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# Executive Summary



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## EXECUTIVE SUMMARY

### ES.1 INTRODUCTION

The United States (U.S.) Department of the Navy (Navy) prepared this Environmental Impact Statement (EIS)/Overseas EIS (OEIS) to assess the potential environmental impacts associated with two categories of military readiness activities: training and testing. Collectively, the at-sea areas in which these military readiness activities are proposed to occur are referred to as the Northwest Training and Testing (NWTT) Study Area (Study Area) (Figure ES-1). The Navy also prepared this EIS/OEIS to comply with the National Environmental Policy Act (NEPA) and Executive Order (EO) 12114.

Major conflicts, terrorism, lawlessness, and natural disasters all have the potential to threaten the national security of the United States. National security, prosperity, and vital interests of the United States are increasingly tied to other nations because of the close relationships between the United States and other national economies. The Navy carries out training and testing activities to be able to protect the United States from its enemies, as well as to protect and defend the rights of the United States and its allies to move freely on the oceans. Training and testing activities that prepare the Navy to fulfill its mission to protect and defend the United States and its allies potentially impact the environment. These activities may trigger legal requirements identified in many U.S. federal environmental laws, regulations, and EOs.

After thoroughly reviewing its environmental compliance requirements for training and testing exercises at sea, the Navy instituted a policy in 2000 designed to comprehensively address these requirements. That policy—the Navy’s At-Sea Policy—resulted, in part, in a series of comprehensive analyses of training and testing activities on U.S. at-sea range complexes and operating areas. These analyses served as the basis for the National Marine Fisheries Service (NMFS) to issue Marine Mammal Protection Act (MMPA) incidental take authorizations because of the potential effects of some training and testing activities on species protected by federal law. These analyses also served as the basis for the NMFS and U.S. Fish and Wildlife Service (USFWS) to issue Biological Opinions (BOs) and incidental take statements pursuant to the Endangered Species Act (ESA). The initial analyses for the Study Area considered in this document (*Northwest Training Range Complex Final EIS/OEIS* [U.S. Department of the Navy 2010a] and *Naval Sea Systems Command Naval Undersea Warfare Center Keyport Range Complex Extension Final EIS/OEIS* [U.S. Department of the Navy 2010b]) resulted in incidental take authorizations and incidental take statements, which begin to expire in 2015.

The present EIS/OEIS updates these analyses and supports incidental take authorizations. This EIS/OEIS also furthers compliance with the Navy’s policy for comprehensive analysis by analyzing the potential environmental impacts of testing in the Southeast Alaska Acoustic Measurement Facility (SEAFAC) and training and testing activities in additional areas (areas not analyzed in previous documents) where training and testing historically occur, including Navy ports and shipyards.

### ES.2 PURPOSE OF AND NEED FOR PROPOSED MILITARY READINESS TRAINING AND TESTING ACTIVITIES

The purpose of the Proposed Action is to conduct training and testing activities to ensure that the Navy meets its mission, which is to maintain, train, and equip combat-ready naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas. This mission is achieved in part by conducting training and testing within the Study Area.

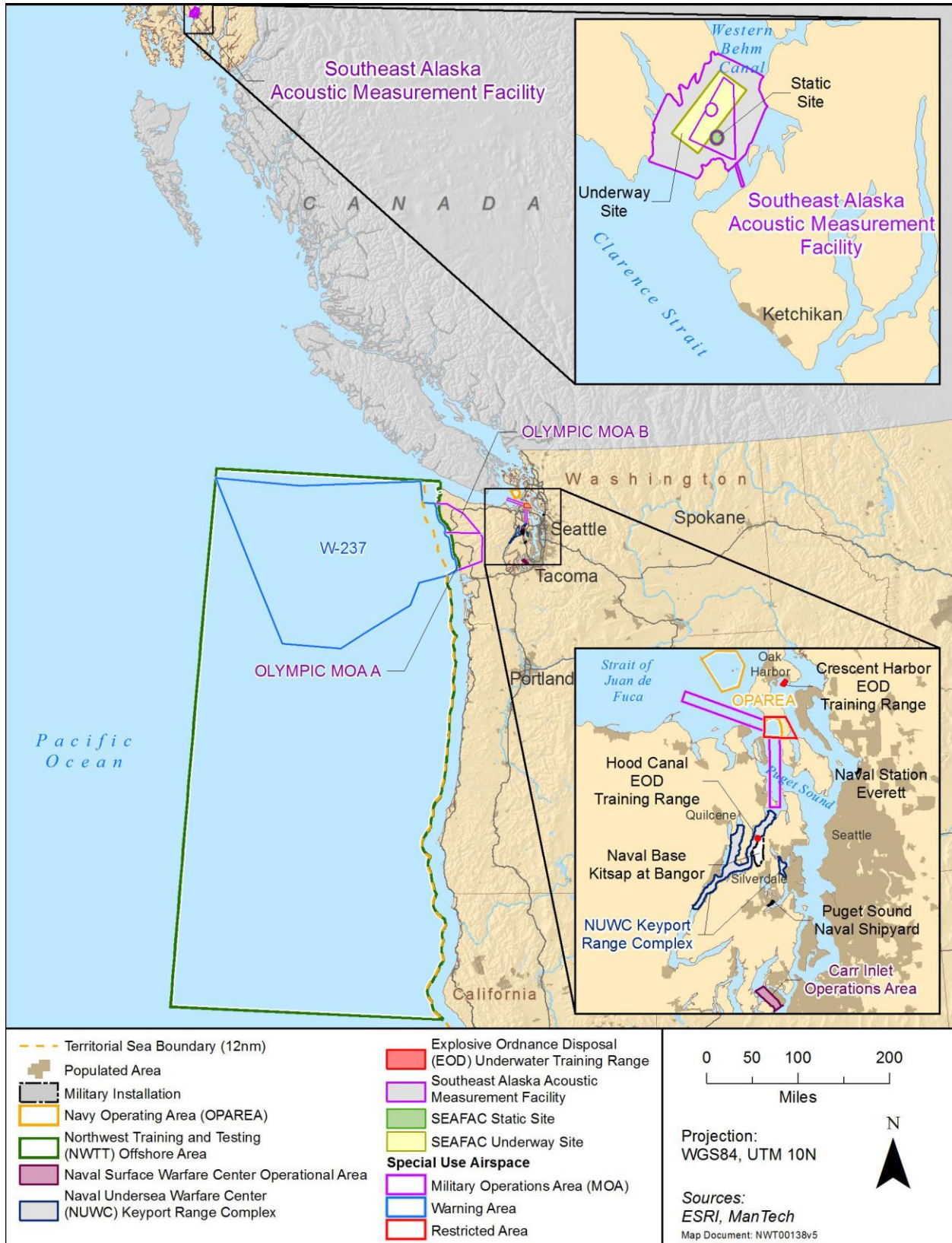


Figure ES-1: Northwest Training and Testing Study Area

## **ES.3 SCOPE AND CONTENT OF THE ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATEMENT**

In this EIS/OEIS, the Navy assessed military readiness training and testing activities that could potentially impact human and natural resources, especially marine mammals, fish, birds, sea turtles, and other marine resources. The range of alternatives includes a No Action Alternative and other reasonable courses of action. The Navy analyzed direct, indirect, cumulative, short-term, long-term, irreversible, and irretrievable impacts. The Navy is the lead agency for the Proposed Action and is responsible for the scope and content of this EIS/OEIS. The United States Coast Guard (USCG) is a cooperating agency as this document assesses potential impacts of USCG activities that occur in the Study Area. The NMFS is a cooperating agency because of its expertise and regulatory authority over marine resources. Additionally, this document will serve as NMFS' environmental planning documentation for the rule-making process under the MMPA.

In accordance with the Council on Environmental Quality Regulations, 40 Code of Federal Regulations (C.F.R.) § 1505.2, the Navy will issue a Record of Decision (ROD) that provides the rationale for choosing one of the alternatives. The decision will be based on factors analyzed in this EIS/OEIS, including military training and testing objectives, best available science and modeling data, potential environmental impacts, and public input.

### **ES.3.1 NATIONAL ENVIRONMENTAL POLICY ACT**

Federal agencies are required under NEPA to examine the environmental impacts of their proposed actions within the United States and its territories. An EIS is a detailed public document that provides an assessment of the potential effects that a major federal action might have on the human environment, which includes the natural environment. The Navy undertakes environmental planning for major Navy actions occurring throughout the world in accordance with applicable laws, regulations, and executive orders. Presidential Proclamation 5928, issued 27 December 1988, extended the exercise of U.S. sovereignty and jurisdiction under international law to 12 nautical miles (nm); however, the proclamation expressly provides that it does not extend or otherwise alter existing federal law or any associated jurisdiction, rights, legal interests, or obligations. Thus, as a matter of policy, the Navy analyzes environmental effects and actions within 12 nm (Territorial Sea as identified on Figure ES-1) under NEPA.

### **ES.3.2 EXECUTIVE ORDER 12114**

This OEIS has been prepared in accordance with EO 12114 (44 Federal Register 1957) and in accordance with Navy regulations codified at 32 C.F.R. Part 187, *Environmental Effects Abroad of Major Department of Defense Actions*. An OEIS is required when a proposed action and alternatives have the potential to significantly harm the environment of the global commons. The global commons are defined as geographical areas outside the jurisdiction of any nation and include the oceans outside of the territorial limits (more than 12 nm from the coast) and Antarctica but do not include contiguous zones and fisheries zones of foreign nations (32 C.F.R. § 187.3). The EIS and OEIS have been combined into one document, as permitted under NEPA (pursuant to 40 C.F.R. § 1506.4) and Executive Order (EO) 12114, to reduce duplication.

