DEPARTMENT OF DEFENSE

Department of the Navy

Record of Decision for the Gulf of Alaska Training Activities Final Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement

AGENCY: Department of the Navy, Department of Defense

ACTION: Record of Decision

SUMMARY: The United States (U.S.) Department of the Navy (Navy), after carefully weighing the strategic, operational, and environmental consequences of the Proposed Action, announces its decision to conduct training (also referred to as military readiness activities) in the manner and at the intensity as described in Alternative 1, the Navy's Preferred Alternative, of the Gulf of Alaska (GOA) Training Activities Final Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (SEIS/OEIS). Implementation of this alternative will enable the Navy and other U.S. military services to best meet their respective missions. The Navy's mission, under Title 10 United States Code (U.S.C.) Section 8062, is to maintain, train, and equip combat-ready military forces capable of winning wars, deterring aggression, and maintaining freedom of the seas. The Navy will implement the full suite of mitigation measures detailed in Chapter 5 (Mitigation) of the GOA Final SEIS/OEIS to avoid or reduce potential environmental impacts during activities.

The GOA Final SEIS/OEIS supports the issuance of new authorization of marine mammal incidental take under the Marine Mammal Protection Act (MMPA) and incidental takes of threatened and endangered marine species under the Endangered Species Act (ESA).

The Navy's action proponent for this proposal is the Commander, United States Pacific Fleet.

FOR FURTHER INFORMATION CONTACT: Naval Facilities Engineering Systems Command Northwest, 1101 Tautog Circle, Suite 203, Silverdale, WA 98315-1101, Attention: GOA Supplemental EIS/OEIS Project Manager 360-396-1735, Website: www.goaeis.com.

A. SUPPLEMENTARY INFORMATION: Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969; Sections 4321 et seq. of Title 42 U.S.C., Council on Environmental Quality regulations (Parts 1500–1508 of Title 40 Code of Federal Regulations [CFR]); Department of Navy regulations (32 CFR part 775); and Executive Order 12114, *Environmental Effects Abroad of Major Federal Actions*, the Navy announces its decision to implement the Preferred Alternative, Alternative 1, including the full range of mitigation measures and standard operating procedures, as described in the GOA Final SEIS/OEIS and this Record of Decision (ROD). This decision will enable the Navy to support and conduct current, emerging, and future training activities in the GOA Study Area, which is made up of the Temporary Maritime Activities Area (TMAA) and the Western Maneuver Area (WMA). A detailed description of the activities that comprise Alternative 1 is provided in Chapter 2 (Description of Proposed Action and Alternatives) of the GOA Final SEIS/OEIS. This decision will enable the Navy to meet changing military requirements to achieve the levels of operational readiness required under Title 10 U.S.C. Section 8062.

B. BACKGROUND AND ISSUES: Since the 1990s, the Department of Defense has conducted major joint training exercises in Alaska and off the Alaskan coast that involves the Navy, Department of Army, Department of Air Force, and U.S. Coast Guard participants reporting to a unified or joint commander. This unified commander coordinates planned activities that are designed to demonstrate and evaluate

the ability of the services to jointly engage in a conflict and carry out plans in response to a threat to national security. Based on force availability, resource constraints, and severe environmental conditions during the winter months, the exercises (the most recent series being Northern Edge) normally occur between April and October. The 2022 GOA Final SEIS/OEIS, like the previous 2016 SEIS/OEIS, analyzes for exercises to occur on an annual basis; however, historically, exercises have occurred only once every two years.

Following public release of the 2020 GOA Draft SEIS/OEIS on December 11, 2020, and completion of the Northern Edge 2021 exercise, the Navy recognized that the size and shape of the GOA TMAA (approximately 42,146 square nautical miles) no longer provides sufficient space for the realistic maneuvering of vessels and aircraft during training exercises. The GOA Study Area was revised to include the WMA, an area outside the TMAA encompassing 185,806 square nautical miles, to enable Navy personnel and units to practice more realistic, complex training scenarios in a safer, more efficient manner that will better prepare them to respond to real-world incidents. This additional area was analyzed and released for public review and comment in the 2022 GOA Supplement to the 2020 GOA Draft SEIS/OEIS on March 18, 2022. The 2022 GOA Final SEIS/OEIS was published on September 2, 2022, and reflects the most up-to-date compilation of the types and numbers of activities in the GOA Study Area deemed necessary to meet military readiness requirements into the reasonably foreseeable future.

Purpose and Need

The purpose of the Navy's Proposed Action remains unchanged from the 2011 GOA Final EIS/OEIS and the 2016 GOA Final SEIS/OEIS. It is to use the GOA Study Area to support and conduct current, emerging, and future training activities. This action is needed to achieve and maintain fleet readiness to ensure the Navy's continued, effective protection of U.S. national security.

The National Marine Fisheries Service (NMFS) is a cooperating agency on the SEIS/OEIS and has its own distinct purpose and need, as described fully in the GOA Final SEIS/OEIS. Briefly, NMFS's purpose is to evaluate the Navy's Proposed Action pursuant to its authority under the MMPA, and to determine whether to issue incidental take regulations and a Letter of Authorization (LOA) for the action, including any conditions needed to meet the statutory mandates of the MMPA. The need for NMFS's action is to consider the impacts of the Navy's activities on marine mammals and meet their obligations under the MMPA. NMFS will issue its own ROD documenting its decision to issue authorization for the Navy's Proposed Action.

Public Involvement

The Navy published a Notice of Intent to prepare the GOA SEIS/OEIS in the *Federal Register* (FR) on February 10, 2020 (85 FR 7538), initiating a public scoping comment period through March 11, 2020. To further notify the public of the scoping period, the Navy published advertisements in five newspapers (*Anchorage Daily News, Juneau Empire, Kodiak Daily Mirror, Peninsula Clarion,* and *Cordova Times*), distributed press releases, and mailed notification letters to 24 tribal chairpersons of federally recognized tribes and 128 federal, state, and local elected officials and government agencies. In addition, the Navy mailed postcards to 556 individuals, community groups, tribal staff, and nongovernmental organizations previously expressing an interest in this project. The public was also provided notification of intent to prepare an SEIS/OEIS via the project website (www.goaeis.com) and via an email to website subscribers (44 recipients). The Notice of Intent and public notices provided information about the Proposed Action, methods for submitting comments, and the project website address.

