Draft
Environmental Impact Statement/Overseas Environmental Impact Statement
Atlantic Fleet Training and Testing

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6 REGULATORY CONSIDERATIONS

In accordance with the Council on Environmental Quality regulations for implementing the National Environmental Policy Act (NEPA), federal agencies shall, to the fullest extent possible, integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively. This chapter summarizes environmental compliance for the Proposed Action, consistency with other federal, state, and local plans, policies, and regulations not considered in Chapter 3 (Affected Environment and Environmental Consequences); the relationship between short-term impacts and the maintenance and enhancement of long-term productivity in the affected environment; irreversible and irretrievable commitments of resources; and energy conservation.

6.1 CONSISTENCY WITH REGULATORY CONSIDERATIONS

Implementation of the Proposed Action for the Atlantic Fleet Training and Testing (AFTT) Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS), would comply with applicable federal, state, and local laws, regulations, and executive orders. The United States (U.S.) Department of the Navy (Navy) is consulting with and will continue to consult with regulatory agencies, as appropriate, during the NEPA process and prior to implementation of the Proposed Action to ensure that requirements are met. Table 6.1-1 summarizes the additional environmental compliance requirements not specifically assessed in the resource chapters. Section 1.6 (The Environmental Planning Process) provides brief excerpts of the federal statutes, executive orders, international standards, and guidance that form the regulatory framework for the resource evaluations in Chapter 3 (Affected Environment and Environmental Consequences). Documentation of consultation and coordination with regulatory agencies is provided in Appendix J (Agency Correspondence).

Table 6.1-1: Summary of Environmental Compliance for the Proposed Action

Laws, Executive Orders, International Standards, and Guidance	*Status of Compliance*
LAWS	
Abandoned Shipwreck Act (43 United States Code [U.S.C.] sections 2101-2106)	For abandoned shipwrecks in United States Territorial Waters, the federal government asserts title to the resource. See Section 3.10 (Cultural Resources) for assessment and conclusion that the Proposed Action is consistent with the act. See Section 3.10 (Cultural Resources) for the assessment.
Act to Prevent Pollution from Ships (33 U.S.C. sections 1901-1915)	The Act to Prevent Pollution from Ships applies to U.S. vessels worldwide and implements the requirements of annexes I (Oil Pollution), II (Noxious Liquid Substances Carried in Bulk), V (Ship-Generated Garbage), and VI (Air Pollution) of the International Convention for the Prevention of Pollution from Ships for the United States. Act to Prevent Pollution from Ships excludes warships and naval auxiliaries from the preventive measures in annexes I, II, and VI. For annex V, Act to Prevent Pollution from Ships requires Navy ships and submarines to comply fully with discharge restrictions applicable outside of "special areas" designated under annex V and places limitations on Navy ship discharges within annex V special areas. Requirements associated with the Act to Prevent Pollution from Ships are implemented in accordance with the *Navy Environmental and Natural Resources Program Manual* and related Navy guidance documents governing waste management, pollution prevention, and recycling. At sea, the Navy complies with these regulations and operates in a manner that minimizes or eliminates any adverse effects to the marine environment. See Section 3.2 (Sediments and Water Quality) for the assessment.
Antiquities Act (16 U.S.C. sections 431-433)	In accordance with Navy procedures, the Proposed Action is consistent with the act's objectives for protection of archaeological and historical sites and objects, preservation of cultural resources, and the public's access to them. See Section 3.10 (Cultural Resources) for the assessment.
Coastal Zone Management Act (16 U.S.C. sections 1451-1464)	The Navy will comply with the coastal zone federal consistency requirements for those states/territories whose coastal uses or recourses may be affected by the Proposed Action (as discussed in Section 6.1.1).
Historic Sites Act (16 U.S.C. sections 461–467)	In accordance with Navy procedures, the Proposed Action is consistent with the national policy for the preservation of historic sites, buildings, and objects of national significance. See Chapter 3.10 (Cultural Resources) for the assessment.
Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. sections 1801–1882)	The Navy will prepare an Essential Fish Habitat Assessment as a separate document. The Proposed Action may have potential impacts on essential fish habitat and managed species. Consultation with the National Marine Fisheries Service (NMFS) will be conducted for affected species and their habitats (as discussed in Section 6.1.3).
Migratory Bird Treaty Act (16 U.S.C. sections 703–712)	Implementation of the Proposed Action is not anticipated to result in significant adverse effects on migratory birds; therefore, the Navy does not need to confer with the U.S. Fish and Wildlife Service. See Section 3.9 (Birds and Bats) for the assessment.