### **ES.3.3 MARINE MAMMAL PROTECTION ACT**

The MMPA of 1972 (16 U.S. Code [U.S.C.] § 1361 et seq.) established, with limited exceptions, a moratorium on the "taking" of marine mammals in waters or on lands under U.S. jurisdiction. The act further regulates "takes" of marine mammals in the global commons by vessels or persons under U.S.

jurisdiction. The term “take,” as defined in Section 3 (16 U.S.C. § 1362(13)) of the MMPA, means “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.” “Harassment” was further defined in the 1994 amendments to the MMPA, which provided two levels of harassment: Level A (potential injury) and Level B (potential behavioral disturbance).

The MMPA directs the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant). The authorization must set forth the permissible methods of taking, other means of attaining the least practicable adverse impact on the species or stock and its habitat, and requirements pertaining to the mitigation, monitoring, and reporting of such taking.

The National Defense Authorization Act for Fiscal Year 2004 (Public Law 108-136) amended the definition of harassment, removing the “specified geographic area” requirement, as well as the small numbers provision as applied to military readiness activities or scientific research activities conducted by or on behalf of the federal government consistent with Section 104(c)(3) (16 U.S.C. § 1371 et seq.). The Fiscal Year 2004 National Defense Authorization Act adopted the definition of “military readiness activity” as set forth in the Fiscal Year 2003 National Defense Authorization Act (Public Law 107-314). A “military readiness activity” is defined as “all training and operations of the Armed Forces that relate to combat” and “the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use.” Pursuant to 16 U.S.C. § 1362(18)(B)(i) and (ii), for military readiness activities, the relevant definition of harassment is any act that:

- injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild (“Level A harassment”) or
- disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering to a point where such behavioral patterns are abandoned or significantly altered (“Level B harassment”).

### **ES.3.4 ENDANGERED SPECIES ACT**

The ESA of 1973 (16 U.S.C. § 1531 et seq.) established protection over and conservation of threatened and endangered species and the ecosystems upon which they depend. An “endangered” species is a species in danger of extinction throughout all or a significant portion of its range. A “threatened” species is one that is likely to become endangered within the near future throughout all or in a significant portion of its range. The USFWS and NMFS jointly administer the ESA and are also responsible for the listing of species (designating a species as either threatened or endangered). The ESA allows the designation of geographic areas as critical habitat for threatened or endangered species. Section 7(a)(2) requires each federal agency to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. When a federal agency's action “may affect” a listed species, that agency is required to consult with NMFS or USFWS, depending on which service has jurisdiction over the species (50 C.F.R. 402.14(a)). Under the terms of Section 7(b)(4) and Section 7(o)(2) of the ESA, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the act provided that such taking complies with the terms and conditions of



an Incidental Take Statement. The ESA applies to certain marine mammals, fish, birds, and sea turtles evaluated in this EIS/OEIS.

This EIS/OEIS analyzes potential effects to species listed under the ESA. In accordance with ESA requirements, the Navy consulted under Section 7 of the ESA with NMFS and USFWS on the potential that implementation of the Proposed Action may affect listed species. Any incidental take of ESA-listed marine mammals would also require authorization under the MMPA, and as stated above, the Navy has requested Letters of Authorization pursuant to this requirement. The Navy will comply with the terms and conditions identified in the NMFS and USFWS BOs.

### **ES.3.5 EXECUTIVE ORDER 13175, CONSULTATION AND COORDINATION WITH INDIAN TRIBAL GOVERNMENTS**

EO 13175 (77 Federal Register [FR] 71479) was signed on 6 November 2000 and applies to new agency regulations and policies with Tribal implications to strengthen U.S. government-to-government relationships with federally-recognized American Indian and Alaska Native Tribes. Tribal implications are defined as having substantial direct effects on one or more American Indian or Alaska Native Tribes, on the relationship between the federal government and Indian Tribes, or on the distribution of power and responsibilities between the federal government and Indian Tribes. Agencies are directed not to enact regulations that would place a financial burden on tribal governments unless the federal government would pay for those costs, or unless the tribal government has at least had an opportunity to demonstrate the estimated financial burden if the federal government does not provide the funding. Federal agencies are also directed not to establish new rules that would preempt tribal law unless the tribal government has been given an opportunity to be consulted early in the rulemaking process and also had an opportunity to file an impact statement on how the proposed regulation would preempt tribal law. EO 13084 (Consultation and Coordination with Indian Tribal Governments) was revoked at the time that EO 13175 took effect.

The Navy invited government-to-government consultation with 56 federally-recognized American Indian and Alaska Native Tribes potentially affected by the Proposed Action. The Navy is in or has completed government-to-government consultation with Tribes that have traditional use areas (Offshore Area and Western Behm Canal, Alaska) or treaty reserved rights (Inland Waters) in the NWTT Study Area and have requested such consultation.

### **ES.3.6 OTHER ENVIRONMENTAL REQUIREMENTS CONSIDERED**

The Navy must comply with all applicable federal environmental laws, regulations, and EOs, including, but not limited to, those listed below. Further information on Navy compliance with these and other environmental laws, regulations, and EOs can be found in Chapters 3 (Affected Environment and Environmental Consequences) and 6 (Additional Regulatory Considerations).

- Abandoned Shipwreck Act
- Clean Air Act
- Clean Water Act
- Coastal Zone Management Act
- Endangered Species Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Marine Mammal Protection Act
- Migratory Bird Treaty Act

- National Historic Preservation Act
- National Marine Sanctuaries Act
- Rivers and Harbors Act
- EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*
- EO 12962, *Recreational Fisheries*
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*
- EO 13089, *Coral Reef Protection*
- EO 13158, *Marine Protected Areas*
- EO 13547, *Stewardship of the Ocean, Our Coasts, and the Great Lakes*

## **ES.4 GOVERNMENT AND PUBLIC INVOLVEMENT**

The NEPA process is open for input from affected government bodies and the public as stakeholders in the action. The Navy made extensive efforts to involve other stakeholders in developing the analysis of the Proposed Action.

The Navy published a Notice of Intent in the *Federal Register* (77 FR 11497) and several newspapers on 27 February 2012. In addition, Notice of Intent/Notice of Scoping Meeting Letters were distributed to more than 700 federal, state, and local elected officials, and government agencies. The Navy also notified federally-recognized American Indian and Alaska Native Tribes that could potentially be affected by the Navy's Proposed Action. The Notice of Intent provided an overview of the Proposed Action and the scope of the EIS, and initiated the scoping process.

### **ES.4.1 SCOPING PROCESS**

Scoping is an early and open process for developing the "scope" of issues to be addressed in an EIS and for identifying significant issues related to a proposed action. During scoping, the public helps define and prioritize issues through public meetings and written comments.

Nine scoping meetings were held on March 13, 14, 15, 16, 19, 20, 22, 23, and 27, 2012, in the cities of Oak Harbor, WA; Quilcene, WA; Silverdale, WA; Aberdeen, WA; Tillamook, OR; Newport, OR; Eureka, CA; Fort Bragg, CA; and Ketchikan, AK, respectively. At each scoping meeting, staffers at the welcome station greeted guests and encouraged them to sign in to be added to the project mailing list to receive future notifications. In total, 238 people signed in at the welcome table. The meetings were held in an open house format, presenting informational posters and written information, with Navy staff and project experts available to answer participants' questions. Additionally, a digital voice recorder was available to record participants' oral comments. The interaction during the information sessions was helpful to the Navy, providing an opportunity for communication from the public.

### **ES.4.2 SCOPING COMMENTS**

Scoping participants submitted comments to the Navy in five ways:

- Oral statements at the public meetings (as recorded by the digital voice recorder)
- Written comments at the public meetings
- Written letters (received throughout the public comment period)
- Electronic mail (received throughout the public comment period)
- Comments submitted directly on the project website (received throughout the public comment period)

During the 60-day scoping period, the Navy received 316 comments from individuals, groups, agencies, federally-recognized American Indian and Alaska Native Tribes and tribal organizations, and elected officials. Table ES-1 provides a breakdown of areas of concern based on comments received during scoping. Because many of the comments addressed more than one issue, the total number of issues raised is greater than the 316 comments received. The Navy considered all scoping comments in preparing this EIS/OEIS.

**Table ES-1: Public Scoping Comment Summary**

Area of Concern	No. of times issue raised
Marine Mammals	225
Sound in the Water/Sonar	173
Underwater Explosions	71
Mitigation	59
Study Area/Size	57
Fish	56
Marine Habitats	45
NEPA Process/Public Participation	42
Navy Activities/Proposed Action	38
Sea Turtles	35
Birds	30
Water Quality	29
Socioeconomics/Commercial and Recreational Fishing	29
Cumulative Impacts	25
Public Health and Safety	24
Other	23
Research	20
Air Quality	18
Marine Debris	15
Terrestrial Resources	15
Noise	11
Cultural Resources/American Indian Concerns	9
Access to Ocean Areas	5

Note: NEPA = National Environmental Policy Act

### **ES.4.3 DRAFT ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATEMENT**

The Draft EIS/OEIS was prepared to assess potential impacts of the Proposed Action and alternatives on the environment. A Notice of Availability was published in the *Federal Register* and notices were placed in local and regional newspapers announcing the availability of the Draft EIS/OEIS. The Draft EIS/OEIS was made available for public review on 24 January 2014, and public comments were accepted from 24 January 2014 to 25 March 2014. The Navy provided a 21-day public comment extension, bringing the comment deadline to 15 April 2014. Eight public meetings were held in Washington, Oregon, California, and Alaska from 26 February 2014 to 11 March 2014.