The Navy published a Notice of Availability (85 FR 80093) and a Notice of Virtual Public Meetings (85 FR 80076) for the GOA Draft SEIS/OEIS in the FR dated December 11, 2020, opening a public review and comment period through February 16, 2021. The Navy also published advertisements in the five aforementioned newspapers, which included a brief description of the Proposed Action; the virtual public meeting dates and times, including when and how to submit a question; the project website address; the duration of the comment period; and information on how to provide comments. The Navy mailed notification letters and a project fact sheet booklet to 24 tribal chairpersons, presidents, or chiefs of Alaska Native federally recognized tribes on December 16, 2020. The Navy mailed 181 notification letters and fact sheet booklets to federal, state, and local government agencies and elected officials on December 14, 2020. The Navy mailed 524 postcards to individuals, community and business groups, tribal staff, and nongovernmental organizations on December 10, 2020. The GOA Draft SEIS/OEIS was made available on the project website, and printed copies and CD-ROMs were mailed to the three information repositories (Cordova, Kodiak, and Seward public libraries) that were open for public access during the COVID-19 pandemic.

Commander, Navy Region Northwest Public Affairs Office distributed a news release and public service announcement to local, regional, and national print and broadcast (radio and television) media and congressional staff members December 11, 2020. The news release and public service announcements were redistributed January 14, 2021, and February 2, 2021, prior to the virtual public meetings. A Facebook post was published December 11, 2020, and again on January 14, 2021, on the Commander, Navy Region Northwest and U.S. Pacific Fleet Facebook pages. The Facebook post was published again February 2, 2021, on the Commander, Navy Region Northwest Facebook page. The news releases provided information on the Proposed Action, virtual public meetings and how to submit questions, project website address, and how to submit comments. The public service announcement provided information on the virtual public meeting dates and times, how to submit questions and comments, and the project website address. Project information was also distributed via the project website subscriber's email distribution list. Forty-eight previous website subscribers were carried forward into the 2020 GOA Draft SEIS/OEIS public review and comment phase.

In accordance with federal, state, and local guidance on social distancing to help prevent the spread of the COVID-19, the Navy took additional steps to broaden efforts to notify, inform, and involve the public during the 2020 GOA Draft SEIS/OEIS public review and comment period. In place of in-person public meetings the Navy held two virtual public meetings using the Zoom for Government webinar platform. The Navy's goal was to provide an opportunity for the public to learn more about the project and the draft environmental impact analysis, as well as have their questions answered, just as they would at an in-person public meeting.

The two virtual public meetings were designed to allow interested individuals to attend by computer, tablet, mobile device, or telephone. The virtual public meetings consisted of a short welcome video from Commander, Navy Region Northwest Rear Admiral Stephen Barnett; a slide presentation; and a question-and-answer session to discuss the Proposed Action and the draft environmental impact analysis. Each meeting was scheduled for one hour. A total of 56 individuals—members of the public, media representatives, elected officials or their staff, representatives of nongovernmental organizations, contractors, and Navy employees—attended the two virtual public meetings.

In total, the Navy received 14 unique comments from federal agencies, nongovernmental organizations, an Alaska Native federally recognized tribe, and private individuals. The Navy's responses to public comments on the Draft SEIS/OEIS are included in the GOA Final SEIS/OEIS in Appendix G (Public Comments and Responses). In response to comments received and consultations with regulatory agencies, the Navy adjusted the analysis to clarify or correct information, as well as to add new

information and scientific literature developed since the GOA Draft SEIS/OEIS was published. These changes are reflected in the GOA Final SEIS/OEIS.

A Notice of Intent to Prepare a Supplement to the 2020 GOA Draft SEIS/OEIS (87 FR 5472) was published February 1, 2022. Legal and display advertisements were placed in the five aforementioned newspapers to advertise the Notice of Intent to supplement the 2020 GOA Draft SEIS/OEIS. The Navy mailed notification letters to 42 tribal chairpersons, presidents, or chiefs of Alaska Native federally recognized tribes on February 3, 2022. The Navy mailed notification letters to 189 federal, state, and local elected officials, government agencies, tribal groups, and organizations on February 2, 2022. The Navy mailed postcards to 529 individuals, community and business groups, tribal staff, and nongovernmental organizations on February 2, 2022.

In conjunction with the Notice of Intent, Commander, Navy Region Northwest Public Affairs Office distributed a news release to local, regional, and national print and broadcast media on February 1, 2022. A Facebook post was published February 1, 2022, on the Commander, Navy Region Northwest Facebook page. The news release and Facebook post included information on the Navy's intent to prepare a Supplement to the 2020 GOA Draft SEIS/OEIS, description of the expanded Study Area, a summary of the Proposed Action, and the website address. Email notifications were also sent to website subscribers February 1, 2022.

The Navy published a Notice of Availability (87 FR 15414) for the Supplement to the 2020 Draft SEIS/OEIS in the FR March 18, 2022, opening a public review and comment period through May 2, 2022. The FR notice included notification of the availability of the Supplement and where it could be accessed, an overview of the Proposed Action and its purpose and need, and public commenting information. Legal and display advertisements were published in the five aforementioned newspapers to advertise the availability of the document, public commenting information, and the project website address. The Navy mailed notification letters to 42 tribal chairpersons, presidents, or chiefs of Alaska Native federally recognized tribes, and 191 letters to federal, state, and local elected officials, government agencies, tribal groups, and organizations on March 16, 2022. The Navy mailed postcards to 521 individuals, community and business groups, tribal staff, and nongovernmental organizations on March 16, 2022. The Supplement to the 2020 Draft SEIS/OEIS was posted on the project website, and printed copies and CD-ROMs were mailed to eight information repositories (Alaska State Library, Copper Valley Community Library, Cordova Public Library, Homer Public Library, Kodiak Public Library, Seward Community Library, University of Alaska Fairbanks/Elmer E. Rasmuson Library, and Z.J. Loussac Library).

