmon fisheries have had three (3) disastrous commercial fishing seasons in a row where fish have returned extremely low in numbers and the fish smaller in size. These salmon fisheries are critical to the Prince William Sound's Native villages and thousands of fishermen whose livelihoods depend on their unique subsistence and the commercial fishing way of life. The once prolific Pacific herring runs that numbered 200,000+ ton of herring returning annually to Prince William Sound are now reduced to only 4,000 ton returning, the low returning herring runs has not warranted a fishery except in 2-3 seasons since 1989, the year of the Exxon Valdez oil spill. All five (5) Pacific wild salmon species; Chinook (king), Sockeye (red), Coho (silver), Chum (keta) and Pink (humpy) spend part of their life and up to a year in both the Copper River Delta and Prince William Sound before heading out to sea till they return to spawn and die. Whatever happens in these connected ocean ecosystems happens to all these salmon species that when healthy and respected, feeds millions of people around the world every year.

Concerns about the impacts of the Navy's activities, particularly on fishing, prompted eleven Gulf of Alaska coastal cities to pass multiple resolutions urging the Navy to conduct activities after mid-September and away from sea-mounts to reduce impacts on subsistence, commercial and other fishing activities.⁶⁵ The Navy overlooks the vocal and repeated concerns of commercial, subsistence, and Indigenous fishermen regarding the lack of concern and available data regarding the timing of and migratory patterns of all species of salmon in the Gulf of Alaska. These resolutions expressed concern about the hazardous materials and impacts of Navy training activities on fish and fisheries. They also noted the "cultural, traditional and subsistence

⁶² Szymkowiak, Marysia, Adaptations and well-being: Gulf of Alaska fishing families in a changing landscape, 197 Ocean and Coastal Management 105321 (2020).

⁶³ Id.

⁶⁴ Id.

⁶⁵ Hanlon, Tegan, Thousands of military personnel converge on Alaska for Northern Edge exercise, Anchorage Daily News (May 3, 2017).

activities historically and continually practiced by Native and non-Native peoples in the Gulf of Alaska.”⁶⁶

d. The Navy must adopt more robust mitigation measures

The Navy cannot merely rely on mitigation measures that are known to be ineffective. While necessary to reduce exposures within a short distance of the source, lookouts are not as effective in mitigating acoustic impacts as time-area restrictions.⁶⁷ In *Conservation Council*, the court determined that the Service may not choose the lesser mitigation option of lookouts to protect marine mammals from military sonar “especially knowing that many potential disruptions to marine mammal behavior will be difficult to detect or avoid through lookouts.”⁶⁸

One of the most effective means to protect marine mammals from noise and disturbance is to impose time and area restrictions. The proposal by the Navy identifies two mitigation areas: the North Pacific Right Whale Mitigation Area and the Portlock Bank Mitigation Area for limited activities. We support these mitigation areas, and the Navy should also consider additional mitigation and time and area restrictions, including but not limited to:

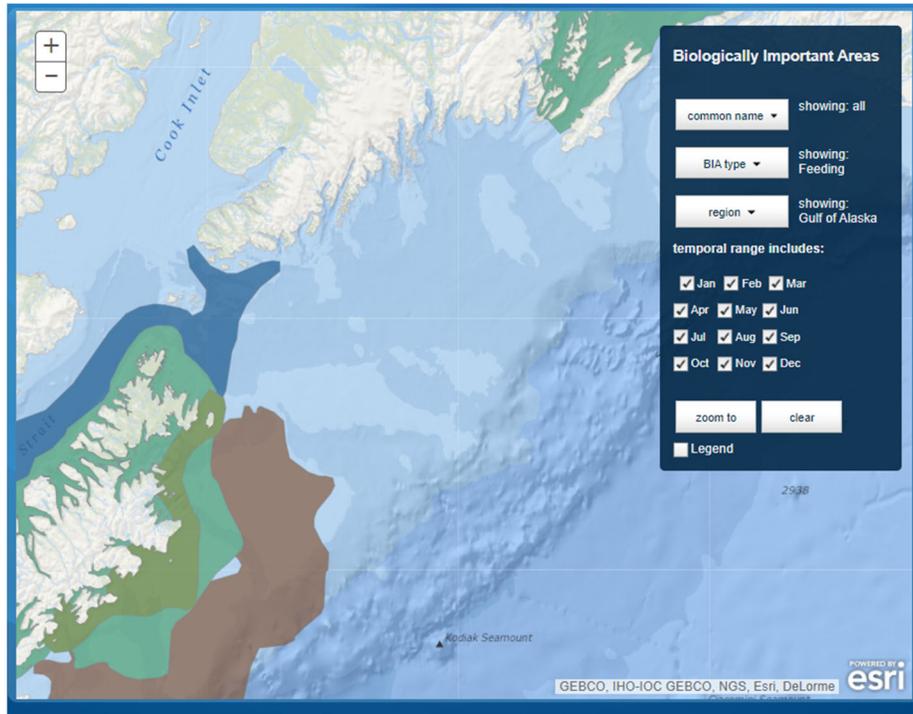
- Extending the mitigation areas to include a buffer zone to adequately protect the biologically sensitive areas from received levels that are above the take threshold.
- Prohibiting active sonar in the Portlock Bank Mitigation Area.
- Moving activities to the fall, after September, which would avoid fishing seasons as well as primary whale feeding months. Alternatively, the Navy should adopt geographic mitigation shoreward of the continental shelf between June and September because that portion of the TMAA is near the biologically important feeding areas for North Pacific right whales, fin whale, humpback whales, and gray whales during those months.⁶⁹