The public meetings were held in a dual format, where members of the public could arrive to view the informational poster stations at any time during the three-hour meetings. A scheduled presentation by the project team was given at each meeting, after which a verbal public comment session was offered. Staffers at the welcome station greeted guests, provided them with informational materials, and

encouraged meeting attendees to sign in to receive future notifications. Comment forms, speaker request cards, and fact sheet booklets were distributed to attendees, along with verbal direction on the organization and flow of the poster stations arranged around the room. A court reporter was made available for verbal public comment for the entirety of the meeting. The court reporter recorded one-on-one oral comments, the project presentation, and the verbal comment session.

#### **ES.4.4 SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATEMENT**

On 19 December 2014, the Navy released a Supplement to the NWTT Draft EIS/OEIS. Following the release of the Draft EIS/OEIS, the Navy determined that a Supplement to the Draft EIS/OEIS was warranted for two reasons. First, one activity, known as Tracking Exercises – Maritime Patrol (Extended Echo Ranging Sonobuoys), is revised, resulting in a substantial change to the type and number of sonobuoys to be used. This change in the Proposed Action warrants preparation of a Supplemental DEIS/OEIS under 40 C.F.R. 1502.9(c)(1)(i). Second, new information relevant to air quality emissions of inland water vessel movements associated with Maritime Security Operations (MSO) warranted further consideration and preparation of an Supplemental DEIS/OEIS under 40 C.F.R. 1502.9(c)(1)(ii).

A Notice of Availability was published in the *Federal Register* and notices were placed in local and regional newspapers announcing the availability of the Supplement to the Draft EIS/OEIS. The Supplement to the Draft EIS/OEIS was made available for public review on 19 December 2014, and public comments were accepted from 19 December 2014 to 2 February 2015.

#### **ES.4.5 FINAL ENVIRONMENTAL IMPACT STATEMENT/OVERSEAS ENVIRONMENTAL IMPACT STATEMENT/RECORD OF DECISION**

This Final EIS/OEIS addresses all public comments received on the Draft EIS/OEIS and the Supplement to the Draft EIS/OEIS. Responses to public comments include correction of data, clarification of analytical approaches, and inclusion of new or additional data or analyses.

The decision-maker will issue a Record of Decision no earlier than 30 days after the Final EIS/OEIS is made available to the public.

#### **ES.5 PROPOSED ACTION AND ALTERNATIVES**

The Navy proposes to conduct military readiness training and testing activities in the Northwest Training and Testing Study Area (Study Area), which is made up of air and sea space in the eastern north Pacific Ocean region, located adjacent to the Northwest coast of the United States, to include the Strait of Juan de Fuca, Puget Sound (including Hood Canal), and Western Behm Canal in southeastern Alaska. In order to both achieve and maintain Fleet readiness, the Navy proposes to:

- Reassess the environmental impacts of Navy at-sea training and testing activities contained in three separate EISs/OEISs and various earlier environmental planning documents (i.e., Environmental Assessments and Categorical Exclusions), and consolidate these analyses into a single environmental planning document, including the following:
  - Northwest Training Range Complex (NWTRC) Final EIS/OEIS (U.S. Department of the Navy 2010a)
  - Naval Sea Systems Command (NAVSEA) Naval Undersea Warfare Center (NUWC) Division, Keyport Range Complex Extension Final EIS/OEIS U.S. Department of the Navy 2010b

- Southeast Alaska Acoustic Measurement Facility (SEAFAC) Final EIS (U.S. Department of the Navy 1988)
- Update environmental analyses with the best available science and most current acoustic analysis methods to evaluate the potential effects of training and testing activities on the marine environment.
- Analyze the potential environmental impacts of training and testing activities in additional areas (areas not covered in previous documents) where training and testing historically occur, including Navy ports and naval shipyards.
- Update the at-sea environmental impact analyses in the previous documents to account for force structure changes for 2015–2020 and the development of supporting weapons, platforms, and systems.
- Adjust baseline training and testing activities from current levels to the level needed to support Navy training and testing requirements beginning October 2015. Adjustment will include other activities and sound sources not addressed in the previous analyses, adjusted for future requirements.
- Support authorization of incidental takes of marine mammals under the MMPA and incidental takes of threatened and endangered marine species, including marine birds under the ESA.

Three alternatives are analyzed in this EIS/OEIS:

- **No Action Alternative:** Baseline training and testing activities, as defined by existing Navy environmental planning documents, including the *NWTRC EIS/OEIS*, the *NUWC Keyport Range Complex Extension EIS/OEIS*, and the *SEAFAC EIS*. The baseline activities also include other events that historically occur in the Study Area and have been subject to previous analysis pursuant to NEPA and EO 12114.
- **Alternative 1 (Preferred Alternative):** Adjustments to types and levels of activities, from the baseline as necessary to support current and planned Navy training and testing requirements. This Alternative considers:
  - modified or updated mission requirements associated with force structure changes, including those resulting from the development, testing, and ultimate introduction of new platforms (vessels and aircraft), and weapons systems into the fleet
  - new biennial training exercises conducted in the Offshore Area
  - biennial mine warfare exercises in Puget Sound in support of homeland defense
  - testing with and testing of undersea systems, subsystems, and components in Puget Sound
  - proof-of-concept testing of unique undersea hardware and fixtures
  - resumption of testing activities at the Carr Inlet Operations Area
  - pier-side sonar maintenance and life cycle testing
  - sea trials in support of overhaul
  - elimination of sinking exercises in the Study Area
- **Alternative 2:** Consists of Alternative 1 plus adjustments to tempo of training and testing activities. All training activities would remain the same except for an increase in Maritime Homeland Defense training events from one every other year to one every year. The tempo of testing activities over those proposed for Alternative 1 would increase in a range between 6 percent for maintenance and miscellaneous testing events and 38 percent for all testing activities in the Western Behm Canal, Alaska. On average, most testing activities in Alternative 2 would increase about 12 percent over those in Alternative 1.

## **ES.6 SUMMARY OF ENVIRONMENTAL EFFECTS**

Environmental effects that might result from the implementation of the Navy's Proposed Action or alternatives have been analyzed in this EIS/OEIS. Resource areas analyzed include sediments and water quality, air quality, marine habitats, marine mammals, sea turtles, birds, marine vegetation, marine invertebrates, fish, cultural resources, American Indian and Alaska Native traditional resources, socioeconomic resources, and public health and safety. The Navy's analysis includes an evaluation of effects on each resource based on the stressors to that resource. The term stressor refers to an agent, condition, or other stimulus that causes stress to an organism or alters physical, socioeconomic, or cultural resources. The effects on these resources are summarized in Table ES-2. This table provides a comparison of the environmental impacts of the No Action Alternative, Alternative 1, and Alternative 2.

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2**

Resource Category	Summary of Impacts
Section 3.1 (Sediments and Water Quality)	<p>Stressors analyzed include explosives and explosion byproducts, metals, chemicals other than explosives, and other materials.</p> <p><b>No Action Alternative:</b></p> <p><u>Explosives and Explosion Byproducts:</u> Impacts of explosion byproducts would be short term and local, while impacts of unconsumed explosives and metals would be long term and local. Chemical or physical changes in sediment or water quality would not exceed applicable standards, regulations, and guidelines.</p> <p><u>Metals:</u> Impacts of metals would be long term and local. Corrosion and biological processes would reduce exposure of military expended materials to seawater, decreasing the rate of leaching, and most leached metals would bind to sediments and other organic matter. Elevated levels of metals in sediments would be restricted to a small zone around the metal.</p> <p><u>Chemicals:</u> Impacts of chemicals other than explosives would be both short term and long term as well as local. Chemical or physical changes in sediment or water quality would not be detectable and would be within existing conditions or designated uses.</p> <p><u>Other Materials:</u> Impacts of other materials would be short term and local. Most other materials from military expended materials would not be harmful to marine organisms and would be consumed during use. Chemical or physical changes in sediment or water quality would not be detectable.</p> <p><b>Alternative 1:</b> The number of individual impacts may increase slightly under Alternative 1, but the types of impacts would be the same as the No Action Alternative. Changes to sediments and water quality under Alternative 1 would be considered localized, short term, and long term. Impacts under Alternative 1 would be below applicable standards, regulations, and guidelines and would be within existing conditions or designated uses.</p> <p><b>Alternative 2:</b> The number of individual impacts may increase slightly under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts would be the same as the No Action Alternative. Changes to sediments and water quality under Alternative 2 would be considered localized, short term, and long term. Impacts under Alternative 2 would be below applicable standards, regulations, and guidelines and would be within existing conditions or designated uses.</p>
Section 3.2 (Air Quality)	<p>Stressors analyzed include criteria air pollutants and hazardous air pollutants.</p> <p><b>No Action Alternative:</b></p> <p><u>Criteria Air Pollutants:</u> Reasonably foreseeable emissions of criteria air pollutants in attainment areas would not cause federal ambient air quality standards to be exceeded.</p> <p><u>Hazardous Air Pollutants:</u> Reasonably foreseeable emissions of criteria air pollutants in maintenance areas would not exceed applicable federal <i>de minimis</i> levels.</p> <p>The public would not be exposed to substantial concentrations of hazardous air pollutants from the Navy's actions.</p> <p><b>Alternative 1:</b> The number of individual activities would increase under Alternative 1, as would emissions of the six criteria air pollutants. All of the air emissions sources proposed are mobile sources and do not impact the current attainment status of the Air Quality Control Regions in the Study Area. Therefore, changes to air quality under Alternative 1 would be considered minor and localized; changes to air quality from hazardous air pollutants are not expected to be detectable.</p>

