NORTHWEST TRAINING AND TESTING

Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement

Project Information
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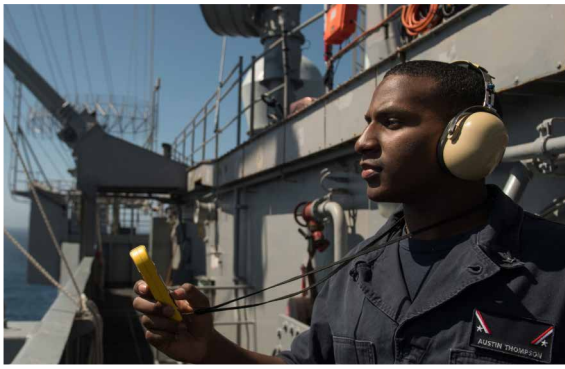

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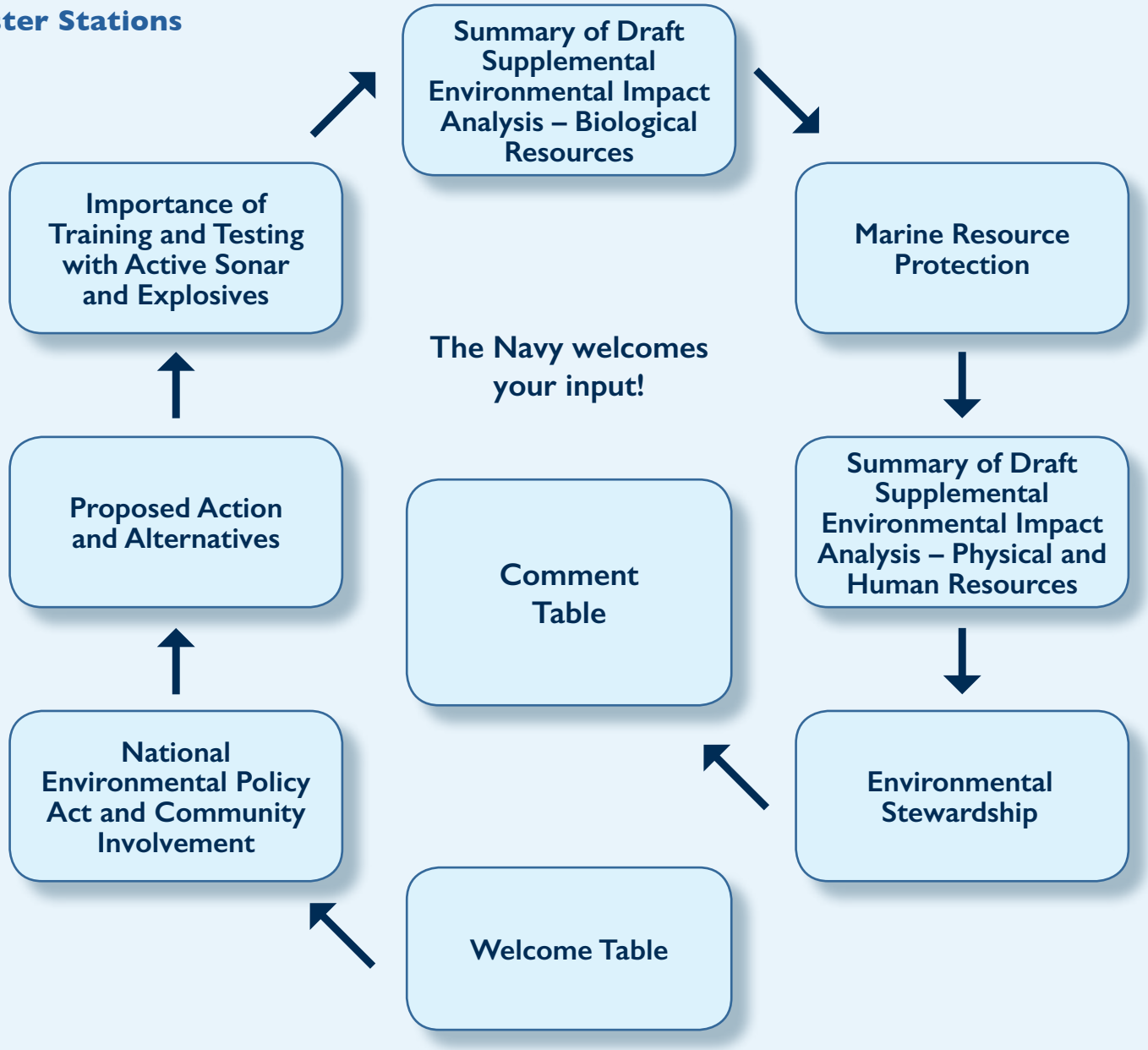
WELCOME TO THE U.S. NAVY'S OPEN HOUSE PUBLIC MEETING

Navy representatives are available at each poster station to provide information and answer your questions. All comments must be postmarked or received online by **June 12, 2019**, for consideration in the Final Supplemental EIS/OEIS.

Public Meetings, 5-8 p.m.:

- April 24, 2019: Everett, Wash.
- April 25, 2019: Silverdale, Wash.
- April 26, 2019: Port Angeles, Wash.
- April 29, 2019: Astoria, Ore.
- April 30, 2019: Newport, Ore.
- May 2, 2019: Eureka, Calif.
- May 3, 2019: Fort Bragg, Calif.
- May 8, 2019: Ketchikan, Alaska

Poster Stations



INTRODUCTION

The U.S. Navy has prepared a draft supplement to the 2015 Northwest Training and Testing Final Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS).

Using the most current and best available science, the Navy has prepared a Draft Supplemental EIS/OEIS to assess the potential environmental impacts associated with conducting proposed ongoing and future military readiness activities within the Northwest Training and Testing (NWTT) Study Area, referred to as the "Study Area." Military readiness activities include training and research, development, testing, and evaluation activities, referred to as "training and testing." The Navy welcomes public review and substantive comments on the Draft Supplemental EIS/OEIS.

The supplement to the 2015 analysis supports proposed ongoing and future activities conducted at sea and in associated airspace within the Study Area beyond 2020. Proposed activities are similar to those conducted in the Study Area for decades and analyzed in the 2015 document.

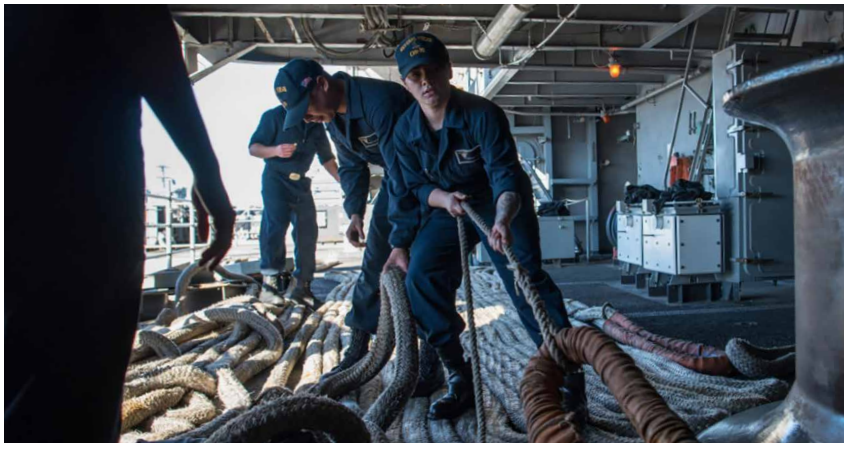
In the Draft Supplemental EIS/OEIS, the Navy evaluated new, relevant information, such as more recent marine species density data and new scientific information, and updated the environmental analyses as appropriate. The Navy prepared the Draft Supplemental EIS/OEIS to support the issuance of federal regulatory permits and authorizations under the Marine Mammal Protection Act and the Endangered Species Act.

The National Marine Fisheries Service and the U.S. Coast Guard are cooperating agencies for this Supplemental EIS/OEIS.

KEY UPDATES MADE IN THE DRAFT SUPPLEMENTAL EIS/OEIS

Proposed training and testing activities are similar to those conducted in the Pacific Northwest and southeastern Alaska for decades and analyzed in the 2015 document. In the Draft Supplemental EIS/OEIS, the Navy:

- Included a No Action Alternative in which Marine Mammal Protection Act authorization would not be issued by the National Marine Fisheries Service (NMFS); therefore, proposed training and testing activities would not be conducted.
- Included analyses of both increases and decreases in training and testing activities from current levels.
- Recategorized or renamed many testing activities for consistency.
- Assessed potential acoustic impacts on marine species using an updated acoustic effects model, updated marine species criteria and thresholds, and more recent marine species density data.
- Used the most current and best available science and analytical methods.
- Reviewed procedural mitigation measures and considered geographic mitigation measures.
- Analyzed the impact of aircraft noise over the Olympic Peninsula.



For more than 240 years, the Navy has been operating on, over, and within the world's oceans, and has been operating within Puget Sound since 1841. These waters are the home and workplace of America's Sailors.

The Navy's mission is to maintain, train, and equip combat-ready naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas. To succeed in combat or an emergency, Sailors must be ready to respond to many different situations, in varied settings, and often under crisis conditions. From large-scale conflict and maritime security operations to humanitarian assistance and disaster relief, Sailors must be fully trained and ready to perform these various and demanding duties at a moment's notice.

The Study Area has not changed since the 2015 NWTT Final EIS/OEIS. In the Draft Supplemental EIS/OEIS, the Navy analyzed only those training and testing activities conducted at sea and in associated airspace within the Study Area.

The Study Area (Figure 1) provides a range of realistic training and testing environments and sufficient air and sea space necessary for safety, for mission success, and to ensure Sailors are equipped and ready to respond. There is no substitute for live training and field testing in a realistic environment.

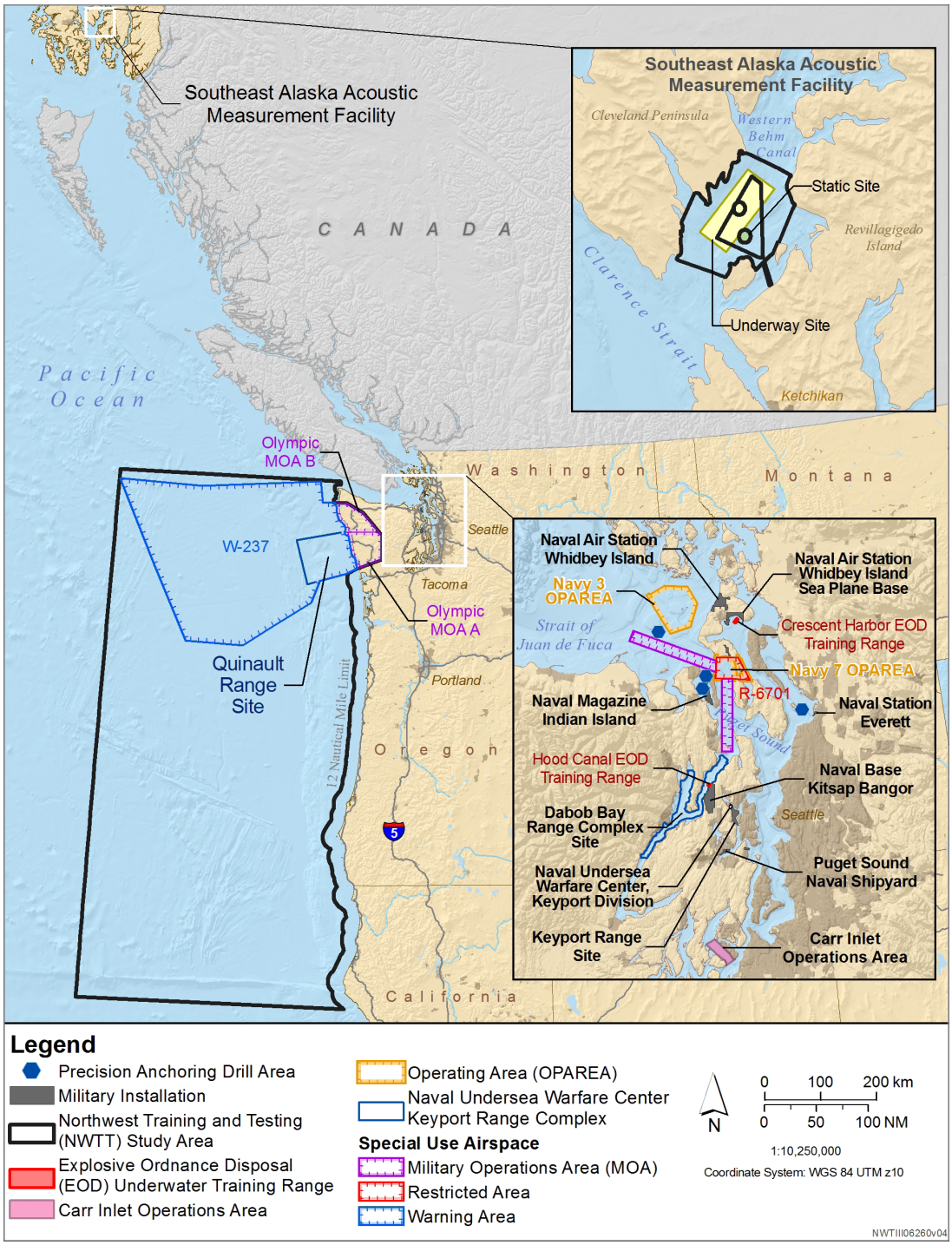


Figure 1. The Northwest Training and Testing Study Area includes:

- Established maritime operating areas and warning areas in the northeastern Pacific Ocean, including areas within:
  - The Strait of Juan de Fuca.
  - Puget Sound.
  - The Western Behm Canal in southeastern Alaska.
- Air and water space within and outside of Washington state waters and established special use airspace.
- Navy pierside and harbor locations within Washington state waters.
- Air and water space outside the state waters of Oregon and Northern California.

Sailors must be ready to respond to many different situations when called upon. The skills needed to achieve readiness are challenging to master and require constant practice. Training and testing must be diverse and as realistic as possible to prepare Sailors for what they will experience in real-world situations to ensure their success and survival.

The land, air, and sea areas of the Pacific Northwest and southeastern Alaska are important to Navy personnel and their families who call these places home. The Navy and the Coast Guard conduct military readiness activities in designated areas of the northeastern Pacific Ocean, including ocean areas offshore of Washington, Oregon, and Northern California, and in the Western Behm Canal in southeastern Alaska. The Navy also trains and conducts tests in certain areas within the Strait of Juan de Fuca and Puget Sound, and at Navy pierside and harbor locations within Puget Sound.

Training in the Study Area

The Navy must maintain a rigorous, comprehensive training regimen to ensure ships are ready to deploy on schedule and Sailors are prepared to carry out their duties as required. Sailors participate in four levels of at-sea training, from learning basic skills to working alongside other military services. The Navy analyzed the potential impacts of various levels of training.

Training and testing must be diverse and as realistic as possible to fully prepare Sailors for what they will experience in real-world situations to ensure their success and survival.

- **Basic-level training**: Consists of individuals, small groups of personnel, or a single crew upon a ship, submarine, or aircraft training on its own.
- **Advanced-level training**: Hones tactics, techniques, and procedures with other units for mission-specific training.
- **Integrated training**: Combines individual units and staffs into strike groups or other combined-arms forces, resulting in deployment certification.
- **Sustainment training**: Allows forces to maintain the highest level of readiness and proficiency.

Testing in the Study Area

Testing activities conducted in the Study Area are critical for maintaining readiness. To maintain an edge over potential adversaries, Sailors must have access to technologically advanced vessels, aircraft, and weapons systems.

The Department of Defense continually researches and develops new technologies. These technologies must be tested and evaluated before Sailors must rely on them in combat or an emergency. Testing may include:

- Development of technology and conducting basic and applied scientific research.
- Assessing the performance of individual system components as they are integrated within vessels and aircraft.
- Building, integrating, and maintaining advanced vessels, aircraft, and systems.

IMPORTANCE OF THE STUDY AREA

Navy training and testing areas within the Study Area provide a safe and realistic environment for training Sailors and testing systems. The proximity of these areas to naval homeports allows for:

- Greater efficiencies during training and testing.
- Shorter transit times.
- Reduced fuel use, cost, and emissions.
- Reduced wear and tear on vessels, submarines, and aircraft.
- Increased safety with closer proximity to airfields, medical facilities, and maintenance facilities on land.
- Access to established at-sea and shore training and testing infrastructure, such as instrumented ranges.
- Maximized at-sea training time, therefore reducing Sailors' time away from their families.

Realistic training and testing activities are crucial for military readiness, personnel safety, and national defense.

Proposed Action

The Navy's Proposed Action is to conduct training and testing activities within the Study Area. To achieve and maintain military readiness, the Navy proposes to:

- Conduct training and testing activities, at sea and in associated airspace, at levels required to support military readiness requirements beyond 2020.
- Accommodate evolving mission requirements, including those resulting from the development, testing, and introduction of new vessels, aircraft, and weapons systems into the fleet.

Proposed activities are similar to those conducted in the Study Area for decades and analyzed in the 2015 document. At-sea training and testing activities continue to include the use of active sound navigation and ranging, known as sonar, and explosives while employing marine species mitigation measures. The type and number of proposed training and testing activities allow for potential changes needed to meet future requirements.

The purpose of the Proposed Action is to conduct training and testing activities to ensure the Navy can accomplish its mission to maintain, train, and equip combat-ready naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas.

Alternatives

The National Environmental Policy Act (NEPA) requires federal agencies to evaluate a range of reasonable alternatives to achieve the purpose of and need for the Proposed Action. In the Draft Supplemental EIS/OEIS, the Navy evaluated the potential environmental impacts of three alternatives, including a No Action Alternative.

Alternative 1 (Preferred Alternative)

- Includes adjustments to types and levels of training and testing to meet current and future requirements.
- Includes the potential for an increase of approximately 300 aircraft flights per year in the Olympic Military Operations Areas.
- Reflects a representative year of training and testing.
- Consists of activities and requirements associated with the development, testing, and introduction of new vessels, aircraft, and weapons systems into the fleet.

Alternative 2

- Includes all activities described under Alternative 1.
- Includes additional adjustments to types and levels of activities to reflect the maximum number of training and testing activities that could occur within a given year.

No Action Alternative

- Authorization from NMFS would not be issued.
- Proposed at-sea training and testing activities would not be conducted.
- Other military activities not associated with the Proposed Action would continue.
- Purpose of and need for the Proposed Action would not be met.

The Navy must train and conduct tests to be prepared to respond to a wide range of situations while maintaining a continuous presence on the world's oceans.

Need for Sonar Training and Testing

Defense against enemy submarines is a top priority for the Navy. To detect potential hostile submarines, the Navy uses both passive and active sonar.

Sonar Training

Sonar uses sound energy waves to detect and locate submerged objects, such as submarines and in-water mines. Sonar proficiency is complex and requires regular, hands-on training in realistic and diverse conditions. The Navy uses simulators and other advanced technologies for some training; however, simulation cannot completely replace training in a live environment. Lack of realistic training will jeopardize the lives of Navy personnel in real-life combat situations. Active sonar is the most effective method of detecting underwater threats, such as torpedoes, in-water mines, and quieter submarines from hostile sources.

Sonar Systems Testing

The Navy needs to research, test, and maintain sonar systems both at sea and pierside to ensure their reliability and availability. Scientific research and testing of new sonar systems and technologies ensures U.S. forces are equipped to defend the nation. Maintaining and upgrading existing sonar systems requires periodic testing and evaluation to ensure systems are functioning properly.

Need for Training and Testing With Explosives

Training in a high-stress environment, including the use of and exposure to explosive ordnance, is necessary for Sailors to be fully prepared to respond to emergencies and national security threats, and to ensure their safety. Testing with explosives is essential to verify that systems will function properly in the environments they will be used.

To the extent possible, Sailors train and conduct tests using inert (non-explosive) practice munitions. Non-explosives, however, cannot completely replace training and testing in a live environment. Limited training and testing with in-water explosives occurs only in established operating areas. The Navy ensures public safety with a combination of notices to mariners and pilots, and vigilant establishment of safety buffers around activity sites when they are in use.

The Navy proposes to continue training and testing activities, which include the use of active sonar and explosives. The Navy would employ marine species mitigation measures during these activities.

Torpedoes, in-water mines, and quieter submarines from hostile sources are true threats to global commerce, national security, and the safety of Sailors. Active sonar is the most effective method of detecting these threats.

SONAR: THEN AND NOW

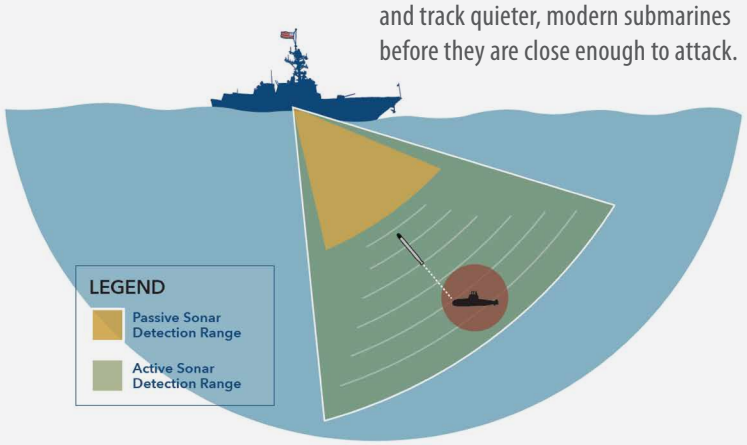
The Navy began using sonar in response to devastating Allied shipping and human losses from U-boat attacks during World War II. Today, forms of sonar are commonly used for commercial, recreational, and scientific applications, including navigation and fish tracking, as well as advanced military applications to detect and track in-water threats.

With advances in warfare technology, newer-generation submarines pose a challenge for the Navy because they are extremely quiet and hard to detect in the noisy ocean environment. Advances in technology and increases in the number of quieter submarines have made it necessary for the Navy to use active sonar, as passive sonar is no longer adequate for detecting them (Figure 2). The difference between these types of sonar is that passive sonar does not emit a signal whereas active sonar emits a pulse sound for purposes of detecting an echo.

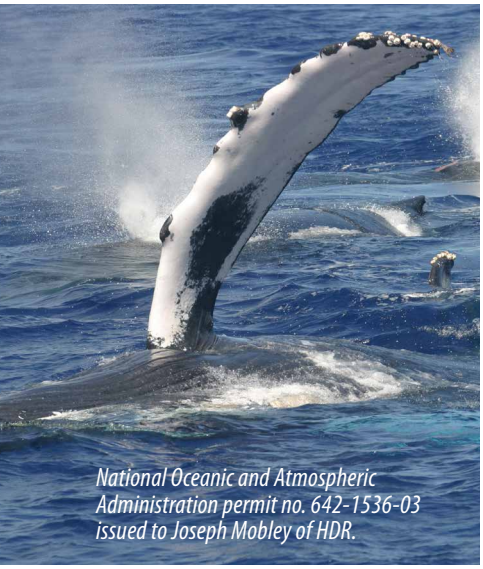
Figure 2. Passive and Active Sonar Detection Range.

Submarines of the previous generation were noisy and could be detected with passive sonar before they came close enough to deploy short-range weapons against a vessel.

Extremely quiet, difficult-to-detect, diesel-electric submarines can approach close enough to deploy long-range weapons before entering the passive sonar detection range of U.S. vessels. Active sonar has a longer detection range that is needed to allow Navy Sailors to detect, identify, and track quieter, modern submarines before they are close enough to attack.