Commander, Navy Region Northwest Public Affairs Office distributed a news release to local, regional, and national print and broadcast media on March 18, 2022, for the Notice of Availability. A Facebook post was published March 18, 2022 on the Commander, Navy Region Northwest Facebook page. The Notice of Availability news release and Facebook post included information on how to access the Supplement to the 2020 Draft SEIS/OEIS, a description of the expanded Study Area, a summary of the Proposed Action, public commenting information, and the website address. Email notifications were also sent to website subscribers on March 18, 2022.

In total, the Navy received 31 unique comments from federal agencies, nongovernmental organizations, and private individuals. In response to comments received, the Navy made adjustments to the analysis to add, clarify, or correct information, as well as to add new information and scientific literature developed since the Supplement to the 2020 GOA Draft SEIS/OEIS was published. These changes were reflected in the GOA Final SEIS/OEIS.

The Navy published the Notice of Availability for the Final SEIS/OEIS in the FR dated September 2, 2022 (87 FR 54214), and notices were published in the five aforementioned newspapers. The Navy mailed

notification letters to 42 tribal chairpersons, presidents, or chiefs of Alaska Native federally recognized tribes, and 191 federal, state, and local elected officials, government agencies, tribal groups, and organizations. The Navy mailed postcards to 521 individuals, community and business groups, tribal staff, and nongovernmental organizations. Commander, Navy Region Northwest Public Affairs Office distributed a news release to local and regional media. The Navy sent emails to individuals who subscribed on the project website to receive project announcements. All public notices announced the availability of the Final SEIS/OEIS and the 30-day wait period, and provided a description of the Proposed Action, project website address, and other project information. The GOA Final SEIS/OEIS was made available on the project website, and printed copies and CD-ROMS were mailed to the eight aforementioned information repositories. There were no comments received during the 30-day wait period following publication of the GOA Final SEIS/OEIS.

Alternatives Considered

The identification, consideration, and analysis of alternatives are critical components of the NEPA process and contribute to the goal of informed decision-making. The GOA Final SEIS/OEIS serves as an update to the 2011 GOA Final EIS/OEIS and the 2016 GOA Final SEIS/OEIS. Alternatives eliminated from consideration in those documents were re-evaluated to determine if they should be reconsidered for analysis in the GOA Final SEIS/OEIS. These alternatives included alternative training locations, reduced training, alternate time frame, simulated training, training without the use of active sonar, and alternatives including additional geographic mitigation measures within the Study Area. After thorough consideration of each previously considered alternative, the Navy determined that they did not meet the purpose of and need for the Proposed Action, and they were eliminated from further analysis.

The range of alternative(s) includes a No Action Alternative and other reasonable alternatives for achieving the purpose and need. Direct, indirect, cumulative, short-term, long-term, irreversible, and irretrievable impacts were identified.

The Navy analyzed two alternatives in the GOA Final SEIS/OEIS.

- **No Action Alternative.** Under the No Action Alternative, the Navy will not conduct the proposed activities in the GOA Study Area. No authorizations or permits will be issued, and the Proposed Action will not take place. For NMFS, denial of an application for an incidental take authorization constitutes the NMFS No Action Alternative, which is consistent with NMFS' statutory obligation under the MMPA to grant or deny requests for take incidental to specified activities. If NMFS were to deny the Navy's application, the Navy will not be authorized to incidentally take marine mammals in the GOA Study Area. The No Action Alternative fails to meet the Navy's purpose and need for the Proposed Action but was carried forward in order to compare the degree of the potential environmental effects of the Proposed Action with the conditions that will occur if the Proposed Action did not occur.
- **Alternative 1: (Preferred Alternative).** Alternative 1 is the Preferred Alternative. Alternative 1 is a Status Quo Alternative based on the 2016 GOA Final SEIS/OEIS and 2017 GOA ROD. While the revised GOA Study Area is larger than the area analyzed in previous documents, including the 2020 GOA Draft SEIS/OEIS, no new or increased levels of training activities will occur, and no increases in vessel numbers, underway steaming hours, or aircraft events will occur. The use of sonar and explosives will be limited to the TMAA portion of the Study Area as previously analyzed and authorized. The Proposed Action includes the addition of the Continental Shelf and Slope Mitigation Area within the TMAA. In this area, the Navy is proposing to prohibit the use of explosives from the sea surface up to 10,000 feet (ft.) altitude during training over the entire continental shelf and slope out to the 4,000 meter (m) depth contour to protect marine species

and biologically important habitat. Under this Alternative, the Navy will continue to conduct training activities at the level and scope necessary to fulfill its Title 10 responsibilities described in the Purpose and Need of the Proposed Action. In the GOA Study Area, a Status Quo Alternative allows the Navy to meet current and future training requirements necessary to achieve and maintain fleet readiness.

The Navy's entire suite of mitigation measures, including procedural mitigation measures and standard operating procedures, are incorporated into the Preferred Alternative.

The Navy thoroughly considered and then eliminated from further consideration several alternatives that did not meet the purpose of and need for the Proposed Action. See Section 2.5 (Alternatives Eliminated from Further Consideration) of the GOA FinalSEIS/OEIS for a description of alternatives considered but not carried forward for detailed analysis.