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
	<p><b>Alternative 2:</b> The number of individual activities would increase under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), as would emissions of the six criteria air pollutants. All of the air emissions sources proposed are mobile sources and do not impact the current attainment status of the Air Quality Control Regions in the Study Area. Therefore, changes to air quality under Alternative 2 would be considered minor and localized; changes to air quality from hazardous air pollutants are not expected to be detectable.</p>
Section 3.3 (Marine Habitats)	<p>Stressors analyzed include acoustic (impulsive sound sources – underwater explosions) and physical disturbance and strike (vessel and in-water device strikes, military expended materials, and seafloor devices).</p> <p><b>No Action Alternative:</b></p> <p><u>Acoustic:</u> Most of the high-explosive military expended materials would detonate at or near the water surface. Only bottom-laid explosives could affect bottom substrate and, therefore, marine habitats. Habitat utilized for underwater detonations would primarily be soft-bottom sediment. The surface area of bottom substrate affected would be a fraction of the total training area available in the Study Area.</p> <p><u>Physical Disturbance and Strike:</u> Items entering the ocean would not be expected to affect marine habitats because of the nature of high-energy surf in the Offshore Area, and shifting sands in the Offshore Area, Inland Waters, and the Western Behm Canal. Once on the seafloor, larger military expended material would be colonized by benthic organisms because these materials would be anchor points in the shifting bottom substrates. Smaller military expended materials would be incorporated into the bottom substrates. The surface area of bottom substrate affected would be a fraction of the total training area available in the Study Area.</p> <p>Pursuant to the Essential Fish Habitat (EFH) requirements of the Magnuson Stevens Fishery Conservation and Management Act and implementing regulations, the use of explosives on or near the bottom, military expended materials, and seafloor devices during training and testing activities may have an adverse effect on EFH by reducing the quality and quantity of non-living substrates that constitute EFH and Habitat Areas of Particular Concern. Essential Fish Habitat conclusions for associated marine vegetation and sedentary invertebrates are summarized in corresponding resource sections (e.g., marine vegetation, invertebrates). Impacts to the water column as EFH are summarized in corresponding resource sections (e.g., invertebrates, fish) because they are impacts on the organisms themselves.</p> <p><b>Alternative 1:</b> The number of individual impacts may increase under Alternative 1, but the types of impacts would be the same as the No Action Alternative. Despite the increases, most detonations would continue to occur at or near the surface, and those that do occur on the seafloor would be located in primarily soft-bottom habitat. Changes to marine substrates could include localized disturbance of the seafloor and cratering of soft bottom sediments. Impacts on soft bottom habitats would be short term, and impacts on hard bottom would be long term. Activities under Alternative 1 would not impact the ability of marine substrates to serve their function as habitat.</p> <p><b>Alternative 2:</b> The number of individual impacts may increase under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts would be the same as the No Action Alternative. Despite the increases, most detonations would continue to occur at or near the surface, and those that do occur on the seafloor would be located in primarily soft-bottom habitat. Changes to marine substrates could include localized disturbance of the seafloor and cratering of soft bottom sediments. Impacts on soft bottom habitats would be short term, and impacts on hard bottom would be long term. Activities under Alternative 2 would not impact the ability of marine substrates to serve their function as habitat.</p>



**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
<p>Section 3.4 (Marine Mammals)</p>	<p>Stressors analyzed include acoustic (sonar and other active acoustic sources; explosive (impulsive) sources; weapons firing, launch, and impact noise; vessel noise; and aircraft noise), energy (electromagnetic devices), physical disturbance and strike (vessels, in-water devices, military expended materials, and seafloor devices), entanglement (fiber optic cables and guidance wires, decelerator/parachutes), ingestion (munitions and military expended material other than munitions), and secondary stressors (sediments and water quality).</p> <p><b>No Action Alternative:</b></p> <p><u>Acoustic:</u> Pursuant to the Marine Mammal Protection Act (MMPA), the use of sonar and other non-impulsive sources, and explosive (impulse) sources may result in Level A harassment or Level B harassment of certain marine mammals; weapons firing, vessel noise, and aircraft noise are not expected to result in Level A or Level B harassment of any marine mammals.</p> <p>Pursuant to the Endangered Species Act (ESA), sonar and other active acoustic sources and explosive (impulsive) sources may affect and are likely to adversely affect certain ESA-listed marine mammals; weapons firing, launch, and impact noise; vessel noise, and aircraft noise may affect but are not likely to adversely affect certain ESA-listed marine mammals; and all acoustic sources would have no effect on marine mammal critical habitats.</p> <p><u>Energy:</u> Pursuant to the MMPA, the use of electromagnetic devices is not expected to result in Level A or Level B harassment of any marine mammals.</p> <p>Pursuant to the ESA, the use of electromagnetic devices may affect but is not likely to adversely affect certain ESA-listed marine mammals and would have no effect on marine mammal critical habitats.</p> <p><u>Physical Disturbance and Strike:</u> Pursuant to the MMPA, the use of vessels, in-water devices, military expended materials, and seafloor devices is not expected to result in Level A or Level B harassment of any marine mammal.</p> <p>Pursuant to the ESA, the use of in-water devices and military expended materials may affect but is not likely to adversely affect certain marine mammal species. The use of seafloor devices would have no effect on any ESA-listed marine mammal. The use of vessels, in-water devices, military expended materials, and seafloor devices would have no effect on marine mammal critical habitats.</p> <p><u>Entanglement:</u> Pursuant to the MMPA, the use of fiber optic cables, guidance wires, and decelerator/parachutes is not expected to result in mortality or in Level A or Level B harassment of any marine mammal.</p> <p>Pursuant to the ESA, the use of fiber optic cables, guidance wires, and decelerator/parachutes may affect but is not likely to adversely affect certain ESA-listed marine mammals and would have no effect on marine mammal critical habitats.</p> <p><u>Ingestion:</u> Pursuant to the MMPA, the potential for ingestion of military expended materials is not expected to result in Level A or Level B harassment of any marine mammal.</p> <p>Pursuant to the ESA, the potential for ingestion of military expended materials may affect, but is not likely to adversely affect certain ESA-listed species.</p> <p><u>Secondary Stressors:</u> Pursuant to the MMPA, secondary stressors are not expected to result in Level A or Level B harassment of any marine mammal.</p> <p>Pursuant to the ESA, secondary stressors may affect but are not likely to adversely affect certain ESA-listed marine mammals and would have no effect on marine mammal critical habitat.</p> <p><b>Alternative 1:</b> The number of individual impacts under the No Action Alternative may increase for most species under Alternative 1,</p>

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
	<p>but the types of impacts, MMPA conclusions, and ESA conclusions would be the same as under the No Action Alternative. Despite the increase, impacts on marine mammals under Alternative 1 are not expected to decrease the overall fitness of any marine mammal population.</p> <p><b>Alternative 2:</b> The number of individual impacts under the No Action Alternative may increase for most species under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts, MMPA conclusions, and ESA conclusions would be the same as under the No Action Alternative. Despite the increase, impacts on marine mammals under Alternative 2 are not expected to decrease the overall fitness of any marine mammal population.</p>
Section 3.5 (Sea Turtles)	<p>Stressors analyzed include acoustic (sonar and other active acoustic sources; underwater explosives; weapons firing, launch, and impact noise; vessel and simulated vessel noise, and aircraft noise), energy (electromagnetic devices), physical disturbance and strike (vessels and in-water devices, and military expended materials), entanglement (fiber optic cables, guidance wires, and decelerator/parachutes), ingestion (munitions and military expended materials other than munitions), and secondary (habitat, sediments, and water quality).</p> <p><b>No Action Alternative:</b></p> <p><u>Acoustic:</u> Pursuant to the ESA, the use of sonar and other active acoustic sources during training activities may affect, but is not likely to adversely affect, ESA-listed leatherback turtles. The use of sonar and other active acoustic sources during testing activities may affect, but is not likely to adversely affect, leatherback turtles. Underwater explosives, and vessel and aircraft noise may affect, but are not likely to adversely affect, leatherback turtles. Weapons firing, launch, and impact noise during training may affect, but is not likely to adversely affect, leatherback turtles. Weapons firing, launch, and impact noise during testing would have no effect on leatherback turtles. The use of active acoustic sources would have no effect on leatherback turtle critical habitat.</p> <p><u>Energy:</u> Pursuant to the ESA, the use of energy sources during training and testing activities would have no effect on ESA-listed leatherback turtles. The use of energy sources would have no effect on leatherback turtle critical habitat.</p> <p><u>Physical Disturbance and Strike:</u> Pursuant to the ESA, physical disturbance and strike from the use of vessels during training and testing activities may affect, and is likely to adversely affect, ESA-listed leatherback turtles. The use of in-water devices, military expended materials, and seafloor devices may affect, but is not likely to adversely affect, ESA-listed sea turtles. Physical disturbance and strike stressors would have no effect on leatherback turtle critical habitat.</p> <p><u>Entanglement:</u> Pursuant to the ESA, entanglement from the use of fiber optic cables, guidance wires, and decelerator/parachutes during training and testing activities may affect, but is not likely to adversely affect, ESA-listed leatherback turtles. Entanglement stressors would have no effect on leatherback turtle critical habitat.</p> <p><u>Ingestion:</u> Pursuant to the ESA, the use of munitions during training and testing activities would not affect ESA-listed leatherback turtles. The use of military expended materials other than munitions during training and testing activities may affect, but is not likely to adversely affect, ESA-listed leatherback turtles. Ingestion stressors would have no effect on leatherback turtle critical habitat.</p> <p><u>Secondary Stressors:</u> Pursuant to the ESA, secondary stressors may affect but are not likely to adversely affect ESA-listed sea turtles because changes in sediment, water, and air quality are not likely to be detectable, and no detectable changes in growth, survival, propagation, or population levels of sea turtles are anticipated. Secondary stressors would have no effect on leatherback turtle critical habitat.</p> <p><b>Alternative 1:</b></p> <p><u>Acoustic:</u> Pursuant to the ESA, the use of sonar and other active acoustic sources during training activities may affect, and is likely</p>

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
	<p>to adversely affect, leatherback turtles.</p> <p>Despite the increase in activities, all other impacts and ESA conclusions would be the same as under the No Action Alternative. Impacts on sea turtles under Alternative 1 are not expected to decrease the overall fitness of any sea turtle population.</p> <p><b>Alternative 2:</b></p> <p><u>Acoustic:</u> Pursuant to the ESA, the use of sonar and other active acoustic sources during training activities may affect, and is likely to adversely affect, leatherback turtles.</p> <p>Despite the increase in activities, all other impacts and ESA conclusions would be the same as under the No Action Alternative. Impacts on sea turtles under Alternative 2 are not expected to decrease the overall fitness of any sea turtle population.</p>
<p>Section 3.6 (Birds)</p>	<p>Stressors analyzed include acoustic (sonar and other active acoustic sources; explosives: weapons firing, launch, and impact noise; vessel and simulated vessel noise; and aircraft noise), physical disturbance and strike (aircraft and aerial target strikes, vessels and in-water device strikes, and military expended materials), ingestion (munitions and military expended materials other than munitions), and secondary (sediments and water quality).</p> <p><b>No Action Alternative:</b></p> <p><u>Acoustic:</u> Pursuant to the ESA, the use of sonar, other active acoustic sources, and underwater explosives may affect, and is likely to adversely affect, the marbled murrelet; may affect, but is not likely to adversely affect, the short-tailed albatross; and would have no effect on other ESA bird species. Weapons firing, launch, and impact noise may affect, but is not likely to adversely affect the marbled murrelet and short-tailed albatross, and would have no effect on other ESA species. Vessel and simulated vessel noise from training and testing may affect, but is not likely to adversely affect, the marbled murrelet and short-tailed albatross, and would have no effect on other ESA species. Aircraft noise during training and testing may affect but is not likely to adversely affect the marbled murrelet, northern spotted owl, short-tailed albatross, streaked horned lark, and western snowy plover. Acoustic sources would have no effect on critical habitat.</p> <p><u>Physical Disturbance and Strike:</u> Pursuant to the ESA, physical disturbance and strike from the use of aircraft, aerial targets, vessels, in-water devices, and military expended materials for training and testing may affect but is not likely to adversely affect the marbled murrelet and short-tailed albatross. The use of aircraft may affect, but is not likely to adversely affect the northern spotted owl, streaked horned lark, and western snowy plover. Physical disturbance and strike stressors would have no effect on critical habitat.</p> <p><u>Ingestion:</u> Pursuant to the ESA, ingestion hazards from the use of munitions and military expended materials other than munitions may affect, but are not likely to adversely affect, the short-tailed albatross, and would have no effect on other ESA species. Ingestion stressors would have no effect on critical habitat.</p> <p>Secondary Stressors: Pursuant to ESA, secondary stressors would have no effect on ESA-listed bird species.</p> <p>Under the Migratory Bird Treaty Act (MBTA) regulations applicable to military readiness activities (50 C.F.R. Part 21), the impacts from stressors introduced during training and testing activities would not result in a significant adverse effect on migratory bird populations.</p> <p>Under the Bald and Golden Eagle Protection Act, the impacts from stressors introduced during training and testing activities would not result in an adverse effect on bald or golden eagles.</p> <p><b>Alternative 1:</b> The number of individual impacts under the No Action Alternative may increase under Alternative 1, but the types of</p>

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
	<p>impacts, and ESA, MBTA, and Bald and Golden Eagle Protection Act conclusions would be the same as under the No Action Alternative. Despite the increase, impacts on seabirds under Alternative 1 are not expected to decrease the overall fitness of any bird population.</p> <p><b>Alternative 2:</b> The number of individual impacts under the No Action Alternative may increase under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts, and ESA, MBTA, and Bald and Golden Eagle Protection Act conclusions would be the same as under the No Action Alternative. Despite the increase, impacts on seabirds under Alternative 2 are not expected to decrease the overall fitness of any bird population.</p>
Section 3.7 (Marine Vegetation)	<p>Stressors analyzed include acoustic (underwater explosives) and physical disturbance and strike (vessel and in-water device strikes, military expended materials, and seafloor devices), and secondary (sediments and water quality).</p> <p>No ESA-listed marine vegetation species are found in the Study Area.</p> <p><b>No Action Alternative:</b></p> <p><u>Acoustic and Physical Disturbance and Strike:</u> Underwater explosives, physical disturbance, and strike could affect marine vegetation by destroying individual plants or damaging parts of plants. The impacts of these stressors are not expected to result in detectable changes in growth, survival, or propagation that would result in population-level impacts on marine plant species.</p> <p><u>Secondary Stressors:</u> Secondary stressors are not expected to result in detectable changes in growth, survival, propagation, or population-level impacts because changes in sediment and water quality or air quality are not likely to be detectable.</p> <p>These conclusions are based on the fact that the areas of impact are very small compared to the relative distribution and the locations where explosions or physical disturbance or strikes occur.</p> <p>Pursuant to the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations, the use of explosives and other impulsive sources, vessel movement, in-water devices, military expended materials, and seafloor devices during training and testing activities may have an adverse effect on EFH by reducing the quality and quantity of marine vegetation that constitutes EFH or Habitat Areas of Particular Concern.</p> <p><b>Alternative 1:</b> The number of individual impacts under the No Action Alternative may increase under Alternative 1, but the types of impacts would be the same as under the No Action Alternative. Despite the increase, impacts from acoustic stressors and physical disturbance are not expected to result in detectable changes to marine vegetation growth, survival, or propagation and are not expected to result in population-level impacts.</p> <p><b>Alternative 2:</b> The number of individual impacts under the No Action Alternative may increase under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts would be the same as under the No Action Alternative. Despite the increase, impacts from acoustic stressors and physical disturbance are not expected to result in detectable changes to marine vegetation growth, survival, or propagation and are not expected to result in population-level impacts.</p>
Section 3.8 (Marine Invertebrates)	<p>Stressors analyzed include acoustic (sonar and other active acoustic sources, and underwater explosives), energy (electromagnetic devices), physical disturbance and strike (vessels and in-water devices, and military expended materials), entanglement (fiber optic cables, guidance wires, and decelerator/parachutes), ingestion (munitions and military expended materials other than munitions), and secondary stressors (metals and chemicals).</p> <p>No ESA-listed marine invertebrate species are found in the Study Area.</p>

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
	<p><b>No Action Alternative:</b></p> <p><u>Acoustic:</u> The use of sonar and other active acoustic sources and underwater explosives is not expected to result in detectable changes in growth, survival, propagation, or population-level impacts.</p> <p><u>Energy:</u> The use of electromagnetic devices is not expected to result in detectable changes in growth, survival, propagation, or population-level impacts.</p> <p><u>Physical Disturbance and Strike:</u> Physical disturbance and strikes from the use of vessels, in-water devices, military expended materials, and seafloor devices is not expected to result in detectable changes in growth, survival, propagation, or population-level impacts.</p> <p><u>Entanglement:</u> Entanglement from the use of fiber optic cables and guidance wires and decelerator/parachutes is not expected to result in detectable changes in growth, survival, propagation, or population-level impacts.</p> <p><u>Ingestion:</u> Ingestion hazards from the expenditure of munitions and military expended materials other than munitions are not expected to result in detectable changes in growth, survival, propagation, or population-level impacts.</p> <p><u>Secondary Stressors:</u> Secondary impacts to marine invertebrates would be inconsequential and not detectable.</p> <p>Pursuant to the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations, the use of sonar and other acoustic sources, vessel noise, weapons firing noise, electromagnetic sources, vessel movement, in-water devices, and metal, chemical, or other material contaminants would have no adverse effect on sedentary invertebrate beds or reefs that constitute EFH or Habitat Areas of Particular Concern. The use of electromagnetic sources would have minimal and temporary adverse impact to invertebrates occupying water column EFH or Habitat Areas of Particular Concern. The use of explosives, military expended materials, seafloor devices, and explosives and explosive byproduct contaminants may have an adverse effect on EFH by reducing the quality and quantity of sedentary invertebrate beds or reefs that constitute EFH or Habitat Areas of Particular Concern.</p> <p><b>Alternative 1:</b> The number of individual impacts under the No Action Alternative may increase under Alternative 1, but the types of impacts would be the same as under the No Action Alternative. Despite the increase, impacts on marine invertebrates under Alternative 1 are not anticipated to result in population-level impacts.</p> <p><b>Alternative 2:</b> The number of individual impacts under the No Action Alternative may increase under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts would be the same as under the No Action Alternative. Despite the increase, impacts on marine invertebrates under Alternative 2 are not anticipated to result in population-level impacts.</p>
Section 3.9 (Fish)	<p>Stressors analyzed include acoustic (sonar and other active acoustic sources; underwater explosives; weapons firing, launch, and impact noise; vessel noise; and aircraft noise), energy (electromagnetic devices), physical disturbance and strike (vessels and in-water devices, military expended materials, and seafloor devices), entanglement (fiber optic cables, guidance wires, and decelerator/parachutes), ingestion (munitions and military expended materials other than munitions).</p> <p><b>No Action Alternative:</b></p> <p><u>Acoustic:</u> Pursuant to the ESA, the use of sonar and other non-impulsive sources during training and testing activities may affect, but is not likely to adversely affect, ESA-listed salmonid species, green sturgeon, Pacific eulachon, and rockfish species; would have no effect on scalloped hammerhead sharks; and would have no effect on any species' critical habitat. The use of explosives</p>

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
	<p>and other impulsive sources during training and testing activities may affect and is likely to adversely affect, ESA-listed salmonid species, Pacific eulachon, and rockfish species; may affect, but is not likely to adversely affect, critical habitat for salmonid species, rockfish species, and green sturgeon; and would have no effect on Pacific eulachon critical habitat.</p> <p><u>Energy</u>: Pursuant to the ESA, the use of electromagnetic devices during training activities may affect but is not likely to adversely affect, ESA-listed salmonid species, green sturgeon, Pacific eulachon, and rockfish species; would have no effect on ESA-listed scalloped hammerhead sharks; may affect, but is not likely to adversely affect, salmonid species and rockfish critical habitat; and would have no effect on critical habitat for Pacific eulachon and green sturgeon.</p> <p><u>Physical Disturbance and Strike</u>: Pursuant to the ESA, the use of vessels and in-water devices may affect, but is not likely to adversely affect, ESA-listed salmonid species, green sturgeon, Pacific eulachon, and rockfish species; would have no effect on scalloped hammerhead sharks; may affect, but is not likely to adversely affect, salmonid and rockfish critical habitat; and would have no effect on Pacific eulachon and green sturgeon critical habitat. The use of military expended materials would have no effect on Pacific eulachon and their associated critical habit; may affect, but is not likely to adversely affect, ESA-listed salmonid species, rockfish species, and green sturgeon; would have no effect on ESA-listed scalloped hammerhead sharks; and may affect but is not likely to adversely affect salmonid, rockfish species, and green sturgeon critical habitat. The use of seafloor devices may affect, but is not likely to adversely affect, ESA-listed salmonid species, Pacific eulachon, green sturgeon, and rockfish species; would have no effect on ESA-listed scalloped hammerhead sharks; may affect, but is not likely to adversely affect salmonid, rockfish species, and green sturgeon critical habitat; and would have no effect on Pacific eulachon critical habitat.</p> <p><u>Entanglement</u>: Pursuant to the ESA, entanglement from the use of fiber optic cables, guidance wires, and decelerator/parachutes during training and testing activities may affect but is not likely to adversely affect ESA-listed salmonid species, Pacific eulachon, green sturgeon, and rockfish species; would have no effect on scalloped hammerhead sharks; would have no effect on Pacific eulachon critical habitat; and may affect but is not likely to adversely affect salmonid and rockfish critical habitat. The use of fiber optic cables and guidance wires would have no effect on green sturgeon critical habitat. The use of parachutes may affect, but is not likely to adversely affect, green sturgeon critical habitat.</p> <p><u>Ingestion</u>: Pursuant to the ESA, ingestion hazards from the expenditure of munitions and military expended material other than munitions during training and testing activities may affect, but is not likely to adversely affect, ESA-listed salmonid species, green sturgeon, Pacific eulachon, and rockfish species; and would have no effect on scalloped hammerhead sharks. Ingestion sources may affect, but are not likely to adversely affect, salmonid, rockfish, and green sturgeon critical habitat; and would have no effect on Pacific eulachon critical habitat.</p> <p><u>Secondary Stressors</u>: Pursuant to the ESA, secondary stressors from training and testing activities would have no effect on ESA-listed salmonid species, green sturgeon, Pacific eulachon, rockfish species, and scalloped hammerhead sharks; and would have no effect on salmonid, green sturgeon and Pacific eulachon critical habitat.</p> <p><b>Alternative 1</b>: The number of individual impacts under the No Action Alternative may increase under Alternative 1, but the types of impacts and ESA conclusions would be the same as under the No Action Alternative. Despite the increase, impacts on fish under Alternative 1 are not expected to decrease the overall fitness of any fish population.</p> <p><b>Alternative 2</b>: The number of individual impacts under the No Action Alternative may increase under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts and ESA conclusions would be the same as under the No Action Alternative. Despite the increase, impacts on fish under Alternative 2 are not expected to decrease the overall fitness of any fish population.</p>

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
Section 3.10 (Cultural Resources)	<p>Stressors analyzed include acoustic (underwater explosions and cratering from underwater explosions) and physical disturbance and interaction (vessel interactions and use of in-water devices, deposition of military expended materials, and use of seafloor devices). These stressors were considered for potential impacts to submerged archeological sites to include known wrecks, obstructions, occurrences, or unknowns; cultural resources eligible for or listed in the National Register of Historic Places; and cultural resources eligible for or listed in state registers.</p> <p><b>No Action Alternative:</b></p> <p>Acoustic and physical stressors, as indicated above, would not adversely affect submerged cultural resources within U.S. territorial waters or Inland Waters in accordance with Section 106 of the NHPA. The Navy previously analyzed impacts that could result from these training and testing activities and concluded that there would be no adverse effects on historic properties. The Alaska and Washington State Historic Preservation Offices concurred with these findings. As new training and testing activities described here represent the same or relatively similar types of activities previously analyzed, with adjustments to tempo and location, no adverse effects on cultural resources are expected. Although Addendum Section 402 of the NHPA does not specifically apply to the Proposed Action, the Navy has considered the importance of the Olympic National Park World Heritage Site in the analysis of potential impacts. No land activities are proposed to occur directly within the property boundaries of Olympic National Park, and airspace activities that may occur in designated Special Use Airspace overlaying the park are fully in compliance with Federal Aviation Administration regulations and recommendations applicable to these areas. Noise levels associated with military aircraft overflights would result in minor impacts to the soundscape within the Olympic National Park World Heritage Site. Other attributes of the Olympic National Park World Heritage Site that contribute to its outstanding universal value, including topography, remarkable beauty, and the complexity of the Olympic ecosystems, would not be affected by the Navy's proposed aircraft overflights. In accordance with Addendum Section 402 of the NHPA, no World Heritage sites outside the United States would be affected.</p> <p><b>Alternative 1:</b> Alternative 1 increases the number of training and testing activities and introduces these activities in areas where training and testing have historically occurred but which have not been previously analyzed. Acoustic and physical stressors would not adversely affect submerged cultural resources within U.S. territorial waters and Inland Waters in accordance with Section 106 of the NHPA.</p> <p><b>Alternative 2:</b> Alternative 2 increases the number of training and testing activities, and introduces these activities in areas where training and testing have historically occurred but which have not been previously analyzed. Acoustic and physical stressors would not adversely affect submerged cultural resources within U.S. territorial waters and Inland Waters in accordance with Section 106 of the NHPA.</p>
Section 3.11 (American Indian and Alaska Native Traditional Resources)	<p>The Navy is in or has completed government-to-government consultation with Tribes that have traditional use areas (Offshore Waters and Western Behm Canal, Alaska) or treaty-reserved rights (Inland Waters) in the NWTT Study Area and have requested such consultations. The Navy considered all potential stressors, and the following have been analyzed for American Indian and Alaska Native traditional resources: impeding access to Tribal usual and accustomed fishing grounds and stations, changes to the availability of marine resources or habitat, and loss or damage to tribal fishing gear.</p> <p><b>No Action Alternative:</b></p> <p>Navy training and testing activities in the Offshore Area are not likely to impede access to usual and accustomed fishing grounds. Navy training and testing activities in Inland Waters could temporarily impede Tribal access to portions of their usual and</p>

**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
	<p>accustomed fishing grounds. Training and testing activities are not expected to have a measureable effect on the availability of marine resources for harvest by Tribes. The potential for loss of or damage to fishing gear from Navy training and testing activities is low. In the Western Behm Canal, there would be no impacts to Alaska Native protected tribal resources or other traditional resources under any alternative.</p> <p><b>Alternative 1:</b> Navy training and testing activities in the Offshore Area are not likely to impede access to usual and accustomed fishing grounds. Navy training and testing activities in Inland Waters could temporarily impede Tribal access to portions of their usual and accustomed fishing grounds. The potential for impeded access would increase compared to the No Action Alternative. Training and testing activities are not expected to have a measureable effect on the availability of marine resources for harvest by Tribes. The potential for loss of or damage to fishing gear from Navy training and testing activities in the Offshore Area is low, but would increase slightly compared to the No Action Alternative. The potential for loss of or damage to fishing gear in Inland Waters would increase compared to the No Action Alternative as a result of Maritime Security Operations training events, specifically the Transit Protection System events. The potential for loss of or damage to fishing gear from Navy testing activities in Inland Waters is low under Alternative 1, but risk would increase compared to the No Action Alternative.</p> <p><b>Alternative 2:</b> Navy training and testing activities in the Offshore Area are not likely to impede access to usual and accustomed fishing grounds. Navy training and testing activities in Inland Waters could temporarily impede Tribal access to portions of their usual and accustomed fishing grounds. The potential for impeded access would increase compared to the No Action Alternative. Training and testing activities are not expected to have a measureable effect on the availability of marine resources for harvest by Tribes. The potential for loss of or damage to fishing gear from Navy training and testing activities in the Offshore Area is low, but would increase slightly compared to the No Action Alternative. The potential for loss of or damage to fishing gear in Inland Waters would increase compared to the No Action Alternative as a result of Maritime Security Operations training events, specifically the Transit Protection System events. The potential for loss of or damage to fishing gear from Navy testing activities in Inland Waters is low under Alternative 2, but risk would increase compared to the No Action Alternative.</p>
<p>Section 3.12 (Socioeconomic Resources)</p>	<p>Stressors analyzed include accessibility (limiting access to the ocean and the air), physical disturbance and interactions (aircraft, vessels and in-water devices, and military expended materials), aircraft and vessel noise (weapons firing, aircraft and vessel noise), and secondary impacts from changes to the availability of marine resources. As part of the analysis, the Navy completed a noise study of aircraft activities in the Olympic MOAs.</p> <p><b>No Action Alternative:</b></p> <p>Impacts on socioeconomic resources are expected to be minor because:</p> <ul style="list-style-type: none"> <li>• Inaccessibility to areas of co-use would be localized and temporary.</li> <li>• The Navy’s strict standard operating procedures would minimize physical disturbance and strikes.</li> <li>• Most airborne activities would occur well out to sea far from tourism and recreation locations.</li> <li>• Aircraft activities in the Olympic MOAs would have no impacts on socioeconomic resources.</li> <li>• Impacts to marine species are not expected.</li> </ul> <p>Further, there are no disproportionately high impacts or adverse effects on any low-income populations or minority populations.</p> <p><b>Alternative 1:</b> The number of most activities under the No Action Alternative may increase under Alternative 1, but the types of impacts would be similar to the No Action Alternative. Despite the increase in activity under Alternative 1, impacts to socioeconomic</p>



**Table ES-2: Summary of Environmental Impacts for the No Action Alternative, Alternative 1, and Alternative 2 (continued)**

Resource Category	Summary of Impacts
	<p>resources are not expected.</p> <p><b>Alternative 2:</b> The number of most activities under the No Action Alternative may increase under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts would be similar to the No Action Alternative. Despite the increase in activity under Alternative 2, impacts to socioeconomic resources are not expected.</p>
Section 3.13 (Public Health and Safety)	<p>Stressors analyzed include underwater energy, in-air energy, physical interactions, and secondary impacts from sediment and water quality changes.</p> <p><b>No Action Alternative:</b></p> <p>Because of the Navy's standard operating procedures, impacts on public health and safety would be unlikely. Further, there are no proportionately high impacts or adverse effects on any low-income populations or minority populations.</p> <p><b>Alternative 1:</b> The number of most activities under the No Action Alternative may increase under Alternative 1, but the types of impacts would be the same as under the No Action Alternative. Despite the increase in activities under Alternative 1, Navy safety procedures would continue to prevent proposed activities being co-located with public activities. Because of the Navy's safety procedures, the potential for activities to impact public health and safety under Alternative 1 would be unlikely.</p> <p><b>Alternative 2:</b> The number of most activities under the No Action Alternative may increase under Alternative 2 (consisting of Alternative 1 plus additional increases in activity tempo), but the types of impacts would be the same as under the No Action Alternative. Despite the increase in activities under Alternative 2, Navy safety procedures would continue to prevent proposed activities being co-located with public activities. Because of the Navy's safety procedures, the potential for activities to impact public health and safety under Alternative 2 would be unlikely.</p>

Notes: C.F.R. = Code of Federal Regulations, ESA = Endangered Species Act, MMPA = Marine Mammal Protection Act, Navy = United States Department of the Navy, NHPA = National Historic Preservation Act, U.S. = United States, U.S.C. = United States Code

## **ES.7 CUMULATIVE IMPACTS**

Traditional use areas and subsistence resources, marine mammals, and sea turtles are the primary resources of concern for cumulative impacts analysis. These resources may be impacted by multiple ongoing and future actions. Explosive detonations, non-impulsive sources such as sonar, and vessel strikes under the No Action Alternative, Alternative 1, and Alternative 2 have the potential to disturb, injure, or kill marine mammals and sea turtles.

The impact on marine mammal and sea turtle species of the Navy's proposed activities is small (see Summary of Impacts on marine mammals and sea turtles in Table ES-2 above). The No Action Alternative, Alternative 1, or Alternative 2 would contribute to cumulative impacts, but the relative contribution would be small compared to other actions. Compared to the potential mortality, stranding, and injury resulting from commercial ship strikes and bycatch, entanglement, ocean pollution and other human causes, the potential for injury resulting from Navy training and testing activities is estimated to be orders of magnitude lower (tens of animals versus hundreds of thousands of animals).

Traditional use areas and subsistence resources exist within the NWTT Study Area. In the Alaska Western Behm Canal waters of the NWTT Study Area, there are no changes in the cumulative impacts to Alaska Native traditional and subsistence resources as there are no changes to proposed activities in the area. In the Inland Waters of the NWTT Study Area, there could be cumulative impacts to American Indian Traditional resources and access to usual and accustomed fishing grounds and stations from training activities such as MSO events that could temporarily affect tribal access. The Navy has an active consultation process in place and will continue to consult on a government-to-government basis with potentially affected American Indian Tribes regarding Navy activities that may have the potential to significantly affect protected tribal treaty rights and resources.

Because of the negligible impacts of the Proposed Action on sediments and water quality, air quality, marine habitats, birds, marine vegetation, marine invertebrates, fish, cultural resources, socioeconomic resources, and public health and safety, cumulative impacts would likewise be negligible. Because of the increased air emissions resulting from the addition of activities not previously included, the incremental contribution would increase from 0.0016 percent of U.S. 2010 greenhouse gas emissions under the No Action Alternative to 0.0023 percent under Alternative 1 and Alternative 2.

## **ES.8 STANDARD OPERATING PROCEDURES, MITIGATION, AND MONITORING**

Within the Study Area, the Navy implements standard operating procedures, mitigation measures, and marine species monitoring and reporting. Navy standard operating procedures have the indirect benefit of reducing potential impacts on marine resources. Mitigation measures are designed to reduce or avoid potential impacts on marine resources. Marine species monitoring efforts are designed to track compliance with take authorizations, evaluate the effectiveness of mitigation measures, and improve understanding of the impacts of training and testing activities on marine resources.

### **ES.8.1 STANDARD OPERATING PROCEDURES**

The Navy currently employs standard operating procedures to provide for the safety of personnel and equipment, including ships and aircraft, as well as the success of the training and testing activities. In many cases, there are incidental environmental, socioeconomic, and cultural benefits resulting from standard operating procedures. Standard operating procedures serve the primary purpose of providing for safety and mission success, and are implemented regardless of their secondary benefits. Because of their importance for maintaining safety and mission success, standard operating procedures have been

considered as part of the Proposed Action under each alternative, and therefore are included in the environmental analyses for each resource.

### **ES.8.2 MITIGATION**

The Navy recognizes that the Proposed Action has the potential to impact the environment. Unlike standard operating procedures, which are established for reasons other than environmental benefit, mitigation measures are modifications to the Proposed Action that are implemented for the sole purpose of reducing a specific potential environmental impact on a particular resource. These measures have been coordinated with NMFS and USFWS through the consultation and permitting processes. The ROD for this EIS/OEIS will address any additional mitigation measures that may result from ongoing regulatory processes.

In order to make the findings necessary to issue an MMPA letter of authorization, it may be necessary for NMFS to require additional mitigation measures or monitoring beyond those contained in this Final EIS/OEIS. NMFS may propose additional mitigation measures or monitoring in the proposed rule.

Additionally, the Navy has engaged in consultation processes under the ESA with regard to listed species that may be affected by the Proposed Action described in this EIS/OEIS. For the purposes of the ESA Section 7 consultation, the mitigation measures proposed here may be considered by NMFS and USFWS as beneficial actions taken by the Federal agency or applicant (50 C.F.R. 402.14(g)(8)). If necessary to satisfy requirements of the ESA, NMFS and USFWS may develop an additional set of measures contained in reasonable and prudent alternatives, reasonable and prudent measures, or conservation recommendations in any BO issued for this Proposed Action.

Pursuant to the Navy's government-to-government consultation with federally-recognized American Indian and Alaska Native Tribes, agreements, both formal and informal, on protocols or tribal mitigations may be developed to reduce or eliminate impacts on protected tribal treaty reserved rights and protected tribal resources.

The Navy selected mitigation measures that have been documented to be effective in reducing impacts and protecting resources, while maintaining the Navy's ability to meet mission requirements. Table ES-3 summarizes the Navy's recommended mitigation measures with currently implemented mitigation measures for each activity category also summarized in the table.

### **ES.8.3 MITIGATION MEASURES CONSIDERED BUT ELIMINATED**

A number of possible alternative or additional mitigation measures have been suggested during the public comment periods of this or previous Navy environmental documents. In addition, through the evaluation process, some measures were deemed to either be ineffective, have an unacceptable impact on the proposed training and testing activities, or both, and will not be carried forward for further consideration. See Section 5.3.4 (Mitigation Measures Considered but Eliminated) of the Final EIS/OEIS for a complete discussion of these measures.

### **ES.8.4 MONITORING**

The Navy is committed to demonstrating environmental stewardship while executing its National Defense Mission and complying with the suite of federal environmental laws and regulations. As a complement to the Navy's commitment to avoiding and reducing impacts of the Proposed Action through mitigation, the Navy will continue to undertake monitoring efforts to track compliance with

take authorizations, help investigate the effectiveness of implemented mitigation measures, and better understand the impacts of the Proposed Action on marine resources. Taken together, mitigation and monitoring comprise the Navy's integrated approach for reducing environmental impacts from the Proposed Action. The Navy's overall monitoring approach will seek to leverage and build on existing research efforts whenever possible.

Since 2006, the Navy, non-Navy marine mammal scientists, and research institutions in consultation with NMFS began conducting scientific monitoring and research in and around ocean areas in the Pacific and Atlantic where the Navy has been and proposes to continue training and testing. Data collected from over 80 monitoring and scientific research reports have been provided to NMFS and have provided information relevant to the analysis of impacts to marine mammals. Monitoring is performed using a variety of methods, including visual surveys from surface vessels and aircraft, as well as passive acoustics, satellite tagging, photo-identification, and biopsy sampling. The Navy also contributes to funding of basic research, including behavioral response studies specifically designed to determine the effects to marine mammals from the Navy's main mid-frequency surface ship anti-submarine warfare active acoustic (sonar) system. These reports and associated peer-reviewed, published studies provide the current best data on observed marine mammal responses to Navy activities.

Consistent with the cooperating agency agreement with NMFS, mitigation and monitoring measures presented in this EIS/OEIS focus on the requirements for protection and management of marine resources. Since monitoring will be required for compliance with the Final Rule issued for the Proposed Action under the MMPA, details of the monitoring program are being developed in coordination with NMFS through the regulatory process.

The Integrated Comprehensive Monitoring Program is intended to coordinate marine mammal monitoring efforts across all regions where the Navy trains and to allocate the most appropriate level and type of effort for each range complex. The current Navy monitoring program is composed of a collection of "range-specific" monitoring plans, each developed individually as part of MMPA and ESA compliance processes as environmental documentation was completed. These individual plans establish specific monitoring requirements for each range complex and are collectively intended to address the Integrated Comprehensive Monitoring Program top-level goals. A Scientific Advisory Group of leading marine mammal scientists developed recommendations that would serve as the basis for a Strategic Plan for Navy monitoring. The Strategic Plan is intended to be a primary component of the Integrated Comprehensive Monitoring Program and provide a "vision" for Navy monitoring across geographic regions—serving as guidance for determining how to most efficiently and effectively invest the marine species monitoring resources to address Integrated Comprehensive Monitoring Program top-level goals and satisfy MMPA regulatory requirements. The objective of the Strategic Plan is to continue the evolution of Navy marine species monitoring towards a single integrated program, incorporating Scientific Advisory Group recommendations, and establishing a more transparent framework for soliciting, evaluation, and implementing monitoring work across the Fleet range complexes.

### **ES.8.5 REPORTING**

The Navy is committed to documenting and reporting relevant aspects of training and testing activities in order to reduce environmental impacts and improve future environmental planning. Initiatives include exercise and monitoring reporting, marine mammal stranding response planning, and bird strike reporting. There has never been a vessel strike to a whale during any of the training or testing activities proposed in the Study Area.

**Table ES-3: Mitigation Identification and Implementation**

Mitigation Measure	Benefit	Evaluation Criteria	Implementation	Responsible Command	Date Implemented
<p><b>Marine Species Awareness Training</b> All personnel standing watch on the bridge and Lookouts will successfully complete the training before standing watch or serving as a Lookout.</p>	<p>To learn the procedures for searching for and recognizing the presence of marine species, including detection cues (e.g., congregating seabirds) so that potentially harmful interactions can be avoided.</p>	<p>Successful completion of training by all personnel standing watch and all personnel serving as Lookouts. Personnel successfully applying skills learned during training.</p>	<p>The multimedia training program has been made available to personnel required to take the training. Personnel have been and will continue to be required to take the training prior to standing watch and serving as Lookouts.</p>	<p>Officer Conducting the Exercise or Test or civilian equivalent</p>	<p>Ongoing</p>
<b>Lookouts</b>					
<p><b>Use of Four Lookouts for Underwater Detonations</b>  Mine countermeasure and neutralization activities using positive control firing devices will include the use of two Lookouts. If applicable, aircrew and divers will report sightings of marine mammals or sea turtles.</p>	<p>Lookouts can visually detect marine species so that potentially harmful impacts to marine mammals and sea turtles from explosives use can be avoided.  Lookouts can more quickly and effectively relay sighting information so that corrective action can be taken. Support from aircrew and divers, if they are involved in the activity, will increase the probability of sightings, reducing the potential for impacts.</p>	<p>Annual report documenting NAVSEA testing and marine mammal observation data.  Timely reporting of underwater detonations and monitoring results related to bull trout and marbled murrelets.</p>	<p>All Lookouts will receive marine species awareness training and will be positioned on vessels, boats, and aircraft as described in Section 5.3.1.1.1 (Training for Personnel Standing Watch and Lookouts).</p>	<p>Officer Conducting the Exercise or Test</p>	<p>Ongoing</p>
<p><b>Use of One or Two Lookouts</b>  Vessels using low-frequency active sonar or hull-mounted mid-frequency active sonar associated with ASW activities will have either one or two Lookouts, depending on the activity and size of the vessel.  Mine countermeasure and neutralization activities with positive control using charge sizes of &gt;0.5 to 2.5 lb. will use two dedicated Lookouts, with one on each support vessel. If applicable, aircrew and divers will also report the presence of marine mammals or marbled murrelets.</p>	<p>Lookouts can visually detect marine species so that potentially harmful impacts to marine mammals and sea turtles from Navy sonar and explosives use can be avoided.  Lookouts can more quickly and effectively relay sighting information so that corrective action can be taken. Support from aircrew and divers, if they are involved in the activity, will increase the probability of sightings, reducing the potential for impacts.</p>				
<p><b>Use of One Lookout</b>  Surface ships and aircraft conducting ASW, ASUW, or MIW activities using HFAS, non-hull mounted mid-frequency active sonar, helicopter dipping mid-frequency active sonar, anti-swimmer grenades, IEER sonobuoys, surface gunnery activities, surface missile activities, bombing activities, explosive torpedo testing, and activities using non-explosive practice munitions, will have one Lookout.</p>	<p>Lookouts can visually detect marine species so that potentially harmful impacts to marine mammals and sea turtles from Navy sonar, explosives, sonobuoys, gunnery rounds, missiles, explosive torpedoes, pile driving, towed systems, surface vessel propulsion, and non-explosive munitions can be avoided.  Lookouts will quickly and effectively relay sighting information so that corrective action(s) can be taken.</p>				

**Table ES-3: Mitigation Identification and Implementation (continued)**

Mitigation Measure	Benefit	Evaluation Criteria	Implementation	Responsible Command	Date Implemented
<b>Mitigation Zones</b>					
<p><b>Use of a Mitigation Zone</b></p> <p>A mitigation zone is an area defined by a radius and centered on the location of a sound source or activity. The size of each mitigation zone is specific to a particular training or testing activity (e.g., sonar use or explosive use).</p>	<p>A mitigation zone defines the area in which Lookouts survey for marine mammals and sea turtles.</p> <p>Mitigation zones reduce the potential for injury to marine species.</p>	<p>For those activities where monitoring is required, record observations of marine mammals and sea turtles located outside of the mitigation zone and note any apparent reactions to on-going Navy activities. Observation of acute reactions may be used as an indicator that the radius of the mitigation zone needs to be increased.</p>	<p>Mitigation zones have been and will continue to be implemented as described in Section 5.3.2 (Mitigation Zone Procedural Measures).</p> <p>Lookouts are trained to conduct observations within mitigation zones of different sizes.</p>	<p>Officer Conducting the Exercise or Test</p>	<p>Ongoing</p>
<p><b>Recognize the Importance of Marine Protected Areas</b></p> <p>In general, most Armed Forces activities are exempt from the prohibitions of marine protected areas. Nevertheless, the Navy would carry out its training and testing activities in a manner that will avoid, to the maximum extent practicable and consistent with training and testing requirements, adverse impacts to National Marine Sanctuary resources.</p>	<p>Avoiding or minimizing impacts while operating in or near marine protected areas could result in improved health of the resources in the areas.</p>	<p>The Navy will report the annual hours of each type of sonar source. For hull-mounted sonar, this report shall include a depiction of the training geographically across the Study Area.</p>	<p>The Navy includes maps in the Protective Measures Assessment Protocol to define marine protected areas.</p> <p>To the greatest extent practicable, adverse impacts to these areas will be avoided.</p>	<p>Officer Conducting the Exercise or Test</p>	<p>Ongoing</p>

Notes: ASW = Anti-Submarine Warfare, ASUW = Anti-Surface Warfare, HFAS = High-Frequency Active Sonar, IEER = Improved Extended Echo Ranging, MIW = Mine Warfare, NAVSEA = Naval Sea Systems Command, Navy = United States Department of the Navy

## **ES.8.6 OTHER CONSIDERATIONS**

### **ES.8.6.1 Consistency with Other Federal, State, and Local Plans, Policies and Regulations**

Based on an evaluation of consistency with statutory obligations, the Navy's proposed training and testing activities would not conflict with the objectives or requirements of applicable federal, state, regional, or local plans, policies, or legal requirements. The Navy is consulting and will continue to consult with regulatory agencies as appropriate during the planning process and prior to implementation of the Proposed Action to ensure all legal requirements are met.

### **ES.8.6.2 Relationship Between Short-Term Use of the Environment and Maintenance and Enhancement of Long-Term Productivity**

This EIS/OEIS provides an analysis of the relationship between a project's short-term impacts on the environment and the effects that these impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. The Proposed Action may result in both short- and long-term environmental effects. However, the Proposed Action would not be expected to result in any impacts that would reduce environmental productivity, permanently narrow the range of beneficial uses of the environment, or pose long-term risks to health, safety, or the general welfare of the public.

### **ES.8.6.3 Irreversible or Irrecoverable Commitment of Resources**

For the alternatives including the Proposed Action, most resource commitments are neither irreversible nor irretrievable. Most impacts are short term and temporary or, if long lasting, are negligible. No habitat associated with threatened or endangered species would be lost as a result of implementation of the Proposed Action. No commitment of resources to construction is proposed as part of this action.

Implementation of the Proposed Action would require fuels used by aircraft and vessels. Since fixed- and rotary-wing flight and ship activities could increase, relative total fuel use could increase. Therefore, if total fuel consumption increased, this nonrenewable resource would be considered irretrievably lost. The Navy has initiated programs that are expected to greatly reduce consumption of fossil fuels and reduce greenhouse gas emissions. Included among these are Navy plans to deploy by 2016 a green strike group (a "great green fleet") composed of nuclear vessels and ships powered by biofuel in local operations and with aircraft flying only with biofuels.

### **ES.8.6.4 Energy Requirements and Conservation Potential of Alternatives and Mitigation Measures**

Resources that will be permanently and continually consumed by project implementation include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources. Prevention of the introduction of potential contaminants is an important component of mitigation of the alternative's adverse impacts. To the extent practicable, considerations in the prevention of introduction of potential contaminants are included. Additionally, sustainable range management practices are in place that protect and conserve natural and cultural resources and preserve access to training areas for current and future training requirements.

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