SUMMARY OF THE DRAFT SUPPLEMENTAL EIS/OEIS FINDINGS



National Oceanic and Atmospheric Administration permit no. 642-1536-03 issued to Joseph Mobley of HDR.

In the Draft Supplemental EIS/OEIS, the Navy updated the evaluation of potential impacts with relevant new information and best available science. Thirteen resource areas analyzed within the 2015 NWTT Final EIS/OEIS were evaluated to determine the need for reanalysis. The analysis and findings presented in the 2019 Draft Supplemental EIS/OEIS are consistent with the analysis and findings presented in the 2015 NWTT Final EIS/OEIS.

Subject to continuing analysis and consultation, the findings indicate the following for proposed training and testing activities:

- **Sediments and Water Quality:** Could result in short- and long-term impacts, but most impacts would be negligible. No regulatory thresholds or guidelines would be exceeded.
- **Air Quality:** Not expected to result in detectable hazardous air pollutants or impact public health.
- **Marine Habitats:** Would not change the habitat structure or prevent the seafloor from providing habitat function.
- **Marine Mammals:** May affect certain species, but not expected to decrease the overall health or survival of any population. (Figure 6, page 11).
- **Sea Turtles:** May affect individual leatherback sea turtles, but not expected to decrease the overall health or survival of the leatherback population.
- **Birds:** May affect certain species, but not expected to decrease overall health or survival of any population.

- **Marine Vegetation:** No detectable changes expected in marine vegetation growth, survival, propagation, or population-level impacts.
- **Marine Invertebrates:** Unlikely to impact populations or subpopulations of marine invertebrates.
- **Fishes:** May affect certain species but not expected to decrease the overall health or survival of any population. (Figure 5, page 10).
- **Cultural Resources:** Not expected to impact cultural resources within U.S. territorial waters or under established special use airspace.
- **American Indian and Alaska Native Traditional Resources:** Not expected to have a measureable effect on the availability of marine resources, and the potential for loss of or damage to fishing gear is low.
- **Socioeconomic Resources:** No disproportionately high impacts or adverse effects on low-income or minority populations. Minor impacts due to localized and temporary inaccessibility to areas of co-use.
- **Public Health and Safety:** Would not impact public health and safety.
- **Cumulative Impacts:** Continue to have cumulative impacts on a number of marine mammal, sea turtle, bird, and fish species as well as American Indian and Alaska Native traditional resources from the Proposed Action with combined impacts of past, present, and other future actions.

The Navy strives to minimize impacts on the marine environment. The analysis indicates the majority of effects on marine species would be behavioral responses. The Navy will continue to implement mitigation and monitoring measures to minimize effects on marine species.

DECIBEL	EXAMPLE	APPLIANCES AND TOOLS
0	healthy hearing threshold	
30	whisper	
60	conversational speech	air conditioner
80	ringing alarm clock	garbage disposal
85	passing diesel truck at 50 feet	snow blower
100	motorcycle (riding) at 25 feet	handheld drill
110	rock band	jackhammer

Figure 3. Decibel Levels of Common Airborne Sounds. The Navy modeled noise from current and proposed aircraft training activities. Results show that areas underneath aircraft training in the Olympic Military Operations Areas would rarely be exposed to maximum noise levels greater than 80 decibels.

Quantifying Acoustic Impacts

The Navy has invested considerable effort and resources to model and analyze the effects of underwater sound sources used during training and testing activities. Based on recommendations from the NMFS-sponsored Center for Independent Experts, the Navy created the Navy Acoustic Effects Model (NAEMO), an advanced acoustic modeling and simulation software tool. NAEMO is used as part of the Navy's quantitative analysis process for estimating impacts on marine mammals and sea turtles from underwater sound associated with training and testing (Figure 4). NAEMO factors in the latest science and standardized parameters, such as marine species density, species-specific dive profiles, acoustic propagation data, Navy activity scenario definitions, and marine mammal and sea turtle acoustic threshold criteria. Additional factors, such as implementation of mitigation measures and avoidance of the area by marine species during training and testing activities, are also considered in the quantitative analysis process.

The Navy uses the most current and best available science and analytical methods to reevaluate protective measures that help minimize impacts on the marine environment.

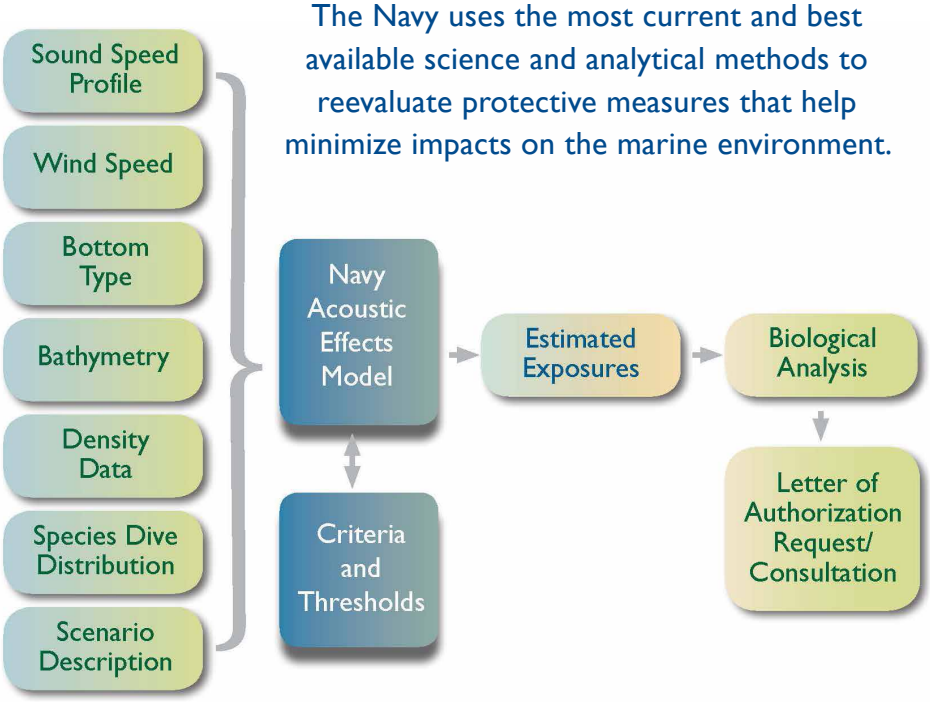


Figure 4. Navy Acoustic Effects Model. NAEMO is an advanced acoustic modeling and simulation software tool used to assess potential effects on marine mammals from sonar and explosives. NAEMO factors in the latest science, standardized parameters, and additional considerations in the quantitative analysis process. Visit **https://www.youtube.com/watch?v=G6FGmVSnT5c&t=2s** for more information.

AIRCRAFT NOISE ASSESSMENT

The Navy modeled noise from aircraft training activities conducted in the Olympic Military Operations Areas (MOAs) and Warning Areas (W-237A and W-237B) using a database of measured aircraft noise levels under different flyover conditions. The results of the study support the analyses and effects determinations for resources in the Draft Supplemental EIS/OEIS. Day-Night Average Sound Level (DNL) accounts for the exposure of all noise events in an average 24-hour period and is the standard measure of a community's response to noise and the basis for land use planning recommendations.

The noise modeling results show that the area underneath the Olympic MOAs would experience a cumulative noise exposure of less than 37 decibels (dB) DNL for current and proposed activities. The ocean area beneath W-237 would experience cumulative noise levels below 35 dB DNL. For comparison, 35 dB DNL would be considered the natural ambient noise level of a wilderness area, and 39 dB DNL the level of a rural residential area.

Both estimated Day-Night Average Sound Levels and maximum noise levels from Navy training in the Olympic MOAs are described in Appendix J (Airspace Noise Analysis for the Olympic Military Operations Areas) of the Draft Supplemental EIS/OEIS. Figure 3 includes maximum noise levels of other common sounds.

