

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

Dear GOA Supplemental EIS/OEIS Project Manager,

PRESERVING WILD
SALMON HABITAT &
INDIGENOUS CULTURE

(document submitted via mail and email)

Board of Directors

Dune Lankard Founder & President

Phillip Blanchett
Director & Vice President

Carol Kalafatic
Director & Secretary

Carol Hoover
Director & Treasurer

Mason Bondi *Director*

Pete Nichols Director

Rion Schmidt Director

Advisory Council

Mary Ann Bishop, PhD
Nils Boisen
Karen Button
Susanna Colloredo
David Lynn Grimes
Chief Gary Harrison
Darcie Houck, Esq.
Robbin La Vine
Timothy Metz
Mariah Parker
Gabriel Scott, Esq.
Pamela Smith
Alan Trist

The Eyak Preservation Council (EPC) is a public charity with 501(c)(3) status based in Cordova, Alaska. We offer educational and outreach programs that concentrate on: protection of our regional salmon way of life, Indigenous cultural preservation and the promotion of sustainable economies. We represent the communities and people of the Copper River, Prince William Sound and northern-central Gulf of Alaska. We have program participants and constituents from these regions and from the nation at large.

The Gulf of Alaska is a rich marine habitat that supports an abundance of wildlife. There are 13 threatened or endangered mammal species that feed, breed, and migrate through the Gulf of Alaska, along with nine threatened or endangered fish species (NOAA Fisheries, 2019). The Gulf of Alaska is also a crucial habitat during the marine portion of migrations of Pacific salmon (*Oncorhynchus* spp.) that contribute to a healthy marine ecosystem and are economically and culturally vital to Alaskan communities (Larson et al., 2013, and Beacham et al., 2014).

EPC is strongly requesting that the Navy employ the Precautionary Principle regarding all aspects of the Northern Edge military trainings in the Gulf of Alaska. The Precautionary Principle, respected by a wide array of scientists and explained well by Kriebel et al., (2000), "has four central components: taking preventive action in the face of uncertainty; shifting the burden of proof to the proponents of an activity; exploring a wide range of alternatives to possibly harmful actions; and increasing public participation in decision making".

EPC is strongly requesting that the Navy analyses in the DEIS recommend that the ROD employ the Precautionary Principle in the absence of adequate information. Number one: do not conduct active sonar in your trainings. There is substantial evidence of mid-frequency active active sonar physically harming and causing strandings of beaked whales as well as altering foraging and feeding behaviors in endangered sperm whales (Fernandez et al., 2015; Isojunno et al., 2016). There has been very little empirical, peer-reviewed studies on the impacts of mid-frequency active active sonar on fish. These impacts deserve more critical investigation in the DSEIS.



Flawed Process

NEPA is a process-driven law, so it is crucial that the process and associated documents be clear enough to ensure meaningful public participation. There are serious flaws with the Navy's current process.

The Eyak preservation Council is stating that the current scoping proocess needs significant and necessary revision, and should be started over.

Firstly, the Federal Register NOI to prepare the Supplemental EIS does not define the No Action Alternative, nor does it explain the implications of any of the alternatives. It fails to invite the public to submit reasonable alternatives for study, which is a crucial component of the NEPA process. For the public, that can rightfully and is requested to participate in the NEPA process to express their concerns regarding Northern Edge, this NOI confusing and unhelpful. Cordova community members have directly expressed to our office that they are discouraged from participating because of how complicated and unclear the current scoping process is.

There are multiple documents online and in print that include varying levels of information regarding this scoping process. All lack a clear desciption of the most effective way to participate. The first step is for the Navy to pull and synthesize all of these outreach materials and summarize them in a succinct, direct way for the public. Then, issue a new NOI with the necessary details in order to encourage more meaningful comments and widespread participation. Finally, EPC asserts that every group that comments during this scoping period be added to your email list so they will be alerted when the DSEIS comes out.

Purpose & Need

The NOI states, "The Proposed Action does not alter the Navy's original purpose and need as discussed in the 2016 GOA Supplemental EIS/OEIS." The language regarding the purpose and need in the 2016 FEIS is vague, convoluted, and ventures astray from the primary reasons for conducting Northern Edge. The length of this section is unnecessarily long (seven paragraphs) and includes distracting historical facts. The purpose and need statement should be succinct, clear, and easy for the public to comprehend.

Nowhere in the purpose and need section does it state *why* the training exercises must be conducted in the Gulf of Alaska specifically. EPC understands the Navy's need to conduct joint exercises at sea to achieve and maintain fleet readiness. However, the purpose and need section does not explain why these trainings must be done in the current location and timing; Northern Edge should not be conducted in the current location, nor in the spring.



Alternatives

There are less destructive action alternatives that can meet the need of fleet readiness.

Since the Gulf of Alaska ecosystem is undergoing significant, continuous stress due to climate change, oil transportation using large vessels, and various other human impacts, the Navy must consider action alternatives for Northern Edge.

Firstly, address the timing. Conducting Northern Edge in May is one of the worst possible times because of the abundances of marine animals and fish in the Gulf of Alaska during spring and the fact that it is a critical reproductive period for dozens of species. EPC demands that the Navy look seriously at alternative timings, such as February or March, and also at alternative locations, further offshore and away from the shelf break.

We request that the Navy study alternative sites that are further offshore and away from high concentrations of fish and whales. The high density of whales on and inside the shelf break led Alaskan researchers to the conclusion that conducting Northern Edge "far outside of shelf break" would be less ecologically damaging. For example, conducting exercises 300 miles south of the shelf break, would have fewer negative impacts. A top complaint from an overwhelming majority of our regional fishermen is that Northern Edge exercises are too close to shore and right on the continental shelf, threatening crucial regenerative resources.

An alternative would be to rotate the locations of the training exercises. Not only would this disperse the negative impacts, it would also allow the Navy to train in a greater variety of sub-arctic environments, which is the stated point of the trainings. If the exercises must be done in the Gulf of Alaska, we request a return to pre-2010 training levels.

The Navy SDEIS must analyze in detail the possibility of meeting the purpose and need of these training exercises without using anti-submarine warfare activities and without using active mid-frequency sonar.

EPC requests an alternative with a reduced amount of allowable ammunitions – no more than the amount used in 2017. Northern Edge could be equally effective with a lesser number of unretrieved expendables. With the amount of funding the U.S. Navy receives, it is appropriate to explore viable methods of retrieving expendables. Northern Edge exercises must eliminate the use of chaff, plastics, and all toxic materials that would simply be left on the seafloor or suspended in the water column.

The action alternatives stipulated above are logical considering the unparalleled stress animals in the Gulf of Alaska are currently facing due to climate change



outlined in University of Alaska Fairbanks' publication, *Alaska's Changing Environment* (2019). These times call for us all to act conservatively, responsibly, and in line with the Precautionary Principle. Remember, these are legally *our* marine resources (as Alaskan citizens) that are *held in trust* by the federal government.

Issue Areas

Analyses in the SDEIS need to be expanded in regards to investigation of lower trophic level species (especially krill and other zooplankton that our fisheries depend on), vulnerability of seamounts, and impacts of anti-submarine warfare exercises on all threatened or declining populations. Threatened and endangered species in the GOA include: bearded seal, beluga whale, blue whale, bocaccio, bowhead whale, Chinook salmon, chum salmon, coho salmon, eulachon, fin whale, gray whale, green sturgeon, Guadalupe fur seal, humpback whale, killer whale, leatherback turtle, North Pacific right whale, ringed seal, sei whale, sockeye salmon, sperm whale, steelhead trout, Steller sea long, and yelloweye rockfish (NOAA ESA Threatened and Endangered Species Directory, 2020).

The Navy must also take a hard look at those which are not yet listed as threatened or endangered, but species which Alaskan scientists are witnessing rapid decline of, including cod, herring, and large copepods, whose crashes are already devastating commercial fishermen in Southeast and Southcentral Alaska.

Here are some examples of the condition and sensitivity of fisheries, and how precarious some are becoming. The sac roe herring fishery in Sitka have closed as of early March 2020, and the GOA cod fishery was declared closed for 2020, which is largely due to climate change impacts. Articles such as, "Sitka herring roe fishery closed..." and "The Sitka tribe's struggle to save Alaskan herring...", were respectively published in *Alaska Public Media* on March 3rd, 2020, and *The Guardian* on December 5th, 2019.

The first-ever closure of the GOA cod fishery was also crushing for commercial fishermen. As Kavita George, of *U.S. Harbors*, reports: "A stock assessment this fall put Gulf cod populations at a historic low, with "next to no" new eggs, according to National Oceanic and Atmospheric Administration research biologist Steve Barbeaux, who authored the report. At their current numbers, cod are below the federal threshold that protects them as a food source for endangered Steller sea lions. Once below that line, the total allowable catch goes to zero — in other words, the fishery shuts down" ("Feds Close the Gulf of Alaska Cod Fishery for the First Time", December 11, 2019).

This is economically devastating. These GOA fisheries are experiencing "death by a thousand cuts", so it is important that an alternative in the SDEIS analyze returning the Northern Edge trainings to more conservative, pre-2010 levels, or moving them completely out of the Gulf.



Please include in the DSEIS thorough analyses of potential impacts of using active sonar, SINK-EX, live ammunition and torpedoes on plankton, the physiology and behavior of the commonly present fish species and of beaked whales, right whales and Stellar sea lions. If you do not have adequate scientific data and explicit information on the impacts (as our research indicates), then we ask that the analyses recommend that the ROD follow the Precautionary Principle by refraining from these activities.

A strong focus of this scoping period should definitely be on listed endangered and threatened species. Isojunno et al. (2016) clearly indicate that the endangered sperm whales reduce foraging and feeding behaviors when exposed to even low-frequency sonar, let alone mid-frequency.

In regards to the endangered North Pacific right whale, the study done by Rone et al. (2017) "provides the most detailed information to date on distribution, abundance, and densities of cetaceans within offshore waters of the GOA. The absence of North Pacific right whale sightings within this historically important habitat continues to underscore the precarious status of this critically endangered whale."

Scientists have documented that: "The occurrence of beaked whales (2013) and blue whales (2013, 2015), detected both visually and acoustically (Rone et al. 2014, 2015), suggests the GOA represents important habitat. Additional research should be devoted to obtaining rigorous abundance and density estimates and a better understanding of habitat use in order to assess potential impacts from military activity." More Navy research is needed. In choosing contractors, the Navy should select multiple Alaskan whale experts that have a long track record of experience in the GOA region.

Very important whale density maps were published by Rone et al. (2017), and clearly demonstrate a high abundance of endangered marine mammals within the TMAA. Please read this entire article carefully.

Beaked whale research studies have demonstrated that standings have occurred as a direct result of mid-frequency active sonar (MFAS) use (NOAA and USN 2001; Jepson et al. 2003; Fernandez et al. 2005; Hildebrand 2005; Barlow and Gisiner 2006). The latest studies by Fernandez et al., 2015, have led to the Spanish government outlawing the use of MFAS surround the Canary Islands. It is unacceptable that the U.S. military, with this knowledge of the direct connection between MFAS and beaked whale strandings would continue to employ this technology in an area where three different species of beaked whales are present. Any mortalities from naval exercises here are likely to go undetected, because the training area is remote from shore, and strong currents in the Gulf's gyre may not carry carcasses to shore. In the DEIS, please analyze, for all areas globally where beaked whale strandings coincided closely in time with MFAS use, whether the presence of beaked whales and any effects on them had been noted during the exercise, or whether possibly linked



injuries or mortalities were reported only by others. This analysis is crucial because of the Navy's reliance on on-board observers and sounds observed by sonar operators as its means for avoiding impacts to whales.

In addition to marine mammals, EPC's constituents are critically concerned about salmonid populations, several of which are already in decline. Currently, researchers at the North Pacific Anadromous Fish Commission explain that "predicting how Pacific salmon will respond to their changing environment presents a formidable challenge, and thus it is imperative that we understand the mechanisms behind those responses to effectively make decisions for their conservation" (Tessier, 2019). Tessier (2019) describes how "the anadromous nature of these already threatened fish may make them more susceptible to climate change and the resulting lower ocean pH" (Crozier et al., 2008).

On the following page, the Eyak Preservation Council is attaching a list of references (the vast majority of which are peer-reviewed) which our team has read and studied, and which we request the Navy to include in its analysis. Additionally, we are sending two thumb drives full of high-quality data and information to the Naval Facilities Engineering Command Office in Silverdale, WA; all the work we are sharing is directly relevant to this scoping process. Following our research and in-depth interactions with impacted community members, EPC has come to the conclusion that the scoping process should begin again, with the alternatives clearly outlined.

The U.S. Navy has the power and responsibility to minimize the stress on mammals, fish, invertebrates, and the entire GOA ecosystem and needs to consider in detail an alternative for moving the timing and locations of Northern Edge. Moving military trainings to a zone that is 300 miles south of the shelf break, conducting exercises in February or March, and refraining from MFAS, SINK-EX, torpedoes, and explosives represent a reasonable alternative. The Navy could still meet its need for fleet readiness, and reduce the negative impacts to a system full of marine life that is already in peril.

Thank you for the opportunity to comment on this important matter.

Signed with grave concern,

Skye Steritz Program Manager Carol Hoover Executive Director



References for Navy review

Beacham, T. D., Beamish, R.J., Candy, J.R., Wallace, C., Tucker, S., Moss, J.H., and Trudel, M. (2014). Stock-specific migration pathways of juvenile sockeye salmon in British Columbia waters and in the Gulf of Alaska. Transactions of the American Fisheries Society. Issue 6, Vol. 143.

Carlson, H.R., E.V. Farley, Jr., and K.W. Myers. (2000). The use of thermal otolith marks to deter- mine stock-specific ocean distribution and migration patterns of Alaskan pink and chum salmon in the North Pacific Ocean 1996-1999. N. Pac. Anadromous Fish Comm. Bull. No.2: 291-300.

Carroll, A.G., Przeslawski, R., Duncan, A., Gunning, M., Bruce, B. (2017) A critical review of the potential impacts of marine seismic surveys on fish & invertebrates. Marine Pollution Bulletin.

Chittenden, C.M., Beamish, R.J., and McKinley, R.S. (2009). A critical review of Pacific salmon marine research relating to climate change. Journal of Marine Science. Vol. 66 (10).

Daly, E.A., J.H. Moss, E. Fergusson, and C. Debenham. (2019). Feeding ecology of salmon in eastern and central Gulf of Alaska. Deep-Sea Research Part II 165:329-339.

de Quiros, Y.B., Fernandez, A., Baird, R.W., Brownell, R.L., Aguilar de Soto, N., Allen, D., Arbelo, M., Arregui, M., Costidis, A., Fahlman, F., Frantzis, A., Gulland, M., <u>Iñíguez</u>, M., Johnson, M., <u>Komnenou</u>, A., Koopman, H., Pabst, D.A., Roe, W.D., Sierra, E., Tejedor, M., and Schorr, G. (2019). Advances in research on the impacts of antisubmarine sonar on beaked whales. The Royal Society Biological Sciences.

Diaz-Delgado, J., Fernandez, A., Sierra, E., Sacchini, S., Andrada, M., Isabel Vela, A., Quesada Canales, O., Paz, Y., Zucca, D., Groch, K., and Arbelo, M. (2018). Pathologic findings and causes of death of stranded cetaceans in the Canary Islands (2006 2012). PLoS One: 13 (10).

Fernandez, A., Edwards, J.F., Rodriguez, F., Espinosa de los Monteros, A., Herraez, P., Catro, O., Jaber, J.R., Martin, V., and Arbelo, M. (2005). "Gas and fat embolic syndrome involving a mass stranding of beaked whales (family Ziphiidae) exposed to antropogenic sonar signals. Vetrinary Pathology 42(4):446-57.

Gordeev, I.I., Starovoystov, A. N., and Ponomarev, S.S. (2018). Trawl survey of Pacific salmon on the R/V "Professor Kaganovsky" in the northwestern part of the Pacific Ocean. Pacific Fisheries Research.



Hunt, B. (2019). Mega-swarm of northern sea nettles in Gulf of Alaska nettles (Chrysaora melanaster). IYS Workshop, PICES, 19-20 Oct. 2019. University of British Columbia, International Year of the Salmon.

Isojunno, S., Cure, S., Kvadsheim, H.P., Lam, F.A., Lloyd Tack, P., Wensveen, P.J., and Omalley Miller, P.J. (2016). Sperm whales reduce foraging effort during exposure to 1 -2kHz. Ecological Application, 26(1): 77-93. Ecological Society of America.

Jemison, L.A., G.W. Pendleton, K.K. Hastings, J.M. Maniscalco and L.W. Fritz. (2018). Spatial distribution, movements, and geographic range of Steller sea lions (Eumetopias

jubatus) in Alaska. PLoS ONE 13:1-36.

Katugin, O.N., Kulik, V.V., Zuev, M.A., and Esenkulova, S. (2019). Distribution patterns of squid in the upper epipelagic Gulf of Alaska in winter 2019. Pacific branch of Russian Federal Research Institute of Fisheries and Oceanography (TINRO) and Pacific Salmon Foundation.

Kriebel D., Tickner, J.A., Epstein, P., Lemons, J., Levins, R., Loechler, E.L., Quinn, M., Rudel, R., Schettler, T., and Stoto, M. (2001). The precautionary principle in environmental science. Environmental Health Perspectives, 109:871–876.

Larson, W.A., F.M. Utter, K.W. Myers, W.D. Templin, J.E. Seeb, C.M. Guthrie III, A.V. Bugaev, and L.W. Seeb. (2013). Single-nucleotide polymorphisms reveal distribution and migration of Chinook salmon (*Oncorhynchus tshawytscha*) in the Bering Sea and North Pacific Ocean. Canadian Journal of Fisheries and Aquatic Sciences 70:128-141.

Monterey Bay Aquarium Research Institute (2019). Why do beaked whales return to a Navy sonar range despite frequent disturbance? Phys.org.

Myers, K.W., Irivine, J.R., Logerwell, E.A., Urawa, S., Naydenko, S.V., Zavolokin, A.V., and Davis, N.D. (2016). Pacific salmon and steelhead: Life in a changing winter ocean. North Pacific Anadromous Fish Commission Bulletin No. 6: 113-138.

National Oceanic and Atmospheric Administration (2019). ESA Threatened and Endangered Species Directory [for Gulf of Alaska]. https://www.fisheries.noaa.gov/species-directory/threatened-endangered

Pakhomov, E.A., Deeg, C., Esenkulova, S., Foley, G., Hunt, B.V., Ivanov, A., Jung, H.K., Kantakov, G., Kanzeparova, A., Khleborodov, A., Neville, C., Radchenko, V., Shurpa, I., Slabinsky, A., Somov, A., Urawa, S., Vazhova, A., Perumthuruthil, V.S., Waters, C., Weitkamp, L., Zuev, M., and Beamish, R. (2019). Summary of Preliminary Findings of the International Gulf of Alaska Expedition Onboard the R/V *Professor Kaganovskiy* During February 16–March 18, 2019. North Pacific Anadromous Fish Commission. NPAFC Doc. 1858. 25 pp. Canada, Japan, Korea, Russia, and USA.



Peng, C. Xhao, X., and Liu, G. (2015). Noise in the sea and its impacts on marine organisms. International Journal of Environmental Research and Public Health 12(10): 12304-23.

Radchenko, V.I., and Somov, A.A. (2019). Pacific salmon abundance and biomass as estimated by trawl survey in the Gulf of Alaska in February-March 2019. PICES Presentation.

Rand, P.S. (2002). Modeling feeding and growth in Gulf of Alaska sockeye salmon: implications for high-seas distribution and migration. Marine Ecology Progress Series Vol. 234: 265–280.

Rice, J. (2019). Salmon expedition reports unexpected findings. Puget Sound Institute, University of Washington, Tacoma.

Rone, B.K., Douglas A.B., Yack T.M., Zerbini A.N., Norris T.N., Ferguson E., Calambokidis J., and Clapham P.J. (2014). Report for the Gulf of Alaska Line-Transect Survey (GOALS) II: marine mammal occurrence in the Temporary Maritime Activities Area (TMAA). Submitted to Naval Facilities Engineering Command (NAVFAC) Pacific, Honolulu, Hawaii under Contract No. N62470-10-D-3011, Task Order 0022, issued to HDR Inc., San Diego, California. Prepared by Cascadia Research Collective, Olympia, Washington; AFSC, Seattle, Washington; and Bio- Waves, Inc., Encinitas, California.

Rone B.K., Clapham P.J., Weller D.W., Crance J.L., and Lang A.R. (2015). North Pacific right whale visual and acoustic survey in the northwestern Gulf of Alaska. Final Report. Submitted to the Marine Mammal Commission, Bethesda, Maryland. Prepared by National Marine Mammal Laboratory, Seattle, Washington; and Southwest Fisheries Science Center, La Jolla, California.

Rone, B.K., Zerbini, A.N., Douglas, A.B., Weller, D.A., Clapman, P.J. (2017) Abundance and distribution of cetaceans in the Gulf of Alaska. Marine Biology 164:23.

Rose, K. (2020). Sitka herring roe fishery closed over small fish, weak markets, and coronavirus uncertainty. Alaska Public Media. https://www.alaskapublic.org/2020/03/03/sitka-herring-roe-fishery-closed-over-

small-fish-weak-markets-and-coronavirus-uncertainty/

Slabbekoorn, H., Dalen, J., de Haan, D., Winter, H.V., and Radford, C. (2019). Population-level consequences of seismic surveys on fishes: An interdisciplinary challenge. Fish and Fisheries. Vol. 20 (4).

Slotte, A., Hansen, K., Dalen, J., and Ona, E. (2004). Acoustic mapping of pelagic fish distribution and abundance in relation to a seismic shooting area off the Norwegian west coast. Fisheries Research. Vol. 67 (2).



Ten Hooper, P., and Griffin, J. (2019). The Sitka tribe's struggle to save Alaskan herring. *The Guardian*.

https://www.theguardian.com/environment/2019/dec/05/the-struggle-for-sitkas-herring-photo-essay-alaska

Tessier, L. (2019). The response of Pacific salmon and their prey to changing ocean conditions and acidification. North Pacific Anadromous Fisheries Commission Newsletter 47, Jan. 2020.

von Seigesar, O. (2013). The Humpback Whales of Prince William Sound: Population Characteristics and Ecology, 1980-2009. Report to Exxon Valdez Oil Spill Trustee Council. Eye of the Whale Research.

Weitkamp, L. (2019). Pacific salmon on the high seas: Initial findings from the winter 2019 Gulf of Alaska expedition. Presentation. NOAA/National Marine Fisheries Service.

Wilson, C. (2019). Expedition breaks new ground in the lives of Pacific salmon. *Times Colonist*.

cc: Dune Lankard, Eyak Preservation Council Board President