Environmental Impacts

The following is a summary of the potential environmental impacts on each resource area associated with implementing the Proposed Action. No new Navy training activities are proposed in the GOA Study Area in the GOA Final SEIS/OEIS, and, for several of the resources, the existing baseline conditions have not changed appreciably. The Navy reviewed new research, literature, laws, and regulatory guidance as described in the GOA Final SEIS/OEIS and determined that the new information resulted in little or no change to the findings of the impact analyses in the 2016 GOA Final SEIS/OEIS. Therefore, the impact assessments from the 2016 GOA Final SEIS/OEIS are incorporated by reference for each of the following resource areas: air quality, sediments and water quality, marine habitats, marine vegetation, marine invertebrates, cultural resources, and public health and safety. The discussion below summarizes the remaining environmental impacts resulting from implementation of the Proposed Action. When required, the Navy consulted with designated resource agencies in accordance with applicable statutes.

Fishes. The Navy analyzed impacts on fish species in the GOA Study Area and included new and emergent data on species occurrence and the implementation of a new mitigation area. The addition of the Continental Shelf and Slope Mitigation Area will substantially decrease the overall impacts on ESA-listed salmonids, specifically Chinook (*Oncorhynchus tshawytscha*) and coho (*Oncorhynchus kisutch*). In addition, the potential exposure of ESA-listed green sturgeon (*Acipenser medirostris*) to an explosive stressor in the TMAA is extremely unlikely due to the demersal nature of this species. One Chinook salmon ESA candidate Evolutionarily Significant Unit (ESU) was added to the analysis. In addition, a new analysis was conducted for green sturgeon to account for new literature on the species' occurrence.

New analyses were conducted for stressors associated with vessel movements, aircraft training, and non-explosive practice ordnance within the WMA. Activities occurring in the WMA portion of the GOA Study Area are unlikely to significantly impact fishes as many fish species occur most frequently over the continental shelf and slope, and the WMA is located off the shelf and slope in open ocean waters with a minimum depth of 4,000 m. Activities using active acoustics or explosives will not occur in the WMA portion of the GOA Study Area. The limited number and types of training activities occurring in the WMA portion of the GOA Study Area are the same as those described and analyzed in the TMAA portion and exclude activities using active sonar and other transducers or explosives. For those activities that occur in both the WMA and the TMAA, the analysis for the WMA is the same as for the TMAA and will not significantly impact fishes.

The Navy determined that acoustic and explosive stressors may affect ESA-listed salmonid species and green sturgeon. However, because of the newly developed geographic mitigation, impacts from explosive stressors will be unlikely to overlap with Chinook, coho, or California-originating salmonids,

and green sturgeon. For other ESA-listed salmonids more likely to co-occur with these training activities, impacts will be short term (occurring over a period of up to 21 days annually), localized, and infrequent. While unlikely, more severe impacts such as mortality or injury from explosive stressors are possible and could lead to permanent or long-term consequences for individuals. However, long-term consequences are not expected for fish populations.

Sea Turtles. The Navy determined that sea turtles rarely occur in the GOA Study Area and are unlikely to co-occur with the Proposed Action; therefore, impacts are not expected to occur. Activities using active acoustics or explosives will not occur in the WMA. The limited number and types of training activities occurring in the WMA are the same as those described and analyzed in the TMAA and exclude activities using active sonar and other transducers or explosives. For those activities that occur in both the WMA and the TMAA, the analysis for the WMA will be the same as for the TMAA and will not significantly impact sea turtles.

Marine Mammals. The Navy determined that acoustic and explosive stressors may affect the following ESA-listed marine mammal species: North Pacific right whale (*Eubalaena japonica*), Mexico Distinct Population Segment (DPS) and Western North Pacific DPS humpback whale (*Megaptera novaeangliae*), blue whale (*Balaenoptera musculus*), fin whale (*Balaenoptera physalus*), sei whale (*Balaenoptera borealis*), Western North Pacific gray whale (*Eschrichtius robustus*), sperm whale (*Physeter macrocephalus*), Western DPS Steller sea lion (*Eumetopias jubatus*), and northern sea otter (*Enhydra lutris kenyoni*). The Navy has also determined that proposed activities in the TMAA may affect humpback whale critical habitat, a portion of which overlaps the Study Area. The Navy's acoustic effects model showed that the use of sonar and other transducers may result in Level A and Level B harassment, as defined under the MMPA, of certain marine mammal species. The level of predicted effects from sonar and other transducers or explosives varies by species, and not all species will be impacted. The Navy's modeling results indicate that the vast majority of potential exposures will be behavioral disturbance (Level B harassment). Level A injury, or permanent threshold shifts (i.e., permanent damage to cells in the ear associated with hearing), are limited to Dall's porpoise, northern-elephant seal, and fin whale. Other non-auditory injury or mortality are not expected to result from the training activities. Potential exposures associated with proposed activities will be temporary as activities occurring in the Study Area will be short term (occurring over a period of up to 21 days annually), localized, and infrequent.

The addition of the Continental Shelf and Slope Mitigation Area will reduce impacts on marine mammals and important shelf and slope habitat in the TMAA by prohibiting the use of explosives below 10,000 ft. altitude (including at the water surface) throughout the entire continental shelf and slope out to the 4,000 m depth contour within the TMAA. Impacts from training activities in the Continental Shelf and Slope Mitigation Area will either remain the same as previously analyzed or will be further reduced.

New analysis was conducted for stressors associated with vessel movements, aircraft training, and non-explosive practice munitions use within the WMA. Activities using active acoustics or explosives will not occur in the WMA. Therefore, no significant impacts are anticipated from vessel movements, aircraft training, and non-explosive practice munitions. The Navy has determined that these stressors will be similar to those within the TMAA, and that weapon noise, vessel noise, aircraft noise, the use of in-water electromagnetic devices and in-air electromagnetic devices, vessel strike, in-water devices, seafloor devices, wires and cables, decelerators/parachutes, and military expended materials will not result in significant impacts on marine mammals.

Birds. Updated sound exposure level effects estimates and acoustic effects modeling were used in the analysis of impacts on birds. The Navy incorporated new information on ESA-listed short-tailed albatross (*Phoebastria albatrus*) presence in both the WMA and TMAA. Seabirds, including the ESA-listed

short-tailed albatross, are expected to occur in higher abundance along the continental shelf and slope. By prohibiting the use of explosives below 10,000 ft. altitude (including at the water surface) throughout the entire continental shelf and slope out to the 4,000 m depth contour within the TMAA, the addition of the Continental Shelf and Slope Mitigation Area will reduce impacts on seabirds and important prey species. Therefore, impacts from training activities in the Continental Shelf and Slope Mitigation Area will either remain the same as previously analyzed, or will be reduced.

Activities using active acoustics or explosives will not occur in the WMA. The distance from shore that aircraft activity occurs in the WMA, and the altitude at which it occurs, limits the potential for overlap with birds, as birds are most likely to occur over the continental shelf and slope, and the WMA begins after water depths of 4,000 m in open ocean waters. The limited number and types of training activities occurring in the WMA are the same as those described and analyzed in the TMAA and exclude activities using active sonar and other transducers or explosives. For those activities that occur in both the WMA and the TMAA, the analysis for the WMA is the same as for the TMAA and will not significantly impact birds.

Under the Migratory Bird Treaty Act (MBTA), impacts will not result in a significant adverse effect on protected populations of seabirds, shorebirds, and other birds. Under the ESA, impacts from sonar, vessel noise, and aircraft disturbance may include behavioral reactions, physiological stress, and masking. In addition to behavioral reactions, physiological stress, and masking, impacts from weapon noise may include hearing loss, and impacts from explosives may include hearing loss, non-auditory injury, and mortality; but mitigation will reduce the likelihood of adverse effects on individual birds.

Socioeconomic Resources and Environmental Justice. The Navy does not anticipate significant socioeconomic impacts, including commercial and recreational fishing, commercial shipping, and tourism. The geographic location of the GOA Study Area, including the WMA, is greater than 12 nautical miles from shore with no population centers in close proximity. Significant socioeconomic impacts are not anticipated as a result of implementation of the Proposed Action; therefore, there will be no disproportionately high and adverse human health or environmental effects on any minority populations and low-income populations.

New analysis was conducted for stressors associated with vessel movements, aircraft training, and non-explosive practice munitions within the WMA. The Navy does not anticipate significant socioeconomic or environmental justice impacts within the WMA. Most of the productive commercial fishing areas are located in shallower waters over the continental shelf, well inshore of the WMA. Similarly, most commercial shipping, tourism, and recreational activities occurs along the coastline, over the continental shelf, and inshore of the WMA.

The addition of the Continental Shelf and Slope Mitigation Area will further reduce potential interactions between Navy activities and commercial and recreational fishing, commercial shipping, or tourism activities that are known to use waters over the continental shelf by prohibiting the use of explosives below 10,000 ft. Other training activities that do not use explosives will continue to be conducted as planned in the Continental Shelf and Slope Mitigation Area; however, any impacts on socioeconomic resources previously anticipated from the use of explosives below 10,000 ft. altitude (including at the water surface) in the TMAA will not occur, reducing the probability of interactions. Impacts from training activities in the Continental Shelf and Slope Mitigation Area will either remain the same as previously analyzed or will be reduced.

Recent Scientific Information

The scientific community continues to conduct research and generate new data in an effort to broaden our understanding of the marine environment. The Navy strongly advocates for and sponsors marine

research and is committed to identifying, evaluating, and incorporating new information that may inform the analyses or affect the conclusions. The Navy has identified and reviewed additional references, including peer-reviewed journal articles (many of them published within the last year), that are relevant to the analyses in the GOA Final SEIS/OEIS. After careful evaluation, the Navy concluded that no new information changes the conclusions in the Final SEIS/OEIS, but certain information is nonetheless relevant to an assessment of acoustic impacts on species in the Study Area. This summary is meant to be illustrative and not a comprehensive review of all new marine species literature.

Marine Mammals. There have been four (4) pertinent studies published since the GOA Final SEIS/OEIS regarding marine mammal hearing. Branstetter and Sills (2022) reviewed direct laboratory (i.e., psychoacoustic) studies of marine mammal hearing. This review does not present new information for assessing impacts on marine mammals; however, it should be used as a reference for background information when discussing masking and models of masking in the Navy's analyses. Tougaard et al. (2022) reviewed the most recent temporary threshold shift (TTS) data from phocid seals (*Phocidae*) and harbor porpoises (*Phocoena phocoena*), and compared empirical data to the predictive exposure functions put forth by Southall et al. (2019), which were based on data collected prior to 2015. The authors concluded that more recent data supports the thresholds used for harbor porpoises (categorized as "very high frequency," or VHF cetaceans), which over-estimated the hearing impact for sounds above 20 kHz in frequency. Similarly, the new data for phocid seals show TTS onset thresholds that are well above the predicted levels for sounds below 5 kHz in frequency. However, phocid seals might be more sensitive to higher frequency sound exposures than predicted, as the TTS onset data for frequencies higher than 20 kHz was below the predicted levels. The interpretation of these data indicate that the criteria and thresholds used to estimate hearing impacts for VHF cetaceans and phocid seals have been conservative overall. Von Benda-Beckmann et al. (2022) assessed whether correcting for kurtosis, a measure of sound impulsiveness, improved the ability to predict temporary threshold shift (TTS) in a marine mammal. The conclusions from this study were that the kurtosis-corrected sound exposure levels (SELs) did not explain differences in TTS between intermittent and continuous sound exposures, likely because silent intervals provided an opportunity for hearing recovery that could not be accounted for by these models. Kurtosis might still be useful for evaluating sound exposure criteria for different types of sounds having various degrees of impulsiveness. Sweeney et al. (2022) examined the difference between noise impact analyses using unweighted broadband sound pressure levels (SPLs) and analyses using auditory weighting functions. The recordings used to conduct parallel analyses in three marine mammal species groups were from a shipping route in Canada. Since shipping noise was predominantly in the low-frequency spectrum, bowhead whales perceived similar weighted and unweighted SPLs while narwhals and ringed seals experienced lower SPLs when auditory weighting functions were used. The data provide a real-world example to support the use of weighting functions based on hearing sensitivity when estimating audibility and potential impact of vessel noise on marine mammals.

There were three (3) publications that were not included in the Final SEIS/OEIS regarding cetacean behavioral reactions to sonar and other transducers. An analysis subsequent to Varghese et al. (2020), which was discussed in the Final SEIS/OEIS, suggested that the observed spatial shifts of Cuvier's beaked whales during multibeam echosounder activity on the Southern California Antisubmarine Warfare Range were most likely due to prey dynamics (Varghese et al. 2021). Manzano-Roth et al. (2022) found that cross sea mount beaked whales reduced clusters of foraging pulses (Group Vocal Periods) during Submarine Command Course events and remained low for a minimum of three days after the mid-frequency active sonar activity. This is consistent with the findings of previous studies of beaked whale responses to sonar discussed in the Final SEIS/OEIS. Königson et al. (2021) tested the efficacy of Banana Pingers (300 ms, 59–130 kHz frequency modulated, 133–139 dBrms re 1 µPa at 1 m source level) as a

deterrent for harbor porpoise in Sweden. As described previously, these pingers were designed to avoid potential pinniped responses. Authors used recorded echolocation clicks with C-PODs to measure the presence or absence of porpoise in the area. Porpoise were less likely to be detected at 0 m and within 100 m of an active pinger, but a pinger at 400 m appeared to have no effect.

There was one (1) new review since the Final SEIS/OEIS of the development of bioenergetic models with a focus on applications to marine mammals (Pirotta et al., 2022). This review did not present new information for assessing impacts on marine mammals; however, it should be used as a reference for background information when discussing Population Consequence of Disturbance and energetic models in the Navy's analyses.

Fishes. There have been two (2) pertinent studies published since the GOA Final SEIS/OEIS regarding the physical effects of underwater detonations on fishes. Jenkins et al. (2022) and Smith et al. (2022) exposed Pacific mackerel (*Scomber japonicus*) to underwater detonations of C4 explosive (6.2 kg net explosive weight [NEW]) off the coast of San Diego, California. Explosions were placed mid-water (10.5 m) and at distances ranging from 21 to 807 m in a relatively shallow water test environment (water depth of 19.5 m). Post-explosion measurements of both non-auditory tissue damage (Jenkins et al. 2022) and impacts on the inner ear (Smith et al. 2022) in exposed fishes were compared to control fishes, and acoustic measurements were taken to relate injuries to sound metrics. The majority of significant non-auditory injuries occurred in the swim bladder and kidney where the peak SPL was at or below 226 dB re 1 µPa and SEL was 196 dB re 1 µPa2s (pressure impulse of 98 pascal seconds [Pa-s]) (Jenkins et al. 2022). In some fishes, mortality and stunning (immobilization) was also observed within distances of 157 m and 257 m of the explosion, respectively. Observations of the inner ear showed varying amounts of auditory injury in the form of hair cell loss as well as evidence of hair cell shearing and even holes in the epithelial tissue along the saccule related to the explosive exposure (Smith et al. 2022). Significant impacts were noted within 400 m (a peak SPL of 220 dB re 1 µPa) from the detonation compared to ears examined at farther distances. Although hair cell damage was found immediately after exposure and hearing loss (i.e., TTS) is likely to have occurred, detection thresholds were not measured. Results from both studies fit well within the current Navy proposed injury threshold of 220 dB re 1 µPa, and the more conservative NMFS implemented thresholds (peak sound pressures of 213 or 207 dB re 1 µPa depending on whether the fish species have a swim bladder or not). In addition, the Navy clarified that explosive energy from detonations will not occur underwater. Therefore, this data does not change the final conclusions for fishes in the GOA Final SEIS/OEIS.

Agency and Tribal Consultation and Coordination

NMFS has served as a cooperating agency throughout the SEIS/OEIS process pursuant to 40 CFR section 1501.6 because of its expertise and regulatory authority over certain marine resources. Additionally, NMFS intends to adopt the SEIS/OEIS as its NEPA documentation in support of its rule-making process under the MMPA. The Navy also consulted and coordinated with other federal and local agencies, including U.S. Fish and Wildlife Service (USFWS) and Alaska State Historic Preservation Officer (SHPO) administrators, in conjunction with actions addressed in the GOA SEIS/OEIS. A summary of the results from each consultation and coordination process is included below:

> **MMPA.** The Navy submitted an application for incidental take authorizations to NMFS on October 9, 2020, for stressors associated with certain activities (acoustic and explosive sources), as described under the Preferred Alternative (Alternative 1). Following this submittal, the Navy clarified that explosive energy from detonations will not occur underwater and updated scientific literature and thresholds used in the analysis in a revised application, submitted on March 11, 2021. As a result of the change to the Proposed Action described in the Supplement

to the 2020 GOA Draft SEIS/OEIS, the Navy submitted an addendum to the application on February 2, 2022.

NMFS signed the Final Rule on December 20, 2022 and concluded that Navy's activities will have a negligible impact on marine mammal species and stocks present in the GOA Study Area. With implementation of the mitigation measures described in the GOA Final SEIS/OEIS, the Navy will have the least practicable adverse impact on marine mammal species or stocks and their habitat. Following publication of the Final Rule, NMFS is expected to issue an LOA for Navy activities. The LOA authorizes the taking of marine mammals incidental to Navy activities conducted in the GOA Study Area pursuant to Section 101 (a)(5)(A) of the MMPA. The LOA specifies the type and amount of incidental take that is authorized, by species, as well as the Navy's mitigation, monitoring, and reporting requirements. NMFS intends to coordinate the LOA with the Incidental Take Statement the Navy anticipates to receive for ESA-listed marine mammals pursuant to Section 7 of the ESA, as discussed below.

NMFS ESA. In accordance with Section 7(a)(2) of the ESA, the Navy requested reinitiation of formal consultation for ongoing military training activities occurring within the Navy's TMAA on April 1, 2021. The Navy also requested to conference under Section 7(a)(4) and 50 CFR section 402.10 on the proposed critical habitat for the humpback whale. NMFS issued previous Biological Opinions addressing these activities in April 2011, May 2013, and April 2017. On April 1, 2021, the Navy submitted a Biological Assessment to NMFS. On March 2, 2022, the Navy submitted an ESA Consultation Addendum Covering the Changes to the GOA Proposed Action and Action Area: *Addition of the Continental Shelf and Slope Mitigation Area within the Temporary Maritime Activities Area and the Addition of the Western Maneuver Area and Associated Training Activities*. The Navy developed this expanded mitigation area to avoid potential impacts from explosives within key habitat areas for ESA-listed species, including humpback whales, gray whales, short-tailed albatross, and salmonids to include Chinook, coho, chum (*Oncorhynchus keta*), sockeye salmon (*Oncorhynchus nerka*), steelhead (*Oncorhynchus mykiss*), and green sturgeon. The Navy clarified that explosive energy from detonations will not occur underwater, so the expanded mitigation area will prevent marine species from being exposed to detonations throughout the highly productive waters of the continental shelf and slope, including near Portlock Bank and off Kodiak Island. The addition of the mitigation area also reduces some of the ESA determinations from likely to adversely affect to not likely to adversely affect due to a significant decrease in exposure to explosives.

NMFS provided the Navy with a Final Biological Opinion on September 30, 2022. In their Biological Opinion, NMFS determined that the Navy's Proposed Action is likely to adversely affect the following ESA-listed species: blue whale, fin whale, humpback whale (Mexico DPS), North Pacific Right whale, sei whale, sperm whale, chum salmon (Hood Canal Summer-run ESU and Columbia River ESU), sockeye salmon (Ozette Lake ESU and Snake River ESU), and steelhead (Puget Sound DPS, Upper Columbia River DPS, Middle Columbia River DPS, Lower Columbia River DPS, Snake River Basin DPS, and Upper Willamette River DPS).

NMFS also determined that the Navy's Proposed Action is not likely to adversely affect the following ESA-listed species and designated critical habitat: humpback whale (Western North Pacific DPS), gray whale (Western North Pacific DPS), Steller sea lion (Western DPS), leatherback sea turtle (*Dermochelys coriacea*), Chinook salmon (Puget Sound ESU, Upper Columbia River Spring-run ESU, Lower Columbia River ESU, Snake River Spring/Summer-run, Snake River Fall-run ESU, Upper Willamette River ESU, California Coastal ESU, Sacramento River Winter-run ESU, and Central Valley Spring-run ESU), coho salmon (Lower Columbia River ESU, Oregon Coast ESU,

Southern Oregon/Northern California Coast ESU, and Central California Coast ESU), steelhead (Northern California DPS, California Central Valley DPS, Central California Coast DPS, South-Central California Coast DPS, Southern California DPS), green sturgeon (Southern DPS), and humpback whale (Mexico DPS) critical habitat.

NMFS concluded that the Proposed Action is not likely to jeopardize the continued existence of threatened and endangered species under NMFS jurisdiction and is not likely to destroy or adversely modify designated critical habitat over the period of the proposed seven-year Marine Mammal Protection Act rule and letter of authorization, and into the reasonably foreseeable future.

USFWS ESA. In accordance with Section 7 of the ESA (50 CFR section 402), during the preparation of the 2011 GOA Final EIS/OEIS, the Navy prepared a Biological Assessment and submitted it to USFWS. The Navy received concurrence letters from the USFWS (March 2010, March 2011) (consultation # 2010-0075 and # 2010-0075-R001). On July 23, 2014, the USFWS sent an email to the Navy stating that reinitiation of consultation for the 2016 GOA Final SEIS/OEIS was not necessary as there were no changes to the actual activities, geographic parameters, or levels of activities occurring in the areas previously subject to consultation with the USFWS.

On May 26, 2021, in accordance with 50 CFR part 402, the Navy submitted a Biological Assessment to reinitiate informal consultation with the USFWS because of trigger (b), new information reveals effects of the Navy's proposed activities (the action) that may affect listed species (ESA-listed short-tailed albatross and northern sea otter) or critical habitat in a manner or to an extent not previously considered in the 2016 GOA Final SEIS/OEIS, and trigger (c) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not previously considered. The 2021 Biological Assessment includes the new information resulting from the changes (updates) to the platforms and systems used as part of the activities and the reduction of certain activities. On February 4, 2022, the Navy submitted a revised Biological Assessment covering the changes to the GOA Proposed Action and Action Area: *Addition of the Continental Shelf and Slope Mitigation Area within the Temporary Maritime Activities Area and the Addition of the Western Maneuver Area and Associated Training Activities*. There is no critical habitat in the Action Area for either species under USFWS jurisdiction. The USFWS issued a Letter of Concurrence on March 30, 2022, for the Navy's determination that the Proposed Action may affect, but is not likely to adversely affect, the federally endangered short-tailed albatross and the federally threatened Southwest Alaska DPS of the Northern sea otter.

Magnuson-Stevens Fishery Conservation and Management Act (MSA). According to 50 CFR section 600.920(a), a supplemental consultation for Essential Fish Habitat (EFH) is required for renewals, reviews, or substantial revisions of actions if these actions may adversely affect EFH. On June 28, 2022, the Navy submitted an EFH Assessment to NMFS Alaska Region, which analyzed the effects of the Proposed Action on designated EFH. The Navy concluded that the Proposed Action will have either a "no adverse effect" or a "may adversely affect" determination, but if so, adverse effects will be minimal in scale and range in duration from a temporary to permanent impact, depending on the stressor type and habitat affected. Based on this analysis, three stressors (explosives at or near the surface, military expended materials, and explosive byproduct contaminants) may adversely affect EFH in the GOA Study Area. Navy training in the GOA Study Area will have no effect on climate change.