POTENTIAL IMPACTS ON FISHES AND MARINE INVERTEBRATES

- Most mid-frequency sonar is not heard by marine invertebrates and most marine fish species (Figure 5). Fish species known to detect mid-frequencies have their best sensitivities outside the range of operational sonars.
- Fish species able to hear sonar are not likely to experience hearing loss because they would need to be near the sonar source for an extended time, and the zone of effect near the source is extremely small.
- Long-term consequences for fish populations due to exposure to sonar and other sound sources are not expected.
- Explosives could injure or kill individual fish or result in temporary hearing loss if in the immediate vicinity of detonations; however, long-term consequences for populations are not expected.
- Military expended materials would not significantly affect habitats, invertebrates, or fishes.

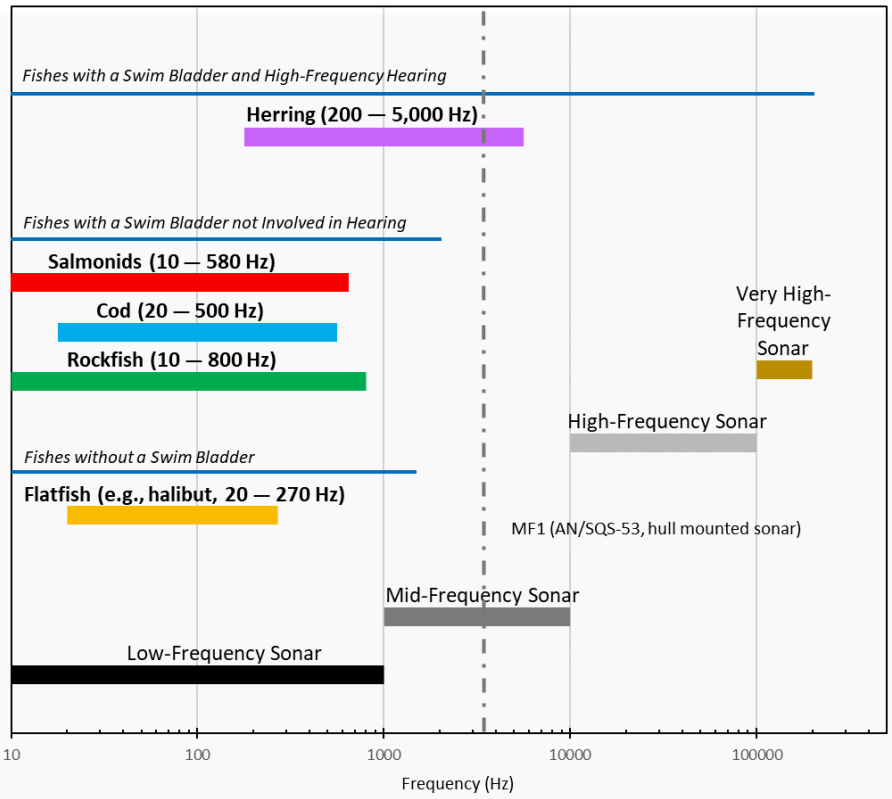
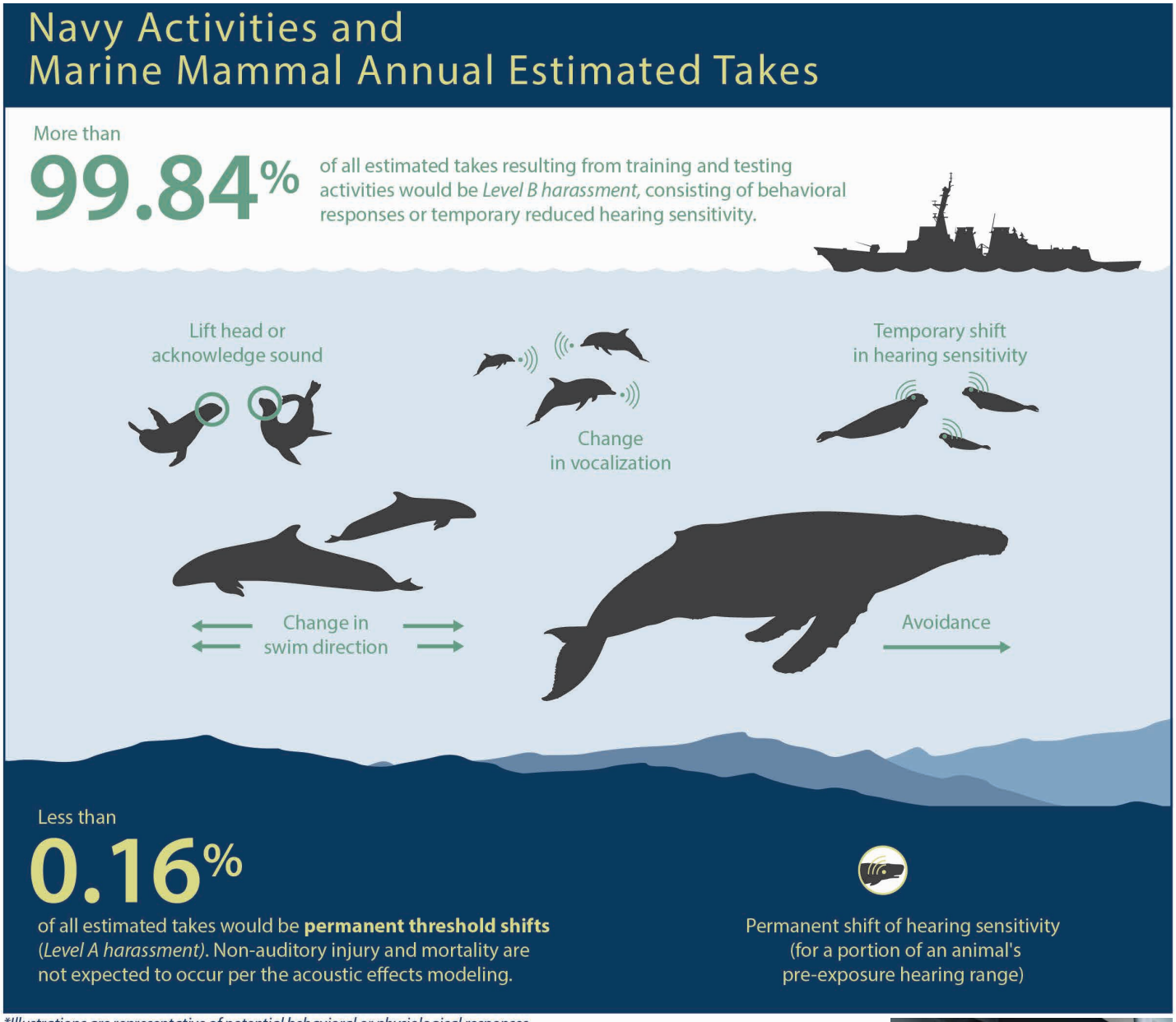


Figure 5. Fish Hearing Group and Navy Sonar Bin Frequency Ranges. The thin blue lines represent the estimated minimum and maximum range of frequency detection for each hearing group, grey and brown lines represent the ranges of each sonar system, and thick colored lines represent example hearing data for specific species. For example, herring can only detect frequencies up to 5,000 Hz, although fishes in the same hearing group can detect much higher frequencies.

Acronyms: Hz = hertz, MF1 = Mid-frequency 1.

Sources: Chapman & Hawkins, 1973; Chapman & Sand, 1974; Hawkins & Johnstone, 1978; Mann et al., 2005; Popper et al., 2007; Popper 2008; Popper et al., 2014; Tavolga & Wodinsky, 1963.



**Illustrations are representative of potential behavioral or physiological responses.*

Figure 6. Navy Activities and Marine Mammal Estimated Takes. The Navy reassessed the potential effects of training and testing on the marine environment using the most current data and analysis methods.

Glossary of Regulatory Terms

- **Take:** To harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal. A take does not necessarily mean the animal is hurt or injured.
- **Incidental take:** An unintentional, but not unexpected, take.
- **Hearing threshold:** The lowest sound pressure at which an animal can hear a particular frequency.
- **Level B harassment:** An act that disturbs or is likely to disturb a marine mammal's natural behavioral patterns, such as migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where patterns are abandoned or significantly altered.
  - **Behavioral response:** A disruption of natural behavior patterns.
  - **Temporary threshold shift:** A reversible shift in an animal's hearing sensitivity.
- **Level A harassment:** An act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild.
  - **Permanent threshold shift:** A permanent shift in an animal's hearing sensitivity.
  - **Injury:** Direct harm or damage to tissues or organs.
- **Mortality:** When an animal is killed or is subjected to a serious injury that is more likely than not to result in death.

Sources: Marine Mammal Protection Act; National Marine Fisheries Service.

Navy Marine Species Research and Monitoring Efforts

The Navy continues to be a world leader in marine species research and monitoring, having funded marine research programs, surveys, and data collection efforts since 2006. The Navy partners with state and federal agencies, universities, research institutions, federal laboratories, and private researchers around the world to better understand marine species occurrence and behavior. This scientific research helps environmental regulators, scientists, and the Navy to:

- Better understand the abundance, distribution, foraging, reproduction, physiology, hearing and sound production, behavior, and ecology of marine species, which is needed to assess the effects on species from naval activities.
- Assess behavioral responses of marine species to sonar and explosives.
- Develop and improve models to better predict potential effects of underwater sound and explosives on marine species.
- Develop effective protective measures.

Research Findings

As part of its Integrated Comprehensive Monitoring Program, the Navy works closely with NMFS to coordinate monitoring efforts across all ocean regions where the Navy trains and conducts tests. The Navy provides annual reports of training and testing activities and monitoring studies to NMFS. These reports are also available to the public.

Scientific research indicates Navy training and testing activities are unlikely to have long-term consequences on marine mammal populations. Some species have displayed short-term behavioral responses during or following certain activities. However, observations indicate Navy activity, including the use of acoustic sources, is compatible with the long-term survival of marine mammals. These observations include:

- Increases in the number of many marine species present in the Study Area.
- Continued presence of species and long-term residence by individual animals, including species thought to be sensitive to sound, in areas highly used by the Navy.
- Lack of observable negative effects on marine mammal stocks or populations with more than 10 years of comprehensive monitoring and data collection.

Visit **www.navymarinespeciesmonitoring.us** for more information on the Navy's Marine Species Monitoring Program.

APPLYING THE LATEST SCIENCE AND TECHNOLOGY

Protective Measures Assessment Protocol

The Protective Measures Assessment Protocol (PMAP) is a software tool the Navy uses prior to conducting training and testing activities. PMAP provides a map that displays the location of the activity relative to any protected or sensitive marine resources in the vicinity. PMAP tailors a report of the specific measures a naval unit must implement to protect marine resources for the actual date, location, and type of activity and ensure compliance with mitigation requirements, permits, and authorizations. Integrated into PMAP are the required mitigation measures contained in the Navy and NMFS Records of Decision, the Marine Mammal Protection Act Letters of Authorization, Essential Fish Habitat consultations, Magnuson-Stevens Fishery Conservation and Management Reauthorization Act recommendations, Coastal Zone Management Act consultations, and the Endangered Species Act Biological Opinions.

Mitigation Measures at Sea

It is important to the Navy to minimize impacts on the marine environment caused by at-sea training and testing activities. The Navy follows strict guidelines and employs measures to reduce potential effects on marine species while training and testing. The measures listed in this fact sheet include some, but not all, of the existing at-sea mitigation measures.

Posting qualified Lookouts

Navy personnel must successfully complete the Marine Species Awareness Training approved by NMFS to qualify as Lookouts, in accordance with the Navy's Lookout Training Handbook. Navy Lookouts visually observe for the presence of marine species within mitigation zones. Visit **www.youtube.com/watch?v=KKo3r1yVBBA** for more information.

Observing the area prior to activities

Marine mammals and sea turtles can be visually detected only while at the surface, and marine mammals can be acoustically detected only while vocalizing underwater. Therefore, before certain activities are conducted, the area is visually scanned and, when possible, acoustically monitored.

Establishing mitigation zones for marine species

A mitigation zone is designed to reduce potential impacts on marine species from certain training and testing activities. The size of a mitigation zone is unique to each specific activity. Navy personnel visually observe each zone. If signs are detected within the mitigation zone indicating marine mammal, sea turtle, or seabird activity, training or testing would cease until the animal exits the zone.

Implementing geographic and temporal mitigation measures

The Navy restricts some types of training and testing activities during certain times of the year and in specific geographic locations to further avoid impacts on marine mammals.

Navigating safely

While in transit, Navy vessel operators are alert at all times, watching for objects in their path. Operators follow Coast Guard navigation rules, operate at a speed consistent with mission and safety, and take proper action if there is a risk of collision. This action includes observing for and maneuvering to maintain distance from marine mammals and sea turtles while underway.

Proposed Geographic Mitigation Areas for Marine Resources

The Navy has proposed geographic mitigation areas (Figure 7) to protect both marine species – including Southern Resident killer whales, salmon, and marbled murrelets – and seafloor resources.

- The Navy limits some types of training and testing within the Olympic Coast National Marine Sanctuary and Marine Species Coastal mitigation areas, and humpback and gray whale biologically important feeding areas to avoid impacts on important foraging, migration, and reproduction habitat of marine species.
- In the Puget Sound and Strait of Juan de Fuca Mitigation Area, the Navy would continue to require units to obtain approval from appropriate designated Command authority prior to (1) use of hull-mounted mid-frequency active sonar during training underway, and (2) conducting ship and submarine active sonar pierside maintenance or testing.
- The Navy does not conduct precision anchoring or explosive mine countermeasure activities within the Seafloor Resource Mitigation Area to avoid impacting live hard-bottom habitat and artificial reefs, which fulfill critical ecosystem functions, and historic shipwrecks, which are archaeological resources important to maritime history.

For additional information about the Navy's proposed mitigation areas, see Appendix K (Geographic Mitigation Assessment) of the Draft Supplemental EIS/OEIS.

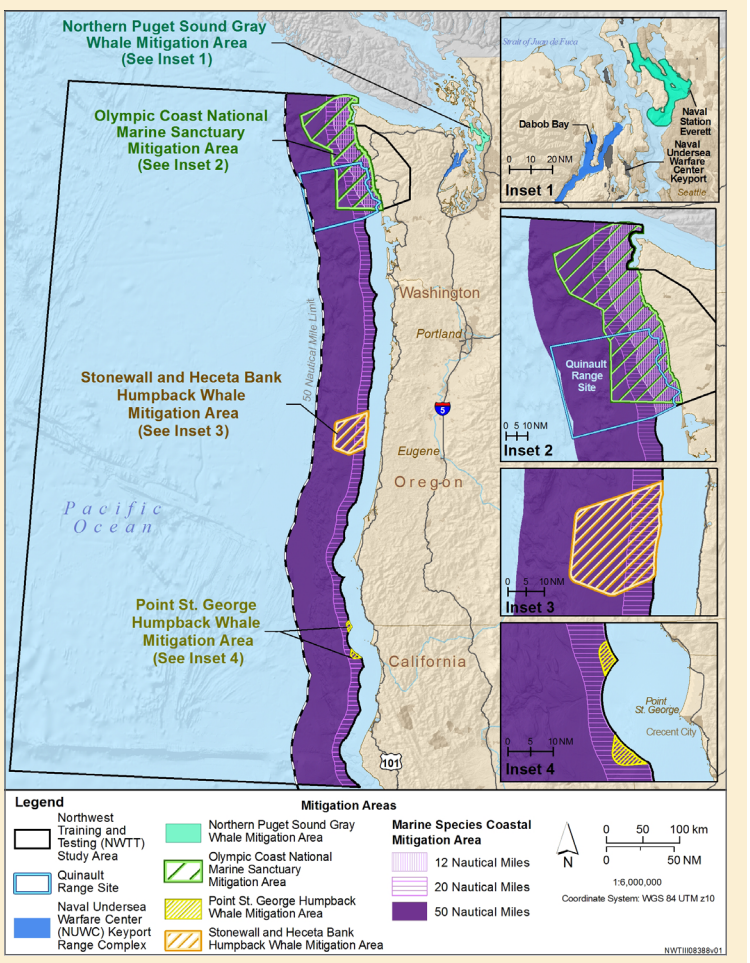


Figure 7. Proposed Geographic Mitigation Areas. The Navy would implement geographic mitigation to avoid or reduce potential impacts on environmental and cultural resources from the Proposed Action.

Environmental Protection at Sea

The Navy is committed to protecting the environment and actively strives to minimize potential effects of training and testing at sea. The Navy continues to implement and improve programs to reduce a vessel's environmental footprint by:

- Consolidating plastic waste into disks and disposing of them when ships return to port.
- Conserving energy by installing energy efficient technologies.
- Managing ballast water to prevent the introduction of non-native species.

The Navy's environmental stewardship programs contribute both to the success of the Navy mission and the preservation of the environment for future generations.

Environmental Protection in the NWTT Study Area

The Navy is dedicated to protecting the marine and coastal environments in the Pacific Northwest and Alaska. Over the past 10 years, the Navy has conducted monitoring and surveys to better understand marine species with which we share the ocean environment. The Navy has funded the following efforts:

Seabird Research and Surveys

- Determining the presence, distribution, and abundance of the Endangered Species Act (ESA)-listed marbled murrelet and short-tailed albatross through offshore surveys conducted by the Washington Department of Fish and Wildlife (WDFW) (2017-present).
- Estimating densities of the marbled murrelet during the fall/winter season within inland Puget Sound waters through WDFW surveys (2012-present).
- Determining marbled murrelet seasonal trends, abundance, and distribution within inland Puget Sound waters through surveys conducted by the U.S. Fish and Wildlife Service and the Navy, and data analyzed by WDFW (2001-2018).

Fish Studies and Surveys

- Surveying ESA-listed salmon and ESA-listed rockfish, and long-term, ongoing surveying of forage fish spawning within the Inland Water portion of the Study Area by WDFW and fisheries conservation organizations (2005-present).
- Estimating stock-specific seasonal variation in ocean distribution, survivorship, and abundance of fall-run ESA-listed Chinook salmon using a model created by NMFS (2017-2018).
- Documenting the oceanic distribution of Chinook salmon, steelhead, coho salmon, and bull trout through a NMFS study using satellite and acoustic tags (2018-present).


Photo courtesy of Steve Jeffries, Washington Department of Fish & Wildlife

Marine Mammal Monitoring and Tagging

- Distribution, Abundance, Seasonality, and Density (2012-present):
  - Determining densities for marine mammals in inland Puget Sound waters through multi-season aerial surveys, working with Smultea Sciences (2013-2016).
  - Documenting seasonal variation in seal and sea lion haulout use throughout the inland Puget Sound waters through multi-season, regional aerial haulout surveys conducted by WDFW.
  - Developing the first density estimates for harbor seals in the inland Puget Sound waters during a Navy and NMFS workshop of scientists, including WDFW.
  - Determining seal and sea lion haulout abundance, seasonal trends, and densities through monitoring and surveys conducted by WDFW, NMFS, and the Navy at Navy installations.
- Passive Acoustic Monitoring Offshore (2004-present):
  - Determining the seasonal movements of the ESA-listed Southern Resident killer whale through acoustic and visual monitoring by NMFS, including deploying acoustic detectors spanning the continental shelf across the Washington, Oregon, and California coasts.
  - Studying the acoustic soundscape and the occurrence and seasonality of marine mammals, including different killer whale ecotypes, through acoustic recording devices deployed by the Scripps Institution of Oceanography in the offshore portion of the Study Area.
- Satellite Tag Tracking (2010-present):
  - Studying the west coast at-sea distribution of the ESA-listed Guadalupe fur seal through satellite tagging by the Marine Mammal Center.
  - Studying California sea lion habitat use, foraging, dive behavior, and movements between the inland waters of the Salish Sea and along the outer coast from Washington to California through satellite tagging by NMFS (2014-2016).
  - Studying habitat use, dive behaviors, and overlap with and the movement between Navy training areas in the Study Area of blue whales, fin whales, and gray whales through satellite tagging by Oregon State University (2013-2017).
  - Studying the mix of distinct population segments of humpback whales, some of which are ESA-listed and occur within the Study Area, through satellite tagging by Oregon State University off the coasts of Washington, Oregon, California, and Hawaii (2017-present). Historical data from similar studies and a genetic analysis were included in this research.
  - Studying movement patterns of fin, humpback, gray, and offshore killer whales through satellite tagging off the coast of Washington (2010-2013) by Cascadia Research Collective.


Photo Credit: Julie Rivers, U.S. Navy

TRIBAL PARTNERSHIPS

The Navy values the culture, history, and heritage of its local communities, and considers how its training and testing may affect cultural resources, such as historic structures, archaeological sites, and traditional cultural properties. The Navy works closely with government agencies, tribes, and other interested parties to avoid, minimize, or mitigate these effects.

Northwest Navy Tribal Leadership Council
The Commander, Navy Region Northwest, formed the Northwest Navy Tribal Leadership Council to maintain strong relationships with the federally recognized tribes of western Washington. This annual collaborative forum promotes a spirit of cooperation among tribal leaders and Navy senior leadership to identify solutions to issues of mutual concern, build trust, share knowledge, and improve communication. The Navy and the tribes maintain open dialogue on issues such as tribal fishing; installation access for tribal shellfish harvesting; Navy environmental planning projects; training, testing, and operations; natural and cultural resource management; and effective consultation processes.

Tribal Government-to-Government Consultation
In conformance with Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments, November 2000), and in fulfillment of the Department of Defense and Navy tribal Government-to-Government consultation policies, the Navy consults with federally recognized tribal governments when Navy proposed actions have the potential to significantly affect tribal rights, resources, or lands.

Treaties in the Pacific Northwest
Between 1854 and 1856, the United States negotiated five treaties with northwest tribes – the treaties of Medicine Creek, Point Elliot, Point No Point, Neah Bay, and Olympia. These federal treaties acknowledged that the tribes living in western Washington maintained the right to fish at off-reservation "usual and accustomed" grounds and stations. Treaties with the Oregon tribes were negotiated and ratified by the United States between 1853 and 1864. These treaties established reservations in exchange for lands ceded by the tribes, although no off-reservation fishing or hunting rights were secured. By 1852, 18 treaties were negotiated with the California tribes that established reservations in exchange for ceded lands, however, none of these were ratified by the United States.

Alaska Native Tribes – Rights and Protected Resources
In Alaska, there are no existing treaties between the United States government and the tribes. All claims relating to Native use and occupancy were extinguished by the Alaska Native Claims Settlement Act in 1971. The Metlakatla Indian Community, Annette Island Reserve, is the only Alaska Native federally recognized tribe that retained a land reservation (Indian land) in Alaska.

Partnering for Sustainability
The Navy has developed partnerships and built coalitions with other government agencies, organizations, and communities to better manage and protect natural and cultural resources.

PUBLIC ACCESS AND SAFETY AT SEA

Sharing the Sea

The cultural identity of Pacific Northwest and coastal Alaska communities is strongly tied to the inland and offshore marine ecosystems. The marine waters support diverse wildlife over and under the surface, as well as transportation, commerce, fishing, recreation, tourism, scientific research, and education.

The military shares marine and coastal areas with the community and recognizes the importance of public access to these areas. Therefore, the Navy has designated airspace and marine areas to indicate where and when it may not be safe for civilian activities to take place. The Navy attempts to avoid popular fishing areas, provides notice of where and when ocean areas will be open or closed for extended periods, and works with local communities to improve communication.

Public Safety Measures

The Navy strives to be good neighbors by minimizing access restrictions and limiting the extent and duration of closures of public areas whenever possible while ensuring safety at all times. When certain training and testing activities are scheduled, notices to mariners are published for public awareness and safety, helping mariners plan accordingly to avoid Navy activities.

The safety of the public and Navy personnel is of utmost importance. The Navy implements multiple safety precautions when planning and conducting at-sea training and testing activities. Some precautionary measures include:

- Ensuring hazard areas are clear of people prior to potentially dangerous activities.
- Canceling or delaying activities if public or personnel safety is a concern.
- Notifying the public of the location, date, time, and duration of potentially dangerous activities, to the extent possible.
- Implementing temporary access restrictions to training and testing areas when appropriate to ensure public safety.

These measures, along with the cooperation of the public, enable safe at-sea training and testing. The Coast Guard publishes and broadcasts notices, and mariners are requested to read and adhere to the published notices.

Thorough environmental and safety reviews are conducted for all test systems prior to going into the water, with early-stage testing in controlled environments to support decisions to test in the marine environment. Most systems go through land-based testing, and many have been tested in smaller fresh water areas or tanks. After an initial review, modifications are made, as needed, to minimize the potential impacts on public safety and the natural environment.

The Navy trains and conducts tests in a manner that is compatible with civilian activity at sea.

The Navy strives to maintain the public's access to ocean and coastal areas whenever possible while ensuring safety at all times. Some access restrictions must occur for public safety and the security of Navy assets and personnel.

NATIONAL ENVIRONMENTAL POLICY ACT PROCESS AND PUBLIC INVOLVEMENT

NEPA is a U.S. law that requires federal agencies to identify and analyze the potential environmental impacts of a proposed action before deciding whether to proceed with that action. The law encourages and facilitates public involvement to inform decision makers on actions that may affect the community or the environment.

Public involvement is an important part of the NEPA process, and a number of opportunities are available for the public to participate throughout the development of the Supplemental EIS/OEIS.

Public and agency input allows decision makers to consider community concerns and benefit from local knowledge. The public participates in the NEPA process during the following stages:

- **Scoping Period**: Helping to identify the scope of the analysis, including potential environmental issues and viable alternatives.
- **Draft Supplemental EIS/OEIS Public Review and Comment Period**: Evaluating and providing substantive comments on the draft analysis.
- **Final Supplemental EIS/OEIS Wait Period**: Reviewing the Final Supplemental EIS/OEIS and Navy responses to substantive comments received on the Draft Supplemental EIS/OEIS.

MARINE MAMMAL PROTECTION ACT AND PUBLIC INVOLVEMENT OPPORTUNITIES

Due to the use of active sonar and explosives during some training and testing activities, the Navy has applied for permits and authorizations under the Marine Mammal Protection Act with NMFS. The Navy has requested from NMFS authorization for the incidental take of marine mammals (see glossary of terms on page 11). NMFS will request public comments on its draft Proposed Rule to issue regulations and Letters of Authorization to the Navy. After the NEPA process is complete, NMFS will make a determination whether or not to issue the Navy a Final Rule and Letters of Authorization.

NATIONAL HISTORIC PRESERVATION ACT SECTION 106 CONSULTATION

Concurrent with the NEPA public involvement process, the Navy is identifying additional consulting parties to participate in the Section 106 process under the National Historic Preservation Act regarding potential effects of the Proposed Action and alternatives on historic properties. Historic properties include districts, sites, buildings, structures, or objects listed or eligible for listing in the National Register of Historic Places. Public comments may be submitted via the same channels as comments on the Draft Supplemental EIS/OEIS provided on page 19.

The Navy welcomes and appreciates your substantive comments. For more information about the Supplemental EIS/OEIS and to submit comments, visit **www.NWTTEIS.com.**

HOW TO SUBMIT COMMENTS ON THE DRAFT SUPPLEMENTAL EIS/OEIS

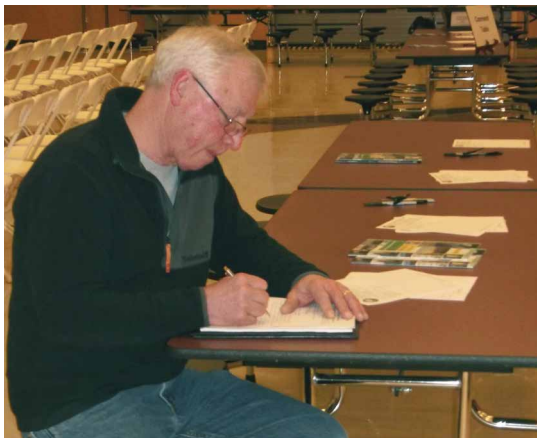
The Navy encourages the public, government agencies, elected officials, and organizations to participate and comment in any of the following ways:

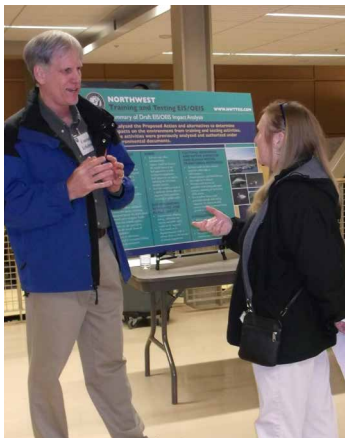
- Submit comments at the public meetings.
- Submit comments via the project website at: **www.NWTTEIS.com.**
- Mail comments to:

  Naval Facilities Engineering
  Command Northwest
  Attention: NWTT Supplemental EIS/OEIS
  Project Manager
  3730 N. Charles Porter Ave.
  Building 385, Admin, Room 216
  Oak Harbor, WA 98278-5000

Comments must be postmarked or received online by **June 12, 2019**, for consideration in the development of the Final Supplemental EIS/OEIS.

Public involvement is a fundamental aspect of the environmental analysis process.





National Environmental Policy Act Process and Timeline

	MILESTONE	DESCRIPTION	CURRENT SCHEDULE
	Notice of Intent to Prepare a Supplemental EIS/OEIS	• Starts the public involvement phase of the NEPA process.	Aug. 22, 2017
→	Scoping Period	• Provides an early and open public process for identifying potential environmental issues and viable alternatives to be evaluated in the Supplemental EIS/OEIS. • Includes opportunities to learn more and submit comments.	**Comment Period:** Aug. 22–Oct. 6, 2017* **Comment period extended*
	Draft Supplemental EIS/OEIS	• Presents the analysis of potential environmental impacts for each identified alternative.	March 29, 2019
→	Draft Supplemental EIS/OEIS Public Review and Comment Period	• Provides the public an opportunity to comment on the analysis presented in the Draft Supplemental EIS/OEIS. • Includes eight public meetings and other opportunities to learn more and submit comments.	**Comment Period:** March 29–June 12, 2019* **Comment period extended* **Public Meetings:** • *Everett, Wash.*: April 24, 2019 • *Silverdale, Wash.*: April 25, 2019 • *Port Angeles, Wash.*: April 26, 2019 • *Astoria, Ore.*: April 29, 2019 • *Newport, Ore.*: April 30, 2019 • *Eureka, Calif.*: May 2, 2019 • *Fort Bragg, Calif.*: May 3, 2019 • *Ketchikan, Alaska*: May 8, 2019
	Final Supplemental EIS/OEIS	• Includes revisions to the Draft Supplemental EIS/OEIS and responses to substantive comments received during the Draft Supplemental EIS/OEIS comment period.	Summer 2020
→	Final Supplemental EIS/OEIS 30-Day Wait Period	• Provides a 30-day wait period after the Final Supplemental EIS/OEIS is published before the Navy may take final action.	Summer 2020
	Record of Decision	• Follows the Final Supplemental EIS/OEIS public review and wait period, which includes consideration of public comments. • Includes the selection of an alternative by the Office of the Assistant Secretary of the Navy (Energy, Installations, and Environment).	Fall 2020

→ Opportunities for Public Review and Comment Complete In Progress Next Steps