⁶⁶ City of Cordova, Alaska, Resolution 06-16-24 (2016).

⁶⁷ *Id.*

⁶⁸ *Conserv. Council for Haw. v. Nat'l Marine Fisheries Serv.*, 97 F. Supp. 3d 1210, 1230 (D. Haw. 2015).

⁶⁹ Ferguson, M., et al. Biologically Important Areas for Cetaceans Within U.S. Waters – Gulf of Alaska Region, 41 *Aquatic Mammals* 65-78 (2015).



- Capping the maximum level of activities each year.
- Installing passive acoustic monitoring in the TMAA to inform mariners’ warnings about the presence of marine mammals.
- Increasing the exclusion zone given the particular sensitivity of some species to sonar at low levels of exposure.
- Imposing a 10-knot ship speed in Mitigation Areas to reduce the risk of vessel strikes.
- Improving detection of marine mammals with restrictions on low-visibility activities and alternative detection such as thermal or acoustic methods.⁷⁰
- Adding mitigation for other marine mammal stressors such as dipping sonar and contaminants.
- Consulting with Alaska Native communities and adding mitigation for environmental justice impacts.

2. The Navy Must Fully Comply with Other Key Environmental Laws

a. The Endangered Species Act

The Navy must consult on its activities impacts on endangered species. Section 7(a)(2) of the Endangered Species Act requires federal agencies to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such

⁷⁰ Verfuss, U.K. et al., Comparing methods suitable for monitoring marine mammals in low visibility conditions during seismic surveys, 126 Marine Pollution Bulletin 1–18 (2018).

species . . . determined . . . to be critical”⁷¹ To accomplish this goal, agencies must consult with the delegated agency of the Secretary of Commerce (through the National Marine Fisheries Service) or Interior (through the U.S. Fish and Wildlife Service) whenever their actions “may affect” a listed species.⁷² The Service has the discretion to impose terms, conditions, and mitigation on any authorization. The proposed action here clearly affects listed species — the critically endangered North Pacific right whale, other whales, salmon, and Steller sea lions— and therefore the Service must consult. The EIS/OEIS states that the Navy will complete consultation, and we urge the Navy to fulfill this commitment and provide for more robust mitigation in that consultation.

b. The Marine Mammal Protection Act

The Navy requires an authorization under the Marine Mammal Protection Act (MMPA), as acknowledged by the EIS/OEIS. The MMPA prohibits the taking of marine mammals, unless the take falls within certain statutory exceptions.⁷³ The statute defines “take” is as “to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect or kill, any marine mammal.”⁷⁴ Here, the training activities will harass and harm marine mammals and such authorization is required before the activities can proceed.

3. Conclusion

In conclusion, the Navy must adhere to the concerns voiced by the public, their representatives and the scientific community, to revise its analysis of impacts of the Gulf of Alaska training activities on marine mammals, fish, birds and other marine life. We urge the Navy to advance scientific research and seasonal observation to collect and consider new and needed information and data; and to implement and impose stronger mitigation to protect the Gulf of Alaska and its vast array of marine life.

The Navy should prepare a revised draft Supplemental EIS/OEIS that includes a full and fair analysis of impacts of the Gulf of Alaska training activities on marine mammals, fish and other marine life; consider new information; and impose stronger mitigation to protect the Gulf of Alaska and its vast array of marine life.

Sincerely,

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⁷¹ 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

⁷² *Id.*

⁷³ 16 U.S.C. § 1371(a)(3).

⁷⁴ 50 C.F.R. § 216.3; 16 U.S.C. § 1362(13).

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