On August 11, 2022, NMFS provided their letter concurring with the Navy's findings and thus, concluding consultation. Changes to the Proposed Action since the 2011 EFH consultation include the removal of the following activities: Sinking Exercise, Portable Undersea Tracking Range on the seafloor, Tracking Exercises with explosive sonobuoys, and use of underwater explosives. In the August 11, 2022 letter, NMFS agreed that "the removal of these training activities, as well as the addition of a Continental Shelf and Slope Mitigation Area, which prohibits the use of explosives from the sea surface up to 10,000 ft. altitude during training over the entire continental shelf and slope out to the 4,000 m depth contour of the TMAA, significantly avoids adverse effects to EFH." NMFS concluded that "These changes, as well as our early coordination effort, proved beneficial to the consultation process. Proactive engagement early in the planning process allowed us a better understanding of your proposed actions and mitigation measures. Therefore, we have no additional conservation recommendations for the proposed action and additional EFH consultation is not necessary."

National Historic Preservation Act (NHPA). The NHPA requires the Navy to take into account the effects of the Navy's undertakings on historic properties in the United States and abroad. The proposed military readiness activities in the GOA are considered an "undertaking" under the Regulation. On May 20, 2021, the Navy sent correspondence to the AK SHPO informing them that the proposed activities were occurring beyond the SHPO's jurisdiction under the NHPA. Additionally, the Navy's correspondence noted that there were no World Heritage sites in the TMAA and the NHPA's requirement to consider adverse effects on a foreign nation's equivalent to the National Register was inapplicable. On June 30, 2021, the Navy received a response from the Alaska SHPO indicating no objections with the Navy's determinations. In February 2022, the Navy notified the AK SHPO of the proposed addition of the WMA, noting that the WMA contained no World Heritage sites. In an email/letter dated February 22, 2022, the SHPO confirmed they had no objections to the Navy's determinations regarding the WMA.

Government-to-Government Consultation

On December 3, 2020, the Navy invited 24 tribal chairpersons, presidents, or chiefs of Alaska Native federally recognized tribes to participate in government-to-government consultation for the GOA Navy Training Activities SEIS/OEIS. As of September 2022, none of the Alaska Native federally recognized tribes initiated consultation for the GOA Navy Training Activities SEIS/OEIS.

Mitigation Measures

The Navy has taken all practicable means to avoid or minimize environmental harm. Geographic mitigation measures that the military will implement under the Proposed Action are organized into two categories: procedural mitigation and geographic mitigation areas. Procedural mitigation is mitigation that will be implemented whenever and wherever an applicable military readiness activity takes place within the GOA Study Area. Geographic mitigation areas are geographic locations within the GOA Study Area where the military will implement additional mitigation (i.e., in addition to procedural mitigation) to further avoid or reduce potential impacts on marine mammals, ESA-listed species, and fishery resources from active sonar, explosives, or physical disturbance and strike stressors.

Chapter 5 (Mitigation) of the Final SEIS/OEIS includes mitigation measures that the Navy will implement to avoid or reduce potential impacts from the GOA SEIS/OEIS Proposed Action. The Navy will also implement standard operating procedures specific to activities conducted under the Proposed Action. The Navy worked collaboratively with the appropriate regulatory agencies through the consultation and permitting processes to develop and finalize the mitigation measures included in the GOA Final SEIS/OEIS and incorporated additional mitigation measures or conservation recommendations in coordination with those agencies. The Navy's mitigation measures are also identified in the NMFS Biological Opinion, Final Rule, and LOA.

Marine Species Monitoring, Research, and Reporting

The Navy is committed to environmental stewardship, complying with federal environmental laws and regulations, and providing required and relevant reports to appropriate regulatory agencies while executing its national security mission.

As a complement to the Navy's commitment to avoiding and minimizing impacts of the Proposed Action through mitigation, the Navy will continue to undertake monitoring efforts to better understand the impacts of the Proposed Action, as presented in Section 5.1.2.2.1 (Marine Species Research and Monitoring Programs) of the GOA Final SEIS/OEIS.

The Navy will continue submitting annual training activity reports as required by the MMPA and ESA that describe the level of activities conducted during the reporting period (e.g., the counts of explosives used).

The Navy will report incidents involving biological resources if they occur, such as aircraft or vessel strikes, observed injuries or mortalities to marine mammals or ESA-listed species after the use of explosives. The Navy and NMFS use the information contained within monitoring, research, activity, and incident reports when evaluating the effectiveness and practicality of mitigation measures and determining if adaptive adjustments may be appropriate. These reports also facilitate a better understanding of the biological resources that inhabit the Study Area and the potential impacts of military readiness activities on them.

Responses to Comments Received on the GOA Final SEIS/OEIS

The Navy did not receive any comments on the Final SEIS/OEIS during the 30-day wait period following the publication of the Notice of Availability for the GOA Final SEIS/OEIS.

C. CONCLUSION: Based on factors analyzed in the GOA Final SEIS/OEIS, including military objectives; best available science; potential environmental impacts; input and expertise of federal agencies, tribal cultural authorities, and non-governmental organizations; and comments from the public, I have determined that the GOA Final SEIS/OEIS Preferred Alternative (Alternative 1) best meets the needs of the Navy. Implementation of Alternative 1 will enable the Navy to fully meet the Navy's current and foreseeable future requirements in the GOA Study Area. By implementing standard operating procedures and mitigation measures identified in the Final SEIS/OEIS, this ROD, and in associated regulatory documents; and by adhering to management plans and monitoring requirements described herein, the Navy has adopted all practicable means to avoid or minimize environmental harm. In addition, the Navy assessed the effects of Alternative 1 in accordance with Executive Order 12114 and concluded that there will be no significant harm to the environment in areas outside the United States and possessions.

21 DEC 2022

Date

Mr. Karnig Ohannessian
Deputy Assistant Secretary of the Navy
(Environment and Mission Readiness)