Table 6.1-1: Summary of Environmental Compliance for the Proposed Action (continued)

Laws, Executive Orders, International Standards, and Guidance	*Status of Compliance*
National Fishery Enhancement Act (33 U.S.C. sections 2101-2106)	The Proposed Action is consistent with regulations administered by NMFS and U.S. Army Corps of Engineers concerning artificial reefs in the navigable waters of the United States. Impacts to artificial reefs are covered in the Essential Fish Habitat Assessment.
National Historic Preservation Act (16 U.S.C. sections 470 et seq.)	The Navy will comply with the Section 106 consultation requirements. See Section 3.10 (Cultural Resources) for the assessment.
National Marine Sanctuaries Act (16 U.S.C. sections 1431-1445c-1)	Five National Marine Sanctuaries administered by National Oceanic and Atmospheric Administration Office of National Marine Sanctuaries lie within the Study Area. These are discussed further in Section 6.1.2.6 (National Marine Sanctuaries). • Activities the Navy proposes to conduct in the Gerry E. Studds Stellwagen Bank National Marine Sanctuary are consistent with the activities considered when the Sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. The Navy plans to consult under Section 304(d). • The Navy does not propose to conduct any new activities in the *Monitor* National Marine Sanctuary that would cause significant impacts on sanctuary resources. Furthermore, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. The Navy does not plan to consult under Section 304(d). • Activities the Navy proposes to conduct in Gray's Reef National Marine Sanctuary are consistent with the activities exempted when the sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. The Navy plans to consult under Section 304(d). • Activities the Navy proposes to conduct in the Florida Keys National Marine Sanctuary are within the classes of activities exempted from requiring a permit as of the effective date of the sanctuary regulations and are consistent with Navy activities and planning included in the most recent management plan. The Navy plans to consult under Section 304(d). • Activities the Navy proposes to conduct in Flower Garden Banks National Marine Sanctuary are consistent with the activities exempted when the sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. The Navy does not plan to consult under Section 304(d).

Table 6.1-1: Summary of Environmental Compliance for the Proposed Action (continued)

Laws, Executive Orders, International Standards, and Guidance	*Status of Compliance*
Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.) / Military Munitions Rule	Under the Resource Conservation and Recovery Act, the Military Munitions Rule identifies when conventional and chemical military munitions are considered solid waste. Military munitions are not considered solid waste based on two conditions stated in the 40 Code of Federal Regulations (CFR) section 266.202(a)(1)(i-iii). Specifically, munitions are not considered hazardous waste when: 1. Used for their intended purpose, including training of military personnel and explosive emergency response specialists; research and development activities; and when recovered, collected, and destroyed during range clearance events. 2. Unused and being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or subjected to other material recovery activities. These two conditions cover the uses of munitions included in the Proposed Action; therefore, the Resource Conservation and Recovery Act does not apply.
Rivers and Harbors Act (33 U.S.C. section 401 et seq.)	Under the Rivers and Harbors Act, a U.S. Army Corps of Engineers permit is required when construction is proposed in navigable waterways. The Navy will acquire U.S. Army Corps of Engineers permits where applicable.
Submerged Lands Act of 1953 (43 U.S.C. sections 1301–1315)	In accordance with the coastal states' regulations, the Proposed Action is consistent with regulations concerning the Submerged Lands Act.
Sunken Military Craft Act (Public Law 108–375, 10 U.S.C. section 113 Note and 118 Stat. 2094–2098)	The Sunken Military Craft Act does not apply to actions taken by, or at the direction of, the United States. See Section 3.10 (Cultural Resources) for the assessment.
R.M.S. Titanic Maritime Memorial Preservation Act (16 U.S.C. sections 450rr-450rr-6)	In accordance with Navy procedures, implementation of the Proposed Action would not affect efforts to designate the shipwreck of the R.M.S. *Titanic* as an international maritime memorial and the development of international guidelines for reasonable research, exploration, and, if appropriate salvage activities with respect to the shipwreck.
EXECUTIVE ORDERS	
Executive Order 11990, *Protection of Wetlands*	In accordance with Navy procedures, implementation of the Proposed Action would not affect wetlands as defined in Executive Order 11990. The action being analyzed takes place at sea; therefore, no wetlands would be impacted by the Proposed Action.
Executive Order 12114, *Environmental Effects Abroad of Major Department of Defense Actions*	The Navy prepared this OEIS in accordance with Executive Order 12114 and Navy-implementing regulations found at 32 CFR Part 187, Environmental Effects Abroad of Major Department of Defense Actions.
Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*	In accordance with Navy procedures, the Proposed Action would not result in any disproportionately high and adverse human health or environmental effects on minority or low-income populations. See Section 3.0.3.2 (Resources and Issues Eliminated from Further Consideration).
Executive Order 12962, *Recreational Fisheries*	In accordance with Navy procedures, the Proposed Action would not affect federal agencies' ability to fulfill certain duties with regard to promoting the health and access of the public to recreational fishing areas. See Section 3.11 (Socioeconomics) for the assessment.

Table 6.1-1: Summary of Environmental Compliance for the Proposed Action (continued)

Laws, Executive Orders, International Standards, and Guidance	*Status of Compliance*
Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*	In accordance with Navy procedures, the Proposed Action would not result in disproportionate environmental health or safety risks to children. See Section 3.0.3.2 (Resources and Issues Eliminated from Further Consideration).
Executive Order 13089, *Coral Reef Protection*	The Navy has prepared this EIS/OEIS in accordance with requirements that federal agencies whose actions affect U.S. coral reef ecosystems shall provide for implementation of measures needed to research, monitor, manage, and restore them, including reducing impacts from pollution and sedimentation. See Section 3.4 (Invertebrates) for the assessment.
Executive Order 13112, *Invasive Species*	In accordance with Navy procedures, the Proposed Action would not increase the number of or introduce new invasive species nor require the Navy to take measures to avoid introduction and spread of those species. Naval vessels are exempt from 33 CFR Part 151 Subpart D, *Ballast Water Management for Control of Nonindigenous Species in Waters of the United States*; however, the Navy follows ballast water protocols as required by the 5090 Manual.
Executive Order 13158, *Marine Protected Areas*	The Navy has prepared this EIS/OEIS in accordance with requirements for the protection of existing national system of marine protected areas. See Section 6.1.2 (Marine Protected Areas) for more information.
Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*	In accordance with Navy procedures, the Proposed Action would not have substantial direct effects on one or more Indian tribes, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes. See Section 8.4.5 (Federally-Recognized Tribes) for federally-recognized tribes that were provided notification letters of the AFTT EIS/OEIS.
Executive Order 13547, *Stewardship of the Ocean, Our Coasts, and the Great Lakes*	The Proposed Action is consistent with the comprehensive national policy for the Stewardship of the Ocean, Our Coasts, and the Great Lakes.
Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*	The Proposed Action is consistent with the federal government's greenhouse gas emissions reductions and sustainability goals of this Executive Order. See Chapter 4 (Cumulative Impacts) for the assessment.
INTERNATIONAL STANDARDS	
International Convention for the Prevention of Pollution from Ships	The Proposed Action does include vessel operation and incidental discharges from ships; however, Navy vessels operating in the Study Area comply with applicable law and regulations, minimizing or eliminating potential impact from discharges from ships.

6.1.1 COASTAL ZONE MANAGEMENT ACT COMPLIANCE

The Coastal Zone Management Act of 1972 (16 U.S.C. sections 1451-1464) encourages coastal states to be proactive in managing coastal zone uses and resources. The act established a voluntary coastal planning program and required participating states to submit a Coastal Management Plan to the National Oceanic and Atmospheric Administration for approval. Under the act, federal actions that have an effect on a coastal use or resource are required to be consistent, to the maximum extent practicable, with the enforceable policies of federally approved Coastal Management Plans.

The Coastal Zone Management Act defines the coastal zone as extending offshore "to the outer limit of State title and ownership under the Submerged Lands Act" (i.e., 3 nautical miles [NM] from the shoreline, 9 NM for the west coast of Florida, Texas, and Puerto Rico). The coastal zone extends inland only to the extent necessary to control the shoreline, but the shoreward extent is not relevant to the Proposed Action.

A consistency determination, a negative determination, or a *de minimis* exemption may be submitted for review of federal agency activities. A federal agency submits a consistency determination when it determines that its activity may have either a direct or an indirect effect on a state coastal use or resource. In accordance with 15 CFR section 930.39, the consistency determination will include a brief statement indicating whether the proposed activity will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the management program. The consistency determination should be based on evaluation of the relevant enforceable policies of the management program. In accordance with 15 CFR section 930.35, "if a Federal agency determines that there will not be coastal effects, then the Federal agency shall provide the State agencies with a negative determination for a federal agency activity: (1) Identified by a State agency on its list, as described in section 930.34(b), or through case-by-case monitoring of unlisted activities; or (2) Which is the same as or is similar to activities for which consistency determinations have been prepared in the past; or (3) For which the Federal agency undertook a thorough consistency assessment and developed initial findings on the coastal effects of the activity." Thus, a negative determination must be submitted to a state if the agency determines no coastal effects and one or more of the triggers above is met. *De minimis* exemptions are activities proposed by the federal agency that have already been reviewed and approved by the state (after allowing for public review and comment), and those that the state has recognized as having insignificant direct or indirect (secondary or cumulative) effects on its coastal resources.

In accordance with the Coastal Zone Management Act, the Navy is reviewing the enforceable policies of each state's federally approved Coastal Zone Management Plan relevant to the Study Area. There are 18 states (Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Louisiana, Mississippi, and Texas) and two U.S. territories (Puerto Rico and U.S. Virgin Islands) whose coastal zones could be affected by the Proposed Action. Based on an evaluation of the effects of the Proposed Action discussed in this EIS/OEIS and the enforceable policies of each state's Coastal Zone Management Plan, and pursuant to 15 CFR section 930.39, the Navy will submit consistency determinations in October of 2017. Consistency determinations for each state adjacent to the Study Area will be available for public viewing on the project web site.

6.1.2 MARINE PROTECTED AREAS

Many areas of the marine environment have some level of federal, state, or local management or protection. Marine protected areas are designated and managed at all levels of government by a variety of agencies and have been established by more than 100 legal authorities. Marine protected areas vary widely in purpose, managing agencies, management approaches, level of protection, and restrictions on human uses. They have been designated to achieve objectives ranging from the conservation of biodiversity, to the preservation of sunken historic vessels, to the protection of spawning species important to commercial and recreational fisheries. The levels of protection provided by these marine protected areas range from fully protected reserves (i.e., no take of any species is permitted) to sites

allowing multiple uses including fishing, recreation, and industrial uses (National Marine Protected Areas Center, 2008).

Executive Order 13158, *Marine Protected Areas* (Federal Register 65(105): 34909-34911, May 26, 2000), directs the National Oceanic and Atmospheric Administration to establish a National Marine Protected Areas Center charged with developing a national system of marine protected areas, and with maintaining a list of sites formally accepted into the national system. A full list of areas accepted in the national system of marine protected areas is available from the National Marine Protected Areas Center. Executive Order 13158 requires each federal agency whose actions affect the natural or cultural resources protected by a marine protected area to identify such actions, and in taking such actions, avoid harm to those natural and cultural resources to the maximum extent practicable. Pursuant to Section 5 of Executive Order 13158, agency requirements apply only to the natural or cultural resources specifically afforded protection by the sites recognized in the List of National System Marine Protected Areas (National Marine Protected Areas Center, 2013). Although many sites contain coastal (within the continental shelf) lands and islands, only the resources of the protected coastal and ocean waters, and the submerged lands thereunder, are subject to Section 5 of Executive Order 13158 (National Park Service, 2006a).

All resources of the marine protected areas located within the Study Area have been incorporated into the analyses in Sections 3.1 through 3.9 (Air Quality, Sediments and Water Quality, Vegetation, Invertebrates, Habitats, Fishes, Marine Mammals, Reptiles, and Birds). In accordance with Executive Order 13158, the Navy has considered the potential impacts of its proposed activities under the Preferred Alternative (Alternative 1) to the national system of marine protected areas that contain marine waters within the Study Area, factoring in Navy standard operating procedures and mitigation when applicable to the stressor and resource. The Navy implements standard operating procedures for aircraft safety, which involves pilots of Navy aircraft making every attempt to avoid large flocks of birds to reduce the safety risk involved with a potential bird strike. Since 2011, the Navy has required that all Navy flying units report all bird strikes through the Web-Enabled Safety System Aviation Mishap and Hazard Reporting System. The standard operating procedures for aircraft safety could result in a secondary benefit to birds through a reduction in the potential for aircraft strike. The Navy also has several standard operating procedures for vessel safety. For example, ships operated by or for the Navy have personnel assigned to stand watch at all times, day and night, when moving through the water (underway). Watch personnel undertake extensive training in accordance with the U.S. Navy Lookout Training Handbook or civilian equivalent. A primary duty of watch personnel is to ensure safety of the ship, and this includes the requirement to detect and report all objects and disturbances sighted in the water that may be indicative of a threat to the ship and its crew, such as debris, a periscope, surfaced submarine, or surface disturbance. Per safety requirements, watch personnel also report any marine mammals sighted that have the potential to be in the direct path of the ship as a standard collision avoidance procedure. Navy vessels operate in accordance with the navigation rules established by the U.S. Coast Guard. All vessels operating on the water are required to follow the International Navigation Rules (COMDTINST M16672.2D). These rules require that vessels at all times proceed at a safe speed so that proper and effective action can be taken to avoid collision and so they can be stopped within a distance appropriate to the prevailing circumstances and conditions. The standard operating procedures for vessel safety could result in a secondary benefit to marine mammals through a reduction in the potential for vessel strike. For a full discussion of standard operating procedures, see Section 2.3.3 (Standard Operating Procedures).

In addition to standard operating procedures, the Navy will implement mitigation to avoid potential impacts from sonar, explosives, and physical disturbance and strike stressors on applicable resources. For example, as described in Section 5.3.4 (Physical Disturbance and Strike Stressors), mitigation for vessel movements includes training Lookouts and watch personnel with the Marine Species Awareness Training (which provides information on sighting cues, visual observation tools and techniques, and sighting notification procedures), and requiring underway vessels to maneuver to maintain a specified distance from marine mammals. For a full discussion of mitigation, see Chapter 5 (Mitigation).

Table 6.1-2 presents information on the national system of marine protected areas located in the Study Area, as well as the training and testing activities that could occur within each area. As described in Chapter 2 (Description of Proposed Action and Alternatives), many training and testing activities could occur anywhere in the Study Area with proper range clearance (See Figure 2.3-1 and Table 2.3-5). These activities include:

- air warfare testing (air combat maneuver test; air platform/vehicle testing; intelligence, surveillance, and reconnaissance [does not typically occur in the coastal zone]);
- anti-submarine warfare (non-explosive torpedo exercise could occur anywhere within the study area with proper range clearance; explosive torpedo exercise would only occur greater than 3 NM from shore; tracking exercise occurs anywhere in the study area where proper water depth [typically 120 ft. and greater] exists);
- electronic warfare operations;
- expeditionary warfare (dive and salvage operations; personnel insertion/extraction);
- mine warfare (mine countermeasure exercise – surface, - ship sonar; submarine mine exercise; marine mammal systems; mine neutralization; submarine launched mobile mining; civilian port defense);
- surface warfare (maritime security operations); and
- other training activities (sonar maintenance and system checks; submarine navigation; submarine under ice certification; waterborne training; surface ship object detection).

Because the activities listed above are unlikely to occur in shallow nearshore waters, the impacts of such activities on marine protected areas located nearshore will not be considered further in this document.

Military activities are sometimes exempted from the prohibitions applicable to marine protected areas. In cases where the military conducted activities within an area prior to its establishment as a marine protected area, those activities are often incorporated into the area's management plan. Management policies specific to military activities are described below for the five different types of marine protected areas found in the Study Area, with area-specific prohibitions listed in Table 6.1-1, where applicable. Marine protected areas (not including National Marine Sanctuaries) located within the Study Area are shown in Figure 6.1-1, Figure 6.1-2, and Figure 6.1-3. The National Marine Sanctuaries located within the Study Area are shown in Figure 6.1-4 and Figure 6.1-5.

Table 6.1-2: National System of Marine Protected Areas within the Study Area

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
State and Territorial Marine Protected Areas					
Blue Crab Sanctuary (established in 1994, 2,448 square kilometers [km^2] in size)	1	Virginia: Chesapeake Bay; overlaps mine warfare training areas, borders the VACAPES Range Complex and VACAPES OPAREA, and abuts pierside location at Joint Expeditionary Base Little Creek, Virginia Beach, Virginia	Focal Resource (Blue crab [*Callinectes sapidus*])	State regulations apply. Harvest restrictions are not applicable to Navy activities (Virginia Marine Resources Commission, 2015).	Ship signature testing activities and surface ship and submarine sonar testing activities would occur pierside at Little Creek; however, these activities are not expected to impact the blue crab or Blue Crab Sanctuary.
Kiptopeke State Park (established in 1992, 2 km^2 in size)	2	Virginia: Lower Chesapeake Bay; 1 NM from mine warfare training area	Ecosystem (migratory birds)	State regulations apply: prohibited to cut or scar any plant or tree, or to collect any plant or animal, except as authorized by permit (Virginia State Parks, n.d.).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Kiptopeke State Park.
Arrecifes de la Cordillera Natural Reserve (established in 1980, 101 km^2 in size)	3	Puerto Rico: Other AFTT Areas	Ecosystem (mangroves, lagoons, beaches, coral reefs)	Prohibited: access to islands that have colonies of nesting birds; camping (Arrecifes de la Cordillera Natural Reserve, 2009).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Arrecifes de la Cordillera Natural Reserve.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Isla de Desecheo Marine Reserve (established in 2000, 6 km^2 in size)	4	Puerto Rico: Other AFTT Areas	Ecosystem (coral reefs)	Prohibited: taking of any species or resource from the Marine Reserve. No site specific management plan is currently in place (National Oceanic and Atmospheric Administration, 2009).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Isla de Desecheo Marine Reserve.
Tres Palmas de Rincón Marine Reserve (established in 2004, 1 km^2 in size)	5	Puerto Rico: Other AFTT Areas	Focal Resource (Elkhorn coral [*Acropora palmata*])	Prohibited: modification of aquatic habitat that is essential for vulnerable species (Tres Palmas de Rincón Marine Reserve, 2009).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Tres Palmas de Rincón Marine Reserve.
St. Croix East End Marine Park (established in 2003, 150 km^2 in size)	6	U.S. Virgin Islands: Other AFTT Areas	Ecosystem (mangroves, reefs, invertebrates, seagrass beds, sea turtles)	State regulations apply, including designated areas in which no take of any resources is allowed; speed or other vessel restrictions; and restriction on the removal of coral or live rock (U.S. Virgin Islands Department of Planning and Natural Resources, 2002).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within St. Croix East End Marine Park.
St. Thomas East End Reserves (established in 2011, 9 km^2 in size)	7	U.S. Virgin Islands: Other AFTT Areas	Ecosystem (mangroves, reefs, seagrass beds)	Prohibited: vessel anchoring, except in designated zones, which is allowed for a maximum of 7 days (U.S. Virgin Islands Department of Planning and Natural Resources, 2011).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within St. Thomas East End Reserves.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Federal/State Partnership Marine Protected Areas					
National Estuarine Research Reserves					
Waquoit Bay National Estuarine Research Reserve (established in 1988, 11 km^2 in size)	8	Massachusetts: Portion located within Naval Undersea Warfare Center Division Newport Testing Range	Ecosystem (coastal and estuarine habitats)	Prohibited: dredging in Areas of Critical Environmental Concern is prohibited except for the sole purpose of fisheries and wildlife management (Waquoit Bay National Estuarine Research Reserve, 2014).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Waquoit Bay National Estuarine Research Reserve.
Jacques Cousteau Estuarine Research Reserve (established in 1998, 480 km^2 in size)	9	New Jersey: Overlaps W-107 of the Atlantic City OPAREA, Northeast Range Complexes	Ecosystem (coastal and estuarine watershed, including habitat for migratory birds, wading birds, fish, and ESA listed birds, sea turtles and marine mammals)	Prohibited: most construction, dredging, and mining operations that would alter the shape of the ocean bottom or reduce fishery productivity (Jacques Cousteau Naitonal Estuarine Research Reserve, 2009).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Jacques Cousteau Estuarine Research Reserve.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Guana Tolomato Matanzas National Estuarine Research Reserve (established in 1999, 260 km^2 in size)	10	Florida: Other AFTT Areas, bordering JAX OPAREA, mine warfare warning area W-158E of JAX Range Complex	Ecosystem (aquatic reserve for preservation of natural conditions and conservation of biodiversity, including ESA-listed marine mammals, sea turtles, and shore birds)	No alteration of physical conditions within the reserve shall be permitted except for public navigation or to enhance the quality of the reserve. Other uses or human activity may be permitted if determined to be compatible (Guana Tolomato Matanzas National Estuarine Research Reserve, 2009).	Proposed activities that could reasonably be expected to occur in the area include: search and rescue and aircraft overflights. However, search and rescue activities and aircraft overflights are not likely to impact the area's protected natural resources. Therefore, no impacts are expected within Guana Tolomato Matanzas National Estuarine Research Reserve.
Rookery Bay National Estuarine Research Reserve (established in 1978, 391 km^2 in size)	11	Florida: Other AFTT Areas (within 10 NM of W-174 of Key West Range Complex)	Ecosystem (birds, fish, West Indian manatees [*Trichechus manatus*], sea turtles)	Prohibited: removing, