# Executive Summary

# ES EXECUTIVE SUMMARY

## ES 1.1 INTRODUCTION

This Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) analyzes the potential environmental effects that may result from the United States (U.S.) Navy's Proposed Action and Alternatives. The Proposed Action and Alternatives address ongoing naval training activities (one joint force exercise occurring over a maximum time period of 14 days during summer months [April through October]). The Proposed Action also consists of Navy training activities associated with conducting two large-scale joint force exercises, including Anti-Submarine Warfare (ASW) activities and the use of active sonar. These exercises would each last up to 21 days (focused exercise period) and consist of multiple component training activities as described in greater detail in Section 2.5. During these focused exercise periods, intermittent Navy Unit Level Training (ULT) could also occur. However, outside of these focused activity periods, during the other 46-49 weeks of the year, the Navy does not train within the Temporary Maritime Activities Area (TMAA) or other areas of the Gulf of Alaska (GOA).

Three alternatives are analyzed in this EIS/OEIS: the No Action Alternative – Current Training Activities within the Alaska Training Areas (ATAs), Alternative 1 – Increase Training Activities to Include Anti-Submarine Warfare Activities and Accommodate Force Structure Changes, and Alternative 2 (Preferred Alternative) – Increase Training Activities, Accommodate Force Structure Changes, Conduct One Additional Annual Joint Force Exercise, and Conduct One Sinking Exercise (SINKEX) During Each Summertime Exercise.

Under the No Action Alternative, training activities would continue at baseline levels. Under Alternative 1, naval training activities would increase; the joint force exercise would increase to last up to 21 days, ASW activities, to include the use of active sonar, would be conducted, and the use of a Portable Undersea Tracking Range (PUTR) would be implemented. Alternative 2 would be the same as Alternative 1; however, it would include conducting the joint force exercise two times during the summer months from April to October (each up to 21 days long) and a SINKEX during each summertime exercise (a maximum of two) in the GOA TMAA.

The geographic area covered by this EIS/OEIS consists of three components: 1) the GOA TMAA; 2) U.S. Air Force (Air Force) over-land Special Use Airspace (SUA) and air routes over the GOA and State of Alaska, and 3) U.S. Army (Army) training lands. Collectively, for the purposes of this EIS/OEIS, these areas are referred to as the ATAs (Figure ES-1). The Air Force SUA and Army training lands are analyzed for National Environmental Policy Act (NEPA) purposes under separate environmental documents. This EIS/OEIS does not involve the creation or development of new training areas on land or changes in the use of airspace over land or water. Nor does it include modifications to training areas at sea that the Navy has been using over the last ten years during exercises and training. Training activities analyzed in this EIS/OEIS include those conducted by the Navy and other U.S. Department of Defense (DoD) services supporting Navy training as discussed in the Description of Proposed Action and Alternatives (Chapter 2).

This Final EIS/OEIS has been prepared by the Department of the Navy in compliance with NEPA of 1969 (42 United States Code [U.S.C.] § 4321 et seq.); the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations [C.F.R.] Parts [§§] 1500-1508); Department of the Navy Procedures for Implementing NEPA (32 C.F.R. § 775); and Executive Order (EO) 12114, *Environmental Effects Abroad of Major Federal Actions* (EO No. 12114, 44 Federal Register [FR] 1957 Jan 4, 1979). This Final EIS/OEIS satisfies the requirements of NEPA and Executive Order (EO) 12114, and will be filed with the U.S. Environmental Protection Agency (USEPA) and made available to appropriate federal, state, local, and other private and public entities.

The Navy is the lead agency for the EIS/OEIS and the headquarters of the National Marine Fisheries Service is a cooperating agency, pursuant to 40 C.F.R. §§ 1501.6 and 1508.5.

Since the 1990s, the Navy has participated in a major exercise in the GOA that involves the Departments of the Navy, Army, Air Force and U.S. Coast Guard (Coast Guard) participants reporting to a unified or joint commander who coordinates the activities planned to demonstrate and evaluate the ability of the services to engage in a conflict and carry out plans in response to a national security threat. Service Secretaries and Combatant Commanders report to the Secretary of Defense. Combatant Commanders are the senior military authority for their assigned area of responsibility. The U.S. Pacific Command (PACOM[1]), based in Hawaii, has the primary warfighting mission to defend the United States and its interests in the Asia-Pacific Region. The U.S. Northern Command (NORTHCOM) has the primary responsibility for homeland defense. Each of these combatant commanders is supported by component commanders comprising forces from the Navy, Army, and Air Force. The Combatant Commanders develop exercises that train the Navy, Army and Air Force components to execute plans for situations that they identify as necessary to defend U.S. interest.

The TMAA is composed of 42,146 square nautical miles ($nm^2$) (145,482 square kilometers [$km^2$]) of surface and subsurface ocean training area and overlying airspace that includes the majority of Warning Area 612 (W-612). W-612 consists of about 2,256 $nm^2$ (8,766 $km^2$) of airspace. No Navy training activities analyzed in this document will occur in the area of W-612 that is outside of the TMAA (Figure ES-1). The TMAA is approximately 300 nautical miles (nm) (555.6 kilometers [km]) in length by 150 nm (277.8 km) in width and situated south of Prince William Sound and east of Kodiak Island. The TMAA's northern boundary is located approximately 24 nm (44 km) south of the shoreline of the Kenai Peninsula, which is the largest proximate landmass. The only other shoreline close to the TMAA is Montague Island, which is located 12 nm (24 km) north of the TMAA. The approximate middle of the TMAA is located 140 nm (259 km) offshore. The inland Air Force SUA consists of 46,585 $nm^2$ (159,782 $km^2$) of airspace and the Army training land consists of 1,981 $nm^2$ (6,796 $km^2$) of land area.

All maritime training activities analyzed in this document take place within the TMAA (Figure ES-2) and the exercises normally occur during the period between April and October. For Navy training activities that do occur in the inland Alaska ranges of the Air Force and Army, impacts associated with those activities have previously been analyzed and addressed in separate environmental analyses conducted by the Air Force and the Army (see Chapter 1, Section 1.6). As such, those activities are identified but not carried forward for analysis within the EIS/OEIS.

The Navy's mission is to organize, train, equip, and maintain combat-ready naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas. This mission is mandated by federal law (Title 10 U.S.C. § 5062), which ensures the readiness of the United States' naval forces.[2] The Navy executes this responsibility by establishing and executing training programs, including at-sea training and exercises, including ASW activities (to include the use of active sonar), and ensuring naval forces have access to the ranges, operating areas, and airspace needed to develop and maintain skills for conducting naval activities.

[1] PACOM is a unified command which includes about 325,000 military personnel from the Army, Navy, Air Force, and Marine Corps (about 20 percent of all active duty U.S. military forces).

[2] Title 10, Section 5062 of the United States Code provides: "The Navy shall be organized, trained, and equipped primarily for prompt and sustained combat incident to operations at sea. It is responsible for the preparation of Naval forces necessary for the effective prosecution of war except as otherwise assigned and, in accordance with Integrated Joint Mobilization Plans, for the expansion of the peacetime components of the Navy to meet the needs of war."

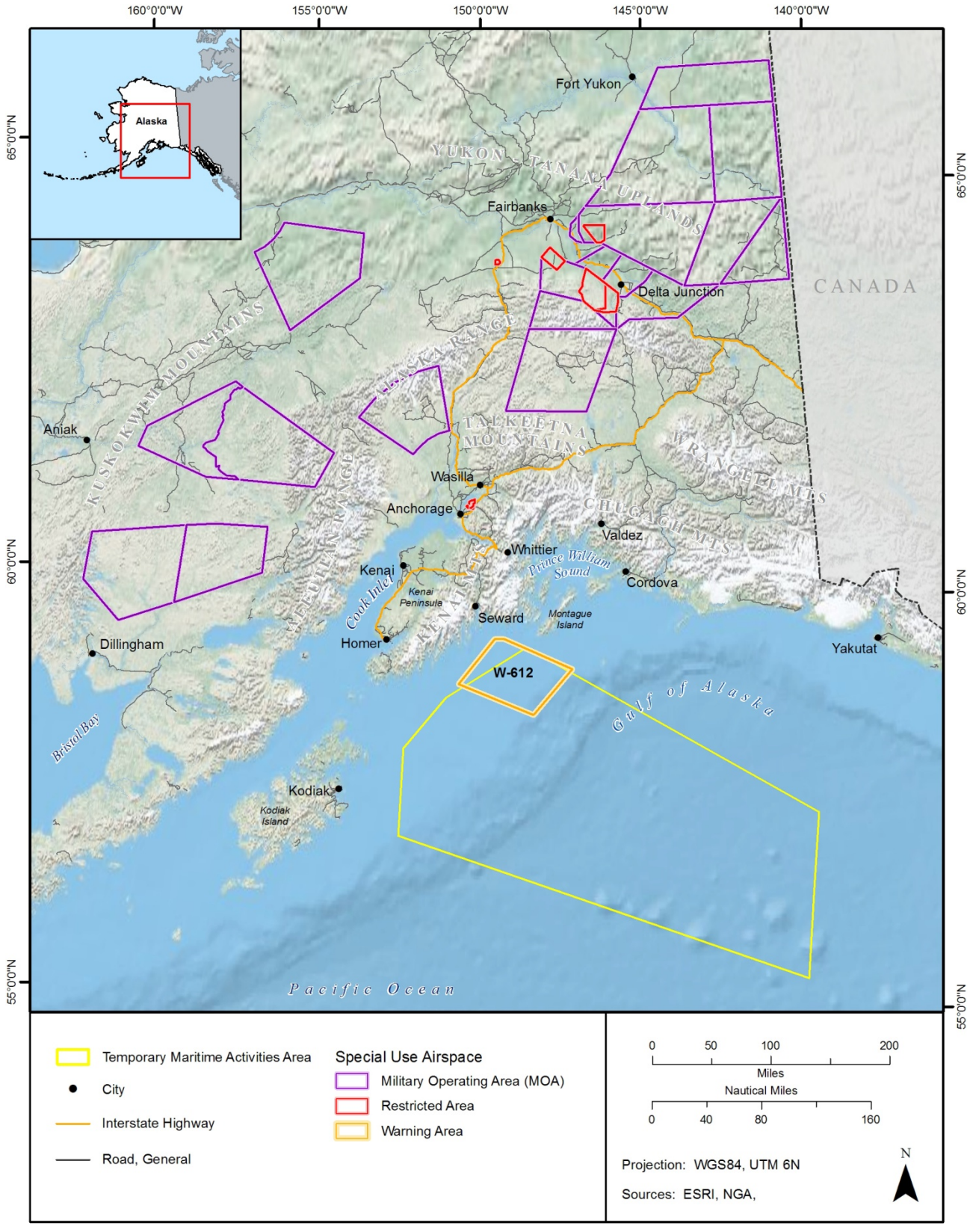


**Figure ES-1: Alaska Training Areas**

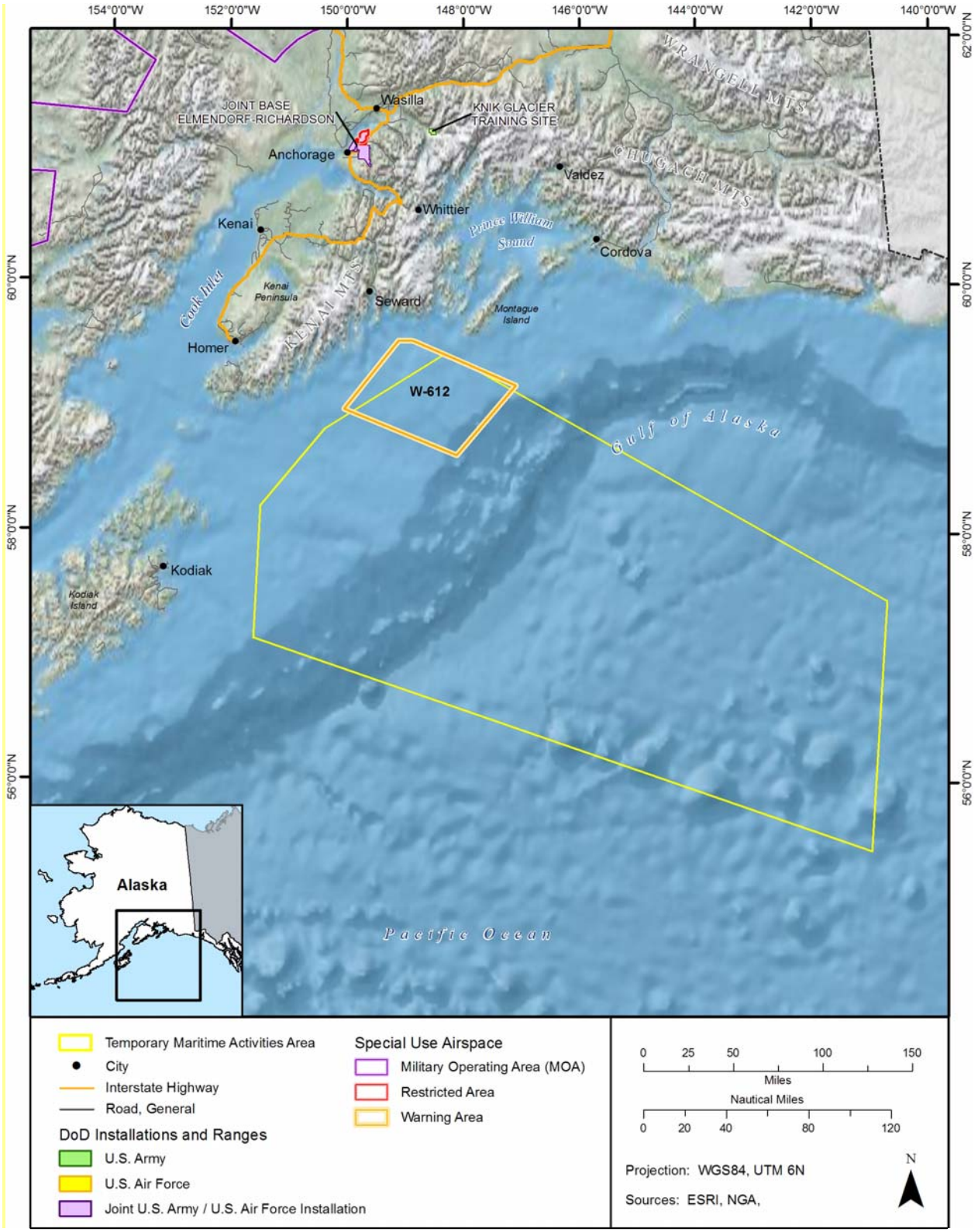


**Figure ES-2: Gulf of Alaska Temporary Maritime Activities Area**

The ATA plays a vital part in executing this naval readiness mandate. The training areas serve as the principal training venue for annual joint training exercises, which can involve forces from the Navy, Air Force, Army, and Coast Guard. The Navy's Proposed Action is a step toward ensuring the continued vitality of this essential naval training resource.

## ES 1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

Given the vital importance of the ATA to the readiness of naval forces and the unique training environment provided by the ATA, the Navy proposes to take actions for the purpose of:

- Supporting U.S. PACOM training requirements;
- Supporting Joint Task Force Commander training requirements;
- Achieving and maintaining Fleet readiness using the ATA to support and conduct current, emerging, and future training activities; and
- Expanding warfare missions supported by the training conducted in the ATA, consistent with requirements.

The Proposed Action is needed to continue to provide a training environment with the capacity and capabilities to fully support required training tasks for operational units participating in Joint exercises, such as the annual Northern Edge exercise. The Navy has developed alternatives criteria based on this statement of the purpose of and need for the Proposed Action.

In this regard, the ATA furthers the Navy's execution of its roles and responsibilities under Title 10. To comply with its Title 10 mandate, the Navy needs to:

- Maintain current levels of military readiness by training in the ATA;
- Accommodate future increases in training activity tempo in the ATA;
- Support the acquisition and implementation into the Fleet of advanced military technology using the ATA to conduct training activities for new platforms and associated weapons systems (EA-18G Growler aircraft, Guided Missile Submarines [SSGN], P-8 Poseidon Multimission Maritime Aircraft [MMA], Guided Missile Destroyer [DDG] 1000 [Zumwalt Class] destroyer, and several types of Unmanned Aerial Systems [UASs]);
- Identify shortfalls in training, particularly training instrumentation, and address through enhancements;
- Maintain the long-term viability of the ATA as a Navy training area while protecting human health and the environment, and enhancing the quality, capabilities, and safety of the training area; and
- Be able to bring Army, Navy, Air Force, and Coast Guard assets together into one geographic area for joint training.

## ES 1.3 SCOPE AND CONTENT OF THE EIS/OEIS

Navy training activities that occur within the Air Force inland SUA and the Army training lands are analyzed under previous NEPA documentation (the *Alaska Military Operations Area EIS* [USAF 1995], *Improvements to Military Training Routes in Alaska Environmental Assessment* [USAF 2007], the *Alaska Army Lands Withdrawal Renewal Final Legislative EIS* [Army 1999], and the *Transformation of U.S. Army Alaska FEIS* [Army 2004]). These documents are incorporated by reference pursuant to 40 C.F.R. §

1502.21, which, in NEPA terms, means that the environmental effects of these activities are addressed in these documents.

Environmental effects in the open ocean beyond the U.S. territorial sea (outside of 12 nm) are analyzed in this EIS/OEIS pursuant to EO 12114 and associated implementing regulations.

This EIS/OEIS provides an assessment of environmental effects associated with current and proposed training activities and changes in force structure (to include new systems, platforms, and instrumentation).

### ES 1.3.1 National Environmental Policy Act

The first step in the NEPA process is the preparation of a Notice of Intent (NOI) to develop an EIS/OEIS. The NOI provides an overview of the Proposed Action, Alternatives, and the scope of the EIS/OEIS. The NOI for this project was published in the *Federal Register* on March 17, 2008, and in four local newspapers, (*Anchorage Daily News, Kodiak Daily Mirror, Cordova Times, Peninsula Clarion* [see Appendix G]). The NOI and newspaper notices included information about comment procedures, a list of information repositories (public libraries), the project website (http://www.GulfofAlaskaNavyEIS.com), and the dates and locations of the scoping meetings.

Scoping is the early and open public process for determining the "scope" of issues to be addressed in the Draft EIS/OEIS, and for identifying significant issues related to a Proposed Action. In April of 2008, the three scoping meetings for the Draft EIS/OEIS (held in Kodiak, Alaska [AK]; Anchorage, AK; and Cordova, AK) invited public attendance to help define and prioritize environmental issues, and convey these issues to the Navy. As a result of the scoping process, the Navy received comments from the public (see Appendix G), as well as agencies, private entities, and federally recognized Alaska Native Tribes and Nations which were considered in the preparation of the Draft EIS/OEIS.

Incorporating public input from the scoping process, the Draft EIS/OEIS was prepared to assess the potential effects of the Proposed Action and Alternatives on the environment. A Notice of Availability was published in the *Federal Register* on 11 Dec, 2009, and notices were placed in five local newspapers (*Anchorage Daily News, Kodiak Daily Mirror, Cordova Times, Peninsula Clarion, Juneau Empire* [see Appendix G]) announcing the availability of the Draft EIS/OEIS. The Draft EIS/OEIS was made available for public and agency review and was circulated for review and comment. Public meetings were held in the same geographic venues as the scoping meetings; however, in response to public input, two additional venues were added in Homer and Juneau, Alaska to receive public comments on the Draft EIS/OEIS. Public comments received on the Draft EIS/OEIS are responded to in Appendix I of this Final EIS/OEIS. Appendix I contains a copy of all written and oral comments and formal transcripts of the public hearings, including the comments received during the hearings.

This Final EIS/OEIS was prepared in response to all public comments, including comments received from other federal and state agencies, on the Draft EIS/OEIS. Responses to public comments may take various forms as necessary, including correction of data, clarifications of and modifications to analytical approaches, and inclusion of additional data or analyses.

Finally, after the Final EIS/OEIS is made available to the public and a 30-day review period has elapsed, a Record of Decision (ROD) will be issued, pursuant to 40 C.F.R. § 1502.2. The ROD will summarize the Navy's decision, identify the selected alternative, describe the public involvement and agency decision-making processes, and present commitments to specific mitigation measures.

### ES 1.3.2 Executive Order (EO) 12114

EO 12114, *Environmental Effects Abroad of Major Federal Actions*, directs federal agencies to provide for informed decision making for major federal actions outside the U.S. territorial sea (> 12 nm [22.2km]

from shore). This includes actions within the Exclusive Economic Zone (EEZ) of the U.S. or a foreign nation, or the high seas, but excludes the territorial sea of a foreign nation. The EEZ comprises areas beyond 12 nm (22.2 km) out to 200 nm (370.4 km) from shore. This Final EIS/OEIS satisfies the requirements of EO 12114 for analysis of training activities or impacts occurring, or proposed to occur, beyond the U.S. territorial sea and within the U.S. EEZ, and on the high seas (see Table 1-1, Section 1.5).

### ES 1.3.3 Coastal Zone Management Act

The *Coastal Zone Management Act* (CZMA) of 1972 (16 U.S.C. § 1451) encourages coastal states to be proactive in managing coastal uses and coastal resources in the coastal zone. The CZMA established a voluntary coastal planning program through which participating states submit a Coastal Management Plan (CMP) to the National Oceanographic and Atmospheric Administration (NOAA) Office of Ocean and Coastal Resource Management (OCRM) for approval. Under CZMA, federal actions are required to be consistent, to the maximum extent practicable, with the enforceable policies of approved state CMPs. The CZMA federal consistency determination process includes a review of the proposed federal actions by the states to determine whether the federal action, in or outside the coastal zone, that affects any land or water use or natural resources of a State's coastal zone, directly or indirectly, is consistent with the enforceable policies of the state's CMP.

The State of Alaska has an approved CMP (Alaska Coastal Management Plan -"ACMP"), which was established under the Coastal Management Act of 1977, and is found at Alaska Statutes Annotated (AS) 46.40 et seq. The ACMP received federal approval from the NOAA in 1979 and Alaska has adopted, and OCRM has approved, additional changes to the ACMP. The Alaska Department of Natural Resources (ADNR) is the state's designated coastal management agency and is responsible for reviewing projects for consistency with the ACMP and issuing coastal management decisions under the provisions of 11 AAC Code Chapter 110. Specific statewide standards for review under the ACMP are found at 11 AAC Chapter 112.

In general, the CZMA defines the coastal zone as extending "to the outer limit of State title and ownership under the Submerged Lands Act." (16 USC § 1453). For the state of Alaska, CZMA coastal boundaries are determined by each individual Coastal Resource District pursuant to 11 Alaska Administrative Code (AAC) 114.220.

Specific standards under the ACMP that are applicable to proposed training activities occurring in the TMAA are 11 AAC Chapter 112 Sections 300 ("Habitats") and 310 ("Air, Land, and Water Quality).

For the activities covered in this Final EIS/OEIS, the Navy has ensured compliance with the CZMA through coordination with the ADNR and the submission of a *de minimis* determination under 15 C.F.R. § 930.33(a)(3)(i) on 29 July 2010. This was based on the Navy's determination that the activities analyzed under this EIS were expected to have only insignificant direct or indirect (secondary and cumulative) coastal effects. ADNR concurred with the *de minimis* determination on 14 October 2010.

### ES 1.3.4 Other Environmental Requirements Considered

The Navy must comply with a variety of other federal environmental laws, regulations, and EOs. These include (among other applicable laws and regulations):

- Marine Mammal Protection Act (MMPA) (16 U.S.C. §§ 1361-1407);
- Endangered Species Act (ESA) (16 U.S.C. §§ 1531-1544);
- Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703-711);

- Rivers and Harbors Act (RHA) (33 U.S.C. §§ 401-426);
- Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) for Essential Fish Habitat (EFH) (16 U.S.C. §§ 1801-1891);
- Clean Air Act (CAA) (42 U.S.C. §§ 7401-7671);
- Federal Water Pollution Control Act (Clean Water Act) (33 U.S.C. §§ 1251-1387);
- National Historic Preservation Act (NHPA) (16 U.S.C. § 470);
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898, 59 FR 7269 [Feb 16, 1994]);
- EO 13045, Environmental Health and Safety Risks to Children (EO 13045, 62 FR 19885 [Apr 23, 1997]);
- Alaska Native Claims Settlement Act of 1971 (ANSCA) (43 U.S.C. §§ 1601-1629); and
- Alaska National Interest Lands Conservation Act (ANILCA) (16 U.S.C. §§ 3101-3233).

In addition, laws and regulations of the State of Alaska appropriate to Navy actions are identified and addressed in this Final EIS/OEIS. This Final EIS/OEIS will facilitate compliance with applicable state laws and regulations.

## ES 1.4 PROPOSED ACTION AND ALTERNATIVES

### ES 1.4.1 Alternatives Development

NEPA implementing regulations provide guidance on the consideration of alternatives in an EIS/OEIS. These regulations require the decision maker to consider the environmental effects of the Proposed Action and a range of alternatives to the Proposed Action (40 C.F.R. § 1502.14). The range of alternatives includes reasonable alternatives, which must be rigorously and objectively explored, as well as other alternatives that are eliminated from further consideration and from further detailed study. To be "reasonable," an alternative must meet the stated purpose of and need for the Proposed Action.

For purposes of this EIS/OEIS, the No Action Alternative serves as the baseline level of operations, representing the regular and historical level of training activity necessary to maintain Navy readiness. Consequently, the No Action Alternative stands as no change from current levels of training usage. This interpretation of the No Action Alternative is consistent with guidance provided by Council on Environmental Quality (CEQ) (CEQ's 40 Most Asked Questions, Question #3; http://ceq.hss.doe.gov), which indicates that where ongoing federal programs continue, even as new plans are developed, "no action" is "no change" from current management direction or level of management intensity. The potential impacts of the current level of training within the ATA (defined by the No Action Alternative) are compared to the potential impacts of activities proposed under Alternative 1 and Alternative 2.

The purpose of including a No Action Alternative in environmental impact analyses is to ensure that agencies compare the potential impacts of the proposed major federal action to the known impacts of maintaining the status quo.

Alternatives considered in this EIS/OEIS were developed by the Navy after careful assessment by subject-matter experts, including military units and commands that use the ATA, range management professionals, and Navy environmental managers and scientists. The Navy has developed a set of criteria to use in assessing whether a possible alternative meets the purpose of and need for the Proposed Action. Each of these criteria assumes implementation of mitigation measures for the protection of natural

resources, as appropriate. Any alternative considered for future analysis should support or employ the following criteria:

1. Appropriate physical environment – unique and complex bathymetric/oceanographic conditions. The following attributes combine to provide a challenging environment for Navy forces to conduct ASW training:

    - Existence of a continental shelf, submarine canyons, and seamounts in the area;
    - Fresh water inputs into the GOA from multiple sources; and
    - Unique areas of upwelling and currents.

2. Proximity of Alaska land and sea training areas to each other to accommodate the joint training mission. The location of the TMAA is directly related to the location of permanent land and air training ranges in the State of Alaska, and supports the mission requirement of Alaskan Command (ALCOM)[3] to conduct joint training for Alaska-based forces and the following elements:

    - Ability to support ALCOM simulated combat conditions and activities;
    - Infrastructure that supports a robust opposition force, which allows realistic training;
    - Land-based infrastructure to support safety of naval aviation including air fields for aircraft emergency diverted landings; and
    - Facilitation of Joint Task Force training in support of PACOM.

3. Availability of sufficiently sized air space and ranges that support tactically realistic joint training activities. This criterion allows for:

    - Fewer restrictions on supersonic flights;
    - Ability to conduct numerous types of training activities at the same time in relative proximity without compromising safety and training objectives;
    - Continuous, nonsegmented training, from launch to recovery; and
    - Support of the full spectrum of joint, allied, and coalition training.

4. Appropriate weather conditions for a cold-water environment suitable for maritime activities at sea, including a sea state of three or less on the Beaufort scale (defined as a moderate sea; average wave height of 2-4 feet [ft] [0.6-1.2 meters {m}]).

5. Minimal encroachments on joint training requirements that could include, but are not limited to:

    - Low interference in the electronic spectrum to allow for unrestricted use of electronic sensors and systems; and
    - Large areas with sparse populations or low to no permanent human populations.

6. Training sustainment in support of the DoD Title 10 mandate.

[3] The mission requirement of ALCOM is to integrate military activities within Alaska to maximize the readiness of theater forces, expedite deployment of forces from and through Alaska in support of worldwide contingencies, and serve as the Joint Task Force (JTF) headquarters for protection of critical infrastructure and coordination of Military Assistance to Civil Authorities (MACA).

7. Proximity to shipping lanes for realistic training on avoiding conflicts with air and marine traffic.

Having identified criteria for generating alternatives for consideration in this Final EIS/OEIS, the Navy eliminated several alternatives from further consideration after initial review. Specifically, the following potential alternatives were not carried forward for analysis:

- Alternative Locations
- Reduced Training
- Alternate Time Frame
- Simulated Training

After careful consideration of each of these potential alternatives in light of the identified criteria, the Navy determined that none of them meets the Navy's purpose of and need for the Proposed Action. For a more detailed discussion of identified criteria and alternatives selected pursuant to the guidance of 40 C.F.R. § 1502.14(a), see Chapter 2 (Section 2.3.1); for alternatives considered but eliminated, see Chapter 2 (Section 2.3.2).

### ES 1.4.2 Alternatives Considered

Three alternatives are analyzed in this EIS/OEIS and are described in detail below: 1) The No Action Alternative – continue current activities (involving no active sonar); 2) Alternative 1 – increase training activities to include the use of active sonar and accommodate force structure changes to include new platforms, weapon systems, and training enhancement instrumentation; 3) Alternative 2 – all portions of Alternative 1, conduct one additional Carrier Strike Group (CSG) exercise during summer months (April through October), annually, and conduct one Sinking Exercise (SINKEX) during each summer exercise, for a maximum of two annually.

The following sections contain the detailed discussion of Alternatives carried forward for analysis in the EIS/OEIS.

### ES 1.4.3 No Action Alternative – Current Training Activities within the Alaska Training Areas

The Navy routinely conducts annual training in the ATA for national defense purposes. Under the No Action Alternative, training activities (no active sonar) as part of large-scale joint exercises would continue at baseline levels required to execute the joint training exercise requirements (one joint force exercise occurring over a maximum time period of up to 14 consecutive days during the summer months [April through October]). The Navy would not increase training activities above historical levels, but would continue exercises in the ATA, and specifically the TMAA, with up to one CSG or equivalent forces. Evaluation of the No Action Alternative in this EIS/OEIS provides a baseline for assessing environmental impacts of Alternative 1 and Alternative 2 (Preferred Alternative), as described in the following subsections.

Training activities and exercises currently conducted in the ATA are briefly described below. Each military training activity described in this EIS/OEIS meets a requirement that can be traced ultimately to requirements from the National Command Authority.[4] Training activities in the ATA stem from large-

[4] National Command Authority (NCA) is a term used by the United States military and government to refer to the ultimate lawful source of military orders. The term refers collectively to the President of the United States (as commander-in-chief) and the United States Secretary of Defense.

scale joint exercises, such as Northern Edge, which may involve thousands of participants. These exercises include basic individual or unit level training events of relatively short duration involving few participants that occur simultaneously with the large-scale joint exercises.

Over the years, the tempo and types of activities have fluctuated within the ATA due to changing requirements, the introduction of new technologies, the dynamic nature of international events, advances in warfighting doctrine and procedures, and force structure changes. Such developments have influenced the frequency, duration, intensity, and location of required training. The factors influencing tempo and types of activities are fluid in nature and will continue to cause fluctuations in training activities within the ATA. However, even with the fluidity of the training requirements, the "ceiling numbers" for the alternatives in the EIS/OEIS will not be exceeded. Accordingly, training activity data used throughout this EIS/OEIS are a representative baseline for evaluating impacts that may result from the proposed training activities.

For purposes of analysis, training activity data used in this EIS/OEIS are organized by Navy Primary Mission Areas (PMARs). The Navy currently trains in five PMARs in the TMAA: Anti-Air Warfare, Anti-Surface Warfare, Electronic Combat (EC), Naval Special Warfare (NSW), and Strike Warfare (STW). The Navy also conducts STW, EC, and NSW training in the Air Force SUA and Army training lands of the ATA. Although discussed in this document, these inland activities and their impacts are covered under other NEPA documentation by the Air Force and Army (USAF 1995, USAF 2007, Army 1999, and Army 2004 [refer to Sections 2.1.2 and 2.1.3]). Summary descriptions of current training activities are outlined in Table 2-7 (Section 2.6.3). As stated earlier, the No Action Alternative is the baseline of current training area usage, thus allowing a comparative analysis between the current tempo and proposed new uses and accelerated tempo of use.

### ES 1.4.4 Alternative 1 – Increase Training Activities to Include Anti-Submarine Warfare Activities and Accommodate Force Structure Changes

Under Alternative 1, in addition to training activities currently conducted, the ATA would support an increase in training activities designed to meet Navy and DoD current and near-term operational requirements. This increase would encompass conducting one large-scale joint force exercise, including ASW activities and the use of active sonar, occurring over a maximum time period of up to 21 consecutive days during the summer months (April through October). Alternative 1 would include basic individual or unit level training events of relatively short duration occurring simultaneously with the large-scale joint force exercise. Alternative 1 would also accommodate increases in training activities due to force structure changes associated with the introduction of new weapon systems, vessels, aircraft, and training instrumentation into the Fleet. Training activities associated with force structure changes would be implemented for the EA-18G Growler, SSGN, P-8 MMA, DDG 1000 (Zumwalt Class), and UASs. Force structure changes associated with new weapons systems would include new types of sonobuoys. Force structure changes associated with new training instrumentation include the use of a Portable Undersea Tracking Range (PUTR). The PUTR would require the temporary placement of seven electronics packages on the seafloor, each approximately 3 ft (0.9 m) long by 2 ft (0.6 m) in diameter. No specific locations have yet been identified, but the electronic packages would be placed in water depths greater than 600 ft (182 m) and at least 3 nm (5.5 km) from land. Depending upon the configuration of the PUTR, it could cover an area from 25-100 $nm^2$. This is a temporary installation (to be recovered once training is complete), so no formal restricted areas would be designated and no limitations would be placed on commercial or civilian use of the area.

### ES 1.4.5 Alternative 2 (Preferred Alternative) – Increase Training Activities, Accommodate Force Structure Changes, Conduct One Additional Annual Exercise, and Conduct One SINKEX During Each Summertime Exercise

Under Alternative 2, in addition to training activities included as a part of Alternative 1 (accommodating training activities currently conducted, increasing specific training activities to include the use of active sonar, and accommodating force structure changes) the ATA would support an additional increase in training activities designed to meet Navy and DoD current and near-term operational requirements. This increase would entail the following activities:

- Conduct one additional separate large-scale joint force exercise, occurring over a maximum time period of up to 21 consecutive days during the summer months (April through October). Alternative 2 would include basic individual or unit level training events of relatively short duration occurring simultaneously with the large-scale joint force exercise.
- Conduct a SINKEX during each summertime exercise (a maximum of two annually) within the TMAA. During a SINKEX, a decommissioned surface ship is towed to a deep-water location and sunk using a variety of ordnance. The SINKEX would occur, by rule, at least 50 nm (93 km) offshore.

Alternative 2 is the Preferred Alternative because it would allow the greatest flexibility for Navy exercise planners to benefit from the unique joint training environment in the ATA. Additionally, Alternative 2 fully meets the criteria identified in Section 2.3.1.

## ES 1.5 SUMMARY OF EFFECTS ANALYSIS

Chapter 3 of the EIS/OEIS describes existing environmental conditions for resources potentially affected by the Proposed Action and Alternatives described in Chapter 2. This chapter also identifies and assesses the environmental consequences of the Proposed Action and Alternatives. The affected environment and environmental consequences are described and analyzed according to categories of resources. The categories of resources addressed in this EIS/OEIS and the location of the respective analyses are identified in Table ES-1.

In the environmental impact analysis process, the resources analyzed are identified and the expected geographic scope of potential impacts for each resource, known as the resource's region of influence (ROI), is defined. The discussion and analysis, organized by resource area, covers the TMAA, to the extent affected resources or potential impacts are present.

Analysis of potential impacts of Navy activities on marine mammals is particularly complex. Therefore, the Navy has provided a comprehensive discussion of the approach to and results of the impacts analysis relating to marine mammals in Section 3.8 Marine Mammals and Appendix D Marine Mammal Modeling.

**Table ES-1: Categories of Resources Addressed and EIS/OEIS Chapter**

| | |
|---|---|
| Air Quality (3.1) | Marine Mammals (3.8) |
| Expended Materials (3.2) | Birds (3.9) |
| Water Resources (3.3) | Cultural Resources (3.10) |
| Acoustic Environment (Airborne) (3.4) | Transportation and Circulation (3.11) |
| Marine Plants and Invertebrates (3.5) | Socioeconomics (3.12) |
| Fish (3.6) | Environmental Justice and Protection of Children (3.13) |
| Sea Turtles (3.7) | Public Safety (3.14) |

## ES 1.6 CUMULATIVE IMPACTS

The analysis of cumulative impacts considers the effects of the Proposed Action in combination with other past, present, and reasonably foreseeable future actions taking place in the project area, regardless of what agency or person undertakes these actions. This EIS/OEIS analyzes cumulative impacts associated with implementation of Navy-sponsored activities and other non-Navy activities in the region. Other activities analyzed include fishing, commercial and recreational marine traffic, ocean pollution, scientific research, and commercial and general aviation. Cumulative effects resulting from other relevant projects (such as those listed in Section 4.1.2) combined with the Proposed Action addressed in this EIS/OEIS were determined to have cumulative impacts, but those impacts are less than significant.

## ES 1.7 MITIGATION AND PROTECTIVE MEASURES

NEPA regulations require an EIS to include appropriate mitigation measures not already included in the Proposed Action or Alternatives (40 C.F.R. § 1502.12(f)). Each of the Alternatives, including the Proposed Action considered in this EIS/OEIS, already includes protective or mitigation measures intended to reduce environmental effects from Navy activities. Measures, such as best management practices (BMPs) and Standard Operating Procedures (SOPs), are discussed in the resource-by-resource analysis, and also are addressed in detail in Chapter 5, Mitigation and Protective Measures.

As part of its commitment to sustainable use of resources and environmental stewardship, the Navy incorporates measures that are protective of the environment into all of its activities. These include employment of BMPs, SOPs, adoption of conservation recommendations, and other protective measures that mitigate the impacts of Navy activities on the environment. Some of these measures are generally designed to apply to certain geographic areas during certain times of year or for specific types of Navy training. Conservation measures covering habitats and species occurring in the ATA have been developed through various environmental analyses conducted by the Navy for land and sea ranges and adjacent coastal waters. The discussion in Chapter 5 describes mitigation measures applicable to Navy activities in the TMAA. Existing protective measures and mitigation measures are also presented in Table ES-2 for each resource section analyzed.

**Table ES-2: Summary of Effects**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| **3.1 Air Quality** | **NEPA (U.S. Territorial Seas, 0 to 12 nm)** | • Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to air quality would occur.<br>• Overflights of ocean (0-12 nm) and land areas at altitudes above 3,000 ft AGL would not affect ground-level air quality. | • Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to air quality would occur.<br>• Overflights of ocean (0-12 nm) and land areas at altitudes above 3,000 ft AGL would not affect ground-level air quality. | • Under Alternative 2, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to air quality would occur.<br>• Overflights of ocean (0-12 nm) and land areas at altitudes above 3,000 ft AGL would not affect ground-level air quality. |
| | **EO 12114 (Non-U.S. Territorial Seas, > 12 nm)** | • The No Action Alternative would maintain training activities and associated air pollutant emissions at baseline levels outside of U.S. territory. | • Outside of U.S. territory, air pollutant emissions would increase slightly, mainly from increased surface vessel and aircraft activities.<br>• Although Alternative 1 would increase emissions of air pollutants over the No Action Alternative, emissions outside of U.S. territorial seas would not cause an air quality standard to be exceeded. | • Outside of U.S. territory, air pollutant emissions would increase mainly from increased surface vessel and aircraft activities.<br>• SINKEX would generate a substantial portion of the air pollutants that would be emitted under Alternative 2.<br>• Although Alternative 2 would increase emissions of air pollutants over the No Action Alternative, emissions outside of U.S. territorial seas would not cause an air quality standard to be exceeded. |
| | ***MITIGATION MEASURES:*** Equipment used by military organizations within the GOA, including ships and other marine vessels, aircraft, and other equipment, are properly maintained in accordance with applicable Navy and Marine Corps requirements. Operating equipment meets federal and state emission standards, where applicable. Annual emissions of criteria and hazardous air pollutants produced by the Proposed Action are well below a level that could degrade regional air quality. Therefore, no mitigation measures are required to reduce the impacts on the environment of air emissions from the Proposed Action. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.2 Expended Materials | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). No significant impacts related to expended materials will occur.<br>• Aircraft overflights will not involve expenditures of training materials. | • Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). No significant impacts related to expended materials would occur.<br>• Aircraft overflights would not involve expenditures of training materials. | • Under Alternative 2, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). No significant impacts related to expended materials would occur.<br>• Aircraft overflights would not involve expenditures of training materials. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • Approximately 76,200 lb (34,600 kg) of training materials will be expended per year, with a density of 9.0 lb per $nm^2$ (1.2 kg per $km^2$) per year distributed over 20 percent of the TMAA. Over 97 percent of the expended items will be naval gun shells or small arms rounds.<br>• Approximately 1,870 lb (850 kg) of hazardous materials would be distributed at an estimated 0.22 lb per $nm^2$ (0.03 kg per $km^2$) per year.<br>• Expended materials under the No Action Alternative will not have a substantial effect on the environment. | • Increase in training would deposit approximately 143,000 lb (65,000 kg) of expended materials, with a density of 16.9 lb per $nm^2$ (2.23 kg per km2) per year distributed over 20 percent of the TMAA. Over 93 percent of the expended items would be naval gun shells or small arms rounds.<br>• Approximately 4,890 lb (2,220 kg) of hazardous materials would be distributed at an estimated 0.58 lb per $nm^2$ (0.08kg per $km^2$) per year.<br>• Expended materials under Alternative 1 would not have a substantial effect on the marine environment. | • There would be a total increase in the weight of expended materials (352,000 lb [160,000 kg]) distributed over 20 percent of the TMAA under Alternative 2. Over 91 percent of the expended items would be naval gun shells or small arms rounds.<br>• Hazardous materials would account for 2.9 percent (10,300 lb [4,680 kg]) per year of expended material, but density of these materials would be approximately 1.2 lb per $nm^2$.<br>• SINKEX training would result in approximately 70,000 lb per year of expended materials, of which one percent would be considered hazardous. SINKEX would result in a relatively high areal density of expended materials on portions of the TMAA.<br>• Expended materials under Alternative 2 would not have a substantial effect on the marine environment. |
| | ***MITIGATION MEASURES:*** As summarized in Section 3.2.4, the alternatives would contribute small amounts of hazardous materials to the environment. Given the large size of the training area and the expected fate and transport of the constituents, hazardous materials released to the environment by the Proposed Action are not likely to be present at detectable concentrations. Current Navy protective measures, such as hazardous waste management procedures identified in Section 3.2.1.2, would continue to be implemented. No additional mitigation measures would be required under the Preferred Alternative. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.3 Water Resources | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1997, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts on water resources would occur.<br>• Aircraft overflights would not involve expenditures of training materials, and thus would not affect water quality. | • Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1997, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts on water resources would occur.<br>• Aircraft overflights would not involve expenditures of training materials, and thus would not affect water quality. | • Under Alternative 2, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1997, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts on water resources would occur.<br>• Aircraft overflights would not involve expenditures of training materials, and thus would not affect water quality. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • With a distribution of expended materials over 20 percent of the TMAA, the deposition rate of expended materials will be 1.92 items per $nm^2$ (0.55 items per $km^2$) per year.<br>• Ordnance constituents and other materials (batteries, fuel, and propellant) from training devices have minimal effect or are below standards.<br>• No long-term degradation of marine water quality. | • An estimated 26-percent increase in expended training materials would occur compared to the No Action Alternative. With a distribution of these materials over 20 percent of the TMAA, the deposition rate of expended items would be 2.40 items per $nm^2$ (0.69 items per $km^2$) per year.<br>• Deposition of hazardous materials (i.e., batteries, fuel, and propellant) from expended materials would be minimal (less than ½ lb per $nm^2$).<br>• No long-term degradation of marine water quality would occur. | • An estimated 160 percent increase in expended training materials would occur, compared to the No Action Alternative. With a distribution of these materials over 20 percent of the TMAA, the deposition rate of expended items would be approximately 4.90 items per $nm^2$ (1.42 items per $km^2$) per year.<br>• Impacts from the increase in expended materials would be minimal because most expended materials (97 percent) would be inert in the marine environment.<br>• Assuming deposition over 20% of the TMAA, the amount of hazardous materials from expended materials would be low, approximately 1.2 lb per $nm^2$ per year. |
| | ***MITIGATION MEASURES:*** Impacts on water resources resulting from the alternatives would be below thresholds that could result in long-term degradation of water resources or affect water quality. Possible impacts to water quality during normal operating conditions would continue to be mitigated by measures identified in Section 3.3.1.2, which include shipboard management, storage, and discharge of hazardous materials and wastes, and other pollution protection measures intended to protect water quality. No additional mitigation measures would be implemented because there would be no significant impacts to water quality. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| **3.4 Acoustic Environment (Airborne)** | **NEPA (U.S. Territorial Seas, 0 to 12 nm)** | • Current Navy activities involving aircraft overflights were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to airborne noise would occur.<br>• Aircraft overflights (> 15,000 ft) over the U.S. Territorial Seas (0-12 nm) to the TMAA would have no effect on the acoustic environment. | • Current Navy activities involving aircraft overflights were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to airborne noise would occur.<br>• Aircraft overflights (> 15,000 ft) over the U.S. Territorial Seas (0-12 nm) to the TMAA would have no effect on the acoustic environment. | • Current Navy activities involving aircraft overflight were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to airborne noise would occur.<br>• Aircraft overflights (> 15,000 ft) over the U.S. Territorial Seas (0-12 nm) to the TMAA would have no effect on the acoustic environment. |
| | **EO 12114 (Non-U.S. Territorial Seas, > 12 nm)** | *Surface Ship Noise*<br>• No change from current conditions. No sensitive receptors present.<br>*Aircraft Noise*<br>• No change from current conditions. Short-term noise impacts, including sonic booms. No sensitive receptors present at sea.<br>*Weapon and Target Noise*<br>• No change from current conditions. Very short-term noise impacts. No sensitive receptors present at sea. | *Surface Ship Noise*<br>• Minor localized engine noise. No sensitive receptors present.<br>*Aircraft Noise*<br>• Short-term noise impacts, including sonic booms. No sensitive receptors present at sea.<br>*Weapon and Target Noise*<br>• Very short-term noise impacts. No sensitive receptors present at sea. | *Surface Ship Noise*<br>• Minor localized engine noise. No sensitive receptors present.<br>*Aircraft Noise*<br>• Short-term noise impacts, including sonic booms. No sensitive receptors present at sea.<br>*Weapon and Target Noise*<br>• Very short-term noise impacts. No sensitive receptors present at sea. |
| | ***MITIGATION MEASURES:*** In the TMAA, most Navy training takes place far out to sea and airborne noise levels would primarily affect military personnel operating the equipment/weapon systems producing the noise. Personnel engaged in the exercise wear personal protective equipment and are not considered sensitive receptors for purposes of the EIS/OEIS analysis. No additional noise-specific mitigation measures are required. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.5 Marine Plants and Invertebrates | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Overflights would not affect marine plants and invertebrates. | • Overflights would not affect marine plants and invertebrates. | • Overflights would not affect marine plants and invertebrates. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • Expended materials and the release of munitions constituents and other materials would be distributed across 20 percent of the TMAA (1.9 items per $nm^2$ [0.5 per $km^2$]) and have minimal effects on pelagic and benthic communities. More than 97 percent of these items would be from gunshells and small caliber rounds.<br>• Surface or near-surface explosions have the potential to kill or harm individual animals and plants in the immediate vicinity resulting in localized impacts. Given the TMAA size and using conservative estimates, 0.01 explosions would occur per $nm^2$ (0.003 per $km^2$) per year resulting in minimal effects. Benthic communities would not be affected by explosions due to water depth. | • Expended materials and the release of munitions constituents and other materials would be distributed across 20 percent of the TMAA (2.4 items per $nm^2$ [0.7 per $km^2$]) and have minimal effects on pelagic and benthic communities. More than 93 percent of these items would be from gunshells and small caliber rounds.<br>• Surface or near-surface explosions have the potential to kill or harm individual animals and plants in the immediate vicinity resulting in localized impacts. Given the TMAA size and using conservative estimates, 0.02 explosion would occur per $nm^2$ (0.006 per $km^2$) per year resulting in minimal effects. Benthic communities would not be affected by explosions due to water depth.<br>• Localized and temporary impacts to benthic fauna may occur from the PUTR, but no long-term impact is anticipated. | • Expended materials and the release of munitions constituents and other materials would be distributed across 20 percent of the TMAA (4.9 items per $nm^2$ [1.4 per $km^2$]) and have minimal effects on pelagic and benthic communities. More than 91 percent of these items would be from gunshells and small caliber rounds.<br>• Surface or near-surface explosions have the potential to kill or harm individual animals and plants in the immediate vicinity resulting in localized impacts. Given the TMAA size and using conservative estimates, 0.14 explosion would occur per $nm^2$ (0.04 per $km^2$) per year resulting in minimal effects. Benthic communities would not be affected by explosions due to water depth.<br>• Localized and temporary impacts to benthic fauna may occur from the PUTR, but no long-term impact is anticipated.<br>• Although localized and temporary impacts to the pelagic environment would occur from a SINKEX, the relatively small quantities of materials expended, dispersed as they are over a very large area, would have no adverse physical effects on marine biological resources. |
| | ***MITIGATION MEASURES:*** The Navy has no existing protective measures in place specifically for marine plants and invertebrates. However, marine plants and invertebrates benefit from measures in place to protect marine mammals, sea turtles, and Essential Fish Habitat that are described in full in Chapter 5. As summarized above, and in detail in Section 3.5.2, the actions proposed under the alternatives described in this EIS/OEIS would have minimal impacts on the marine plant and invertebrate communities of the TMAA. Therefore, no resource-specific mitigation measures would be required. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.6 Fish | NEPA (0 - 12 nm) | • Overflights would not adversely affect fish populations or EFH as defined under the MSFCMA. | • Overflights would not adversely affect fish populations or EFH as defined under the MSFCMA. | • Overflights would not adversely affect fish populations or EFH as defined under the MSFCMA. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • Vessel movement, aircraft overflight, weapons firing disturbance, and expended materials would result in minimal harm to fish or EFH. Given the TMAA size and using conservative estimates, the concentration of expended materials would be 1.9 per $nm^2$ (0.5 per $km^2$). More than 97 percent of these items would be from gunshells and small caliber rounds.<br>• Explosive ordnance use may result in injury or mortality to individual fish but would not result in impacts to fish populations. Given the TMAA size and using conservative estimates, the concentration of explosive ordnance would be 0.010 per $nm^2$ (0.003 per $km^2$).<br>• Activities would not adversely affect fish populations or EFH as defined under the MSFCMA.<br>• May affect ESA-listed fish species.<br>• No effect to designated critical habitat. | • Vessel movement, aircraft overflight, weapons firing disturbance, and expended materials would result in minimal harm to fish or EFH. Given the TMAA size and using conservative estimates, the concentration of expended materials would be 2.4 per $nm^2$ (0.7 per $km^2$). More than 93 percent of these items would be from gunshells and small caliber rounds.<br>• Explosive ordnance use may result in injury or mortality to individual fish but would not result in impacts to fish populations. Given the TMAA size and using conservative estimates, the concentration of explosive ordnance would be 0.020 per $nm^2$ (0.006 per $km^2$).<br>• Because only a few species of fish may be able to hear the relatively higher frequencies of mid-frequency sonar, sonar used in Navy exercises would result in minimal harm to fish or fish habitat.<br>• Activities would not adversely affect fish populations or EFH as defined under the MSFCMA.<br>• May affect ESA-listed fish species.<br>• No effect to designated critical habitat. | • Vessel movement, aircraft overflight, weapons firing disturbance, and expended materials would result in minimal harm to fish or EFH. Given the TMAA size and using conservative estimates, the concentration of expended materials would be 4.9 per $nm^2$ (1.4 per $km^2$). More than 91 percent of these items would be from gunshells and small caliber rounds.<br>• Explosive ordnance use may result in injury or mortality to individual fish but would not result in impacts to fish populations. Given the TMAA size and using conservative estimates, the concentration of explosive ordnance would be 0.142 per $nm^2$ (0.041 per $km^2$).<br>• Because only a few species of fish may be able to hear the relatively higher frequencies of mid-frequency sonar, sonar used in Navy exercises would result in minimal harm to fish or fish habitat.<br>• Activities would not adversely affect fish populations or EFH as defined under the MSFCMA. No SINKEXs would be conducted in HAPCs.<br>• May affect ESA-listed fish species.<br>• No effect to designated critical habitat. |
| | ***MITIGATION MEASURES:*** The Navy has no existing protective measures in place specifically for fish. However, habitats associated with fish communities benefit from measures in place to protect marine mammals and sea turtles that are described in full in Chapter 5. As summarized above and in detail in Section 3.6.2, the alternatives proposed in the EIS/OEIS would be expected to affect individual fish and have localized effects on their habitats, but would not affect communities or populations of species or their use of the TMAA. Mitigation measures for at-sea activities involving explosive ordnance, implemented for marine mammals and sea turtles, also offer protections to habitats associated with fish communities. These current protective measures detailed in Chapter 5 (such as utilization of general maritime measures and buffer zones for marine mammals as well as marine vegetative communities) would continue to be implemented, and no further mitigation measures would be needed to protected fish in the TMAA. | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.7 Sea Turtles | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Aircraft overflights would occur at altitudes at or above 15,000 ft (915 m) and have no effect on leatherback turtles. | • Aircraft overflights would occur at altitudes at or above 15,000 ft (915 m) and have no effect on leatherback turtles. | • Aircraft overflights would occur at altitudes at or above 15,000 ft (915 m) and have no effect on leatherback turtles. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • Short-term behavioral responses from general vessel disturbance possible. Potential for injury or mortality from vessel collisions but occurrence is very unlikely.<br>• Potential for short-term behavioral responses to low level overflights.<br>• Extremely low probability of direct strikes from ordnance and low potential for ingestion of expended materials.<br>• Potential for exposure to at-sea explosions but occurrence is very unlikely.<br>• No long-term effects would occur.<br>• No Action Alternative may affect ESA-listed leatherback turtles. | • Short-term behavioral responses from general vessel disturbance possible. Potential for injury or mortality from vessel collisions but occurrence is very unlikely.<br>• Potential for short-term behavioral responses to low level overflights.<br>• Extremely low probability of direct strikes from ordnance and low potential for ingestion of expended materials.<br>• Potential for exposure to at-sea explosions but occurrence is very unlikely.<br>• Because sonars used in the TMAA are above the known hearing range of sea turtles potential for exposure to mid-frequency and high-frequency sources is unlikely.<br>• No long-term effects would occur.<br>• Alternative 1 may affect ESA-listed leatherback turtles. | • Short-term behavioral responses from general vessel disturbance possible. Potential for injury or mortality from vessel collisions but occurrence is very unlikely.<br>• Potential for short-term behavioral responses to low level overflights.<br>• Extremely low probability of direct strikes from ordnance and low potential for ingestion of expended materials.<br>• Potential for exposure to at-sea explosions but occurrence is very unlikely.<br>• Because sonars used in the TMAA are above the known hearing range of sea turtles potential for exposure to mid-frequency and high-frequency sources is unlikely.<br>• No long-term effects would occur.<br>• Alternative 2 may affect ESA-listed leatherback turtles. |
| | ***MITIGATION MEASURES:*** The comprehensive suite of protective measures and SOPs implemented by the Navy to reduce impacts to marine mammals also serves to mitigate potential impacts on sea turtles. In particular, personnel and watchstander training, establishment of exclusion zones for marine mammals for at-sea explosions, and pre- and post-exercise surveys all serve to reduce or eliminate potential impacts of Navy activities on sea turtles that may be present in the vicinity. The current requirements and practices described in detail in Chapter 5 would continue to be implemented, and no further mitigation measures would be needed to protect leatherback turtles in the TMAA. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.8 Marine Mammals | NEPA (0 - 12 nm) | • Aircraft overflights of U.S. territorial seas would occur at altitudes at or above 15,000 ft (915 m) and have no effect on marine mammals. | • Aircraft overflights of U.S. territorial seas would occur at altitudes at or above 15,000 ft (915 m) and have no effect on marine mammals. | • Aircraft overflights of U.S. territorial seas would occur at altitudes at or above 15,000 ft (915 m) and have no effect on marine mammals. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • Short-term behavioral responses from general vessel disturbance possible. Potential for injury or mortality from vessel collisions but occurrence is very unlikely.<br>• Potential for short-term behavioral responses to low level overflights. No long-term population-level effects.<br>• Extremely low probability of direct strikes from ordnance and low potential for ingestion of expended materials.<br>• For at-sea explosions, behavioral effects modeling and accounting for rare species indicates 102 MMPA Level B harassments (80 from sub-TTS and 22 from TTS), one MMPA Level A harassment resulting from slight injury, and no exposures resulting in potential severe injury or mortality. With implementation of mitigation measures, the MMPA Level A harassments should not occur.<br>• All seven ESA-listed species of marine mammals may be affected by one or more stressors resulting from No Action Alternative training activities. All species may be affected by exposures to at-sea explosions. | • Short-term behavioral responses from general vessel disturbance possible. Potential for injury or mortality from vessel collisions but occurrence is very unlikely.<br>• Potential for short-term behavioral responses to low level overflights. No long-term population-level effects.<br>• Extremely low probability of direct strikes from ordnance and low potential for ingestion of expended materials<br>• For at-sea explosions, behavioral effects modeling and accounting for rare species, indicates 137 MMPA Level B harassments (103 from sub-TTS and 34 from TTS), one MMPA Level A harassment from slight injury, and no exposures resulting in potential severe injury or mortality. Mitigation would reduce the number of these harassments. With implementation of mitigation measures the one MMPA Level A harassment should not occur.<br>• For active sonar & other non-sonar acoustic sources, behavioral effects modeling and accounting for rare species indicates 215,519 MMPA Level B harassments (215,053 sub-TTS and 466 from TTS). There is one predicted MMPA Level A harassment from PTS, but with implementation of mitigation measures, this MMPA Level A harassment should not occur.<br>• All seven ESA-listed species of marine mammals may be affected by one or more stressors resulting from Alternative 1 training activities. All species may be affected by exposures to sound from sonar and at-sea explosions. | • Short-term behavioral responses from general vessel disturbance possible. Potential for injury or mortality from vessel collisions but occurrence is very unlikely.<br>• Potential for short-term behavioral responses to low level overflights. No long-term population-level effects.<br>• Extremely low probability of direct strikes from ordnance and low potential for ingestion of expended materials<br>• For at-sea explosions, behavioral effects modeling and accounting for rare species indicates 240 MMPA Level B harassments (170 from sub-TTS and 70 from TTS), four MMPA Level A harassments, and one exposure resulting in potential severe injury or mortality. Mitigation would reduce the number of these harassments. With implementation of mitigation measures, the four MMPA Level A harassments and one severe injury should not occur. Increase in at-sea explosions from SINKEX are offset by area clearance procedures.<br>• For active sonar & other non-sonar acoustic sources, behavioral effects modeling and accounting for rare species indicates 425,551 MMPA Level B harassments (424,620 from sub-TTS and 931 from TTS). There is one predicted MMPA Level A harassment from PTS, but with implementation of mitigation measures, this MMPA Level A harassment should not occur.<br>• All seven ESA-listed species of marine mammals may be affected by one or more stressors resulting from Alternative 2 training activities. All species may be affected by exposures to sound from sonar and at-sea explosions. |
| | ***MITIGATION MEASURES***: The Navy intends to implement a comprehensive suite of mitigation measures that serve to reduce impacts to marine mammals that might result from Navy training in the TMAA (summarized in Section 3.8.8 and in detail in Section 5.1.7). In particular, personnel and watchstander training, establishment of marine mammal-free exclusion zones for at-sea explosions, and pre- and post-exercise surveys all serve to reduce or eliminate potential impacts of Navy activities on marine mammals that may be present in the vicinity. The current requirements and practices described in detail in Ch. 5 would continue to be implemented, and no further mitigation measures would be needed to protect marine mammals in the TMAA. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.9 Birds | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Due to flight altitude, behavioral responses to overflights in territorial seas are not expected.<br>• Potential for harm to birds from aircraft strikes is extremely low and is not anticipated. | • Due to flight altitude, behavioral responses to overflights in territorial seas are not expected.<br>• Potential for harm to birds from aircraft strikes is extremely low and is not anticipated. | • Due to flight altitude, behavioral responses to overflights in territorial seas are not expected.<br>• Potential for harm to birds from aircraft strikes is extremely low and is not anticipated. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • Harm due to vessel movements is unlikely.<br>• Brief behavioral response to overflights. Low potential for harm to birds from aircraft strikes.<br>• Low potential for harm to birds from ordnance use.<br>• Low potential for harm to birds from explosives use.<br>• Low potential for harm from military expended materials.<br>• Within the TMAA, the single endangered species is the short-tailed albatross. Vessel movements, aircraft overflight, ordnance use, at-sea explosions, and military expended materials (entanglement) may affect, but are not likely to adversely affect, individual ESA-listed seabirds. | • Harm due to vessel movements is unlikely.<br>• Brief behavioral response to overflights. Low potential for harm to birds from aircraft strikes.<br>• Low potential for harm to birds from ordnance use.<br>• Low potential for harm to birds from explosives use.<br>• Low potential for harm from military expended materials.<br>• No considerable harm to birds, migratory birds, bald eagles, federally listed species, or their habitat.<br>• Within the TMAA, the single endangered species is the short-tailed albatross. Vessel movements, aircraft overflight, ordnance use, at-sea explosions, and military expended materials may affect, but not likely to adversely affect, individual ESA-listed seabirds. | • Harm due to vessel movements is unlikely.<br>• Brief behavioral response to overflights. Low potential for harm to birds from aircraft strikes.<br>• Low potential for harm to birds from ordnance use.<br>• Low potential for harm to birds from explosions and impacts.<br>• Low potential for harm from military expended materials.<br>• No considerable harm to birds, migratory birds, bald eagles, federally listed species, or their habitat.<br>• Within the TMAA, the single endangered species is the short-tailed albatross. Vessel movements, aircraft overflight, ordnance use, at-sea explosions, and military expended materials may affect, but not likely to adversely affect, individual ESA-listed seabirds. |
| | ***MITIGATION MEASURES:*** Some of the SOPs and BMPs implemented by the Navy for resource protection that are described in detail in Chapter 5 would also reduce potential effects to birds (e.g., avoidance of birds and their nesting and roosting habitats and monitoring of exclusion zones surrounding at-sea explosions prior to detonations). As summarized above and in detail in Section 3.9.2, the actions proposed in this EIS/OEIS could affect birds within the TMAA, but community- or population-level effects would not be expected under any of the alternatives. Current protective measures would continue to be implemented by the Navy, and no additional mitigation measures would be needed to protect birds or their habitats. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| **3.10 Cultural Resources** | **NEPA (U.S. Territorial Seas, 0 to 12 nm)** | • Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to cultural resources onshore would occur.<br>• Aircraft overflights above 15,000 ft (915 m) altitude between the shore and the TMAA would have no impact on cultural resources. | • Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to cultural resources onshore would occur.<br>• Aircraft overflights above 15,000 ft (915 m) altitude between the shore and the TMAA would have no impact on cultural resources. | • Under Alternative 2, Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to cultural resources onshore would occur.<br>• Aircraft overflights above 15,000 ft (915 m) altitude between the shore and the TMAA would have no impact on cultural resources. |
| | **EO 12114 (Non-U.S. Territorial Seas, > 12 nm)** | • Submerged cultural resources would not be impacted because of the type of training activities and the low density of submerged cultural resources within the area of effect. | • Submerged cultural resources would not be impacted because of the type of training activities and the low density of submerged cultural resources within the area of effect. | • Submerged cultural resources would not be impacted because of the type of training activities and the low density of submerged cultural resources within the area of effect. |
| | ***MITIGATION MEASURES:*** The Navy has established protective measures to reduce potential effects on cultural and natural resources from training exercises in coastal waters and for land and sea ranges. Some are generally applicable, while others apply to particular geographic areas or during specific times of year. Protective measures in other locations include avoidance of known shipwreck sites or the use of inert ordnance. Precise and accurate locations for shipwrecks in the TMAA are not known. As summarized above and in detail within Section 3.10.2, no substantial impacts on cultural resources from the proposed activities were identified. Therefore, no additional mitigation measures are necessary or appropriate. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.11 Transportation and Circulation | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to inland transportation and circulation would occur.<br>• With the use of the Altitude Reservation (ALTRV), overflights would have no adverse impact on non-military air or marine traffic. | • Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to inland transportation and circulation would occur.<br>• With the use of the ALTRV, overflights would have no adverse impact on non-military air or marine traffic. | • Under Alternative 2, Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to inland transportation and circulation would occur.<br>• With the use of the ALTRV, overflights would have no adverse impact on non-military air or marine traffic. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • No adverse effects on commercial or general aviation would occur. Limitations are communicated to commercial airlines and general aviation by Notice to Airmen (NOTAMs).<br>• No adverse effects on marine traffic would occur. When training activities occur within shipping or high traffic areas, these activity areas are communicated to all vessels and operators by NOTMARs published by the USCG. | • Effects on air and marine traffic would be the same as described under the No Action Alternative. No additional impacts on the Federal Aviation Administration's (FAA's) capabilities would be created as a result of proposed training increases under Alternative 1.<br>• Marine traffic will not be affected by military operational increases.<br>• Installation and use of the temporary PUTR will not affect air and marine traffic. | • Effects on air and marine traffic would be the same as described under Alternative 1. There are no adverse effects to air or marine traffic as a result of implementation of Alternative 2.<br>• Marine traffic will not be affected by military operational increases.<br>• Installation and use of the temporary PUTR will not affect air and marine traffic.<br>• With implementation of Letter of Instruction, range clearance procedures, and NOTMARs, SINKEX would not affect non-military transportation and circulation. |
| | ***MITIGATION MEASURES:*** Safety and security factors dictate that use of airspace and control of air traffic be closely regulated. Accordingly, regulations applicable to all aircraft are promulgated by the FAA to define permissible uses of designated airspace, and to control that use. The Navy provides publication of NOTMARs and other outreach information about potentially hazardous activities planned for the TMAA, for publication by the USCG. To ensure the broadest dissemination of information about hazards to commercial and recreational vessels, the Navy provides schedule conflicts along with other Coast Guard concerns via the internet. As summarized above and in detail within Section 3.11.2, no adverse effects on air or marine traffic from the proposed activities were identified. Therefore, no additional mitigation measures are necessary. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.12 Socioeconomics | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to socioeconomics would occur.<br>• Overflights would not result in adverse effects to commercial shipping, commercial fishing, recreation, or tourism. | • Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to socioeconomics would occur.<br>• Overflights would not result in adverse effects to commercial shipping, commercial fishing, recreation, or tourism. | • Under Alternative 2, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to socioeconomics would occur.<br>• Overflights would not result in adverse effects to commercial shipping, commercial fishing, recreation, or tourism. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • No adverse impacts to commercial/recreational fishing, fisheries research/management, civilian access, or tourism would occur as a result of the No Action Alternative. | • No adverse impacts to commercial/recreational fishing, fisheries research/management, civilian access, or tourism would occur as a result of Alternative 1.<br>• Use of the PUTR by Fleet ships and aircraft would have no socioeconomic impact to the region.<br>• Gear placement for the PUTR on the seafloor in a 25-100 $nm^2$ area could be incompatible with certain commercial fishing activities. | • No adverse impacts to commercial/recreational fishing, fisheries research/management, civilian access, or tourism would occur as a result of Alternative 2.<br>• Use of the PUTR by Fleet ships and aircraft would have no socioeconomic impact to the region.<br>• Gear placement for the PUTR on the seafloor in a 25-100 $nm^2$ area could be incompatible with certain commercial fishing activities.<br>• SINKEX under Alternative 2 would not result in impacts to fish populations and thus commercial fishing operations. |
| | ***MITIGATION MEASURES:*** Long-range advance notice of scheduled activities and times are made available to the public and the commercial fishing community via the Internet. To minimize potential military/civilian interactions, the Navy would continue to publish scheduled potentially hazardous training activities using the NOTAM and NOTMAR systems as applicable. As summarized above and in detail within Section 3.12.2, no adverse effects to socioeconomics from the proposed activities were identified. Therefore, no additional mitigation measures are necessary. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.13 Environmental Justice and Protection of Children | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to environmental justice or protection of children would occur.<br>• No effects are anticipated from training activities and overflights; no disproportionately high and adverse effects on any low-income or minority groups would occur.<br>• There are no population centers found within the TMAA. Therefore, no effects on children would occur as a result of implementation of the No Action Alternative. | • Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to environmental justice or protection of children would occur.<br>• No effects are anticipated from training activities and overflights; no disproportionately high and adverse effects on any low-income or minority groups would occur.<br>• There are no population centers found within the TMAA. Therefore, no effects on children would occur as a result of implementation of Alternative 1. | • Under Alternative 2, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts related to environmental justice or protection of children would occur.<br>• No effects are anticipated from training activities and overflights; no disproportionately high and adverse effects on any low-income or minority groups would occur.<br>• There are no population centers found within the TMAA. Therefore, no effects on children would occur as a result of implementation of Alternative 2. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • No permanent human population centers exist in non-U.S. territorial seas and subsistence uses occur mostly outside of the TMAA. Therefore, no impacts related to environmental justice or protection of children would occur. | • No permanent human population centers exist in non-U.S. territorial seas and subsistence uses occur mostly outside of the TMAA. Therefore, no impacts related to environmental justice or protection of children would occur under Alternative 1. | • No permanent human population centers exist in non-U.S. territorial seas and subsistence uses occur mostly outside of the TMAA. Therefore, no impacts related to environmental justice or protection of children would occur under Alternative 2. |
| | ***MITIGATION MEASURES:*** As summarized above and in detail within Section 3.13.2, no adverse effects to environmental justice or protection of children from the proposed activities were identified. Therefore, no additional mitigation measures are necessary. | | | |

**Table ES-2: Summary of Effects (continued)**

| | | No Action Alternative | Alternative 1 | Alternative 2 |
|---|---|---|---|---|
| 3.14 Public Safety | NEPA (U.S. Territorial Seas, 0 to 12 nm) | • Current Navy activities were considered and are consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts on public safety would occur.<br>• Aircraft overflights would not affect public safety because aircraft are limited to flying within the ALTRV and follow FAA guidelines. | • Under Alternative 1, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts on public safety would occur.<br>• Increase in aircraft overflights would not affect public safety because aircraft are limited to flying within the ALTRV and follow FAA guidelines. | • Under Alternative 2, Navy activities were considered and would be consistent with those analyzed in the previous environmental documentation (USAF 1995, USAF 2007, Army 1999, Army 2004). These documents concluded that no significant impacts on public safety would occur.<br>• Increase in aircraft overflights would not affect public safety because aircraft are limited to flying within the ALTRV and follow FAA guidelines. |
| | EO 12114 (Non-U.S. Territorial Seas, > 12 nm) | • Navy training exercises in the TMAA will not affect public safety. The Navy will issue NOTAMs or NOTMARs to notify the public of training exercises. If non-participants are in the training area, training activities will not proceed until non-participants have left the area. | • Navy training exercises in the TMAA will not affect public safety. The Navy will issue NOTAMs or NOTMARs to notify the public of training exercises. If non-participants are in the training area, training activities will not proceed until non-participants have left the area.<br>• Impacts on public safety would be the same as under the No Action Alternative.<br>• Installation and use of the temporary PUTR will not affect public health or safety. | • Navy training exercises in the TMAA will not affect public safety. The Navy will issue NOTAMs or NOTMARs to notify the public of training exercises. If non-participants are in the training area, training activities will not proceed until non-participants have left the area.<br>• There would be an increase in training tempo and new training activities, but impacts on public safety would be the same as under the No Action Alternative and Alternative 1.<br>• With implementation of SOPs, range clearance procedures, and NOTMARs, SINKEX will not affect public health or safety. |
| | ***MITIGATION MEASURES:*** Navy training activities in the TMAA comply with numerous established safety procedures (Fleet Area Control and Surveillance Facility safety procedures, DoD SOPs, Navy SOPs for aviation and submarine navigation safety, and general exercise safety procedures regarding surface vessels, aircraft, live and inert ordnance, sonar, electromagnetic radiation, and lasers) to ensure that neither participants nor nonparticipants engage in activities that endanger life or property (described in full in Section 3.14.1.2). As summarized above and in detail within Section 3.14.2, no substantial impacts from the proposed activities have been identified. The safety procedures followed by the Navy lower the risk that Navy training activities pose on public safety. No further mitigation measures would be required. | | |
| ***Note:*** Throughout Table ES-3, the word "Conservative" is meant to imply the use of assumptions that tend to overestimate. | | | | |

## ES 1.8 OTHER REQUIRED CONSIDERATIONS

### ES 1.8.1 Possible Conflicts with Objectives of Federal, State, and Local Plans, Policies, and Controls

Based on an evaluation with respect to consistency with statutory obligations, the Navy's Alternatives (including the Proposed Action) for the GOA Navy Training Activities Final EIS/OEIS do not conflict with the objectives or requirements of federal, state, regional, or local plans, policies, or legal requirements. Chapter 6, Table 6-1, provides a summary of environmental compliance requirements that may apply.

### ES 1.8.2 Relationship between Short-term Uses and Long-term Productivity

The Proposed Action would 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. The Navy is committed to sustainable range management, including co-use of the TMAA with the general public and commercial interests to the extent practicable, consistent with accomplishment of the Navy mission and in compliance with applicable law. This commitment to co-use enhances the long-term productivity of the training areas within the ATA.

### ES 1.8.3 Irreversible or Irretrievable 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. However, implementation of the Proposed Action would require the use of fuels by aircraft, ships, and ground-based vehicles. Total fuel consumption would increase and this nonrenewable resource would be considered irreversibly lost.

### ES 1.8.4 Energy Requirements and Conservation Potential

Increased training activities in the ATA for the Alternatives, including the Proposed Action, would result in an increase in energy demand over the No Action Alternative. Energy requirements would be subject to established energy conservation practices. The use of energy sources has been minimized wherever possible without compromising safety or training activities. No additional conservation measures related to direct energy consumption by the proposed activities are identified.

### ES 1.8.5 Natural or Depletable Resource Requirements and Conservation Potential

Resources that would be permanently and continually consumed by project implementation include water, electricity, natural gas, and fossil fuels. Pollution prevention is an important component of mitigation of the Alternatives' adverse impacts. To the extent practicable, pollution prevention considerations are included. Sustainable range management practices are in place that protect and conserve natural and cultural resources; and allow for preservation of access to training areas for current and future training requirements, while addressing potential encroachments that threaten to impact training area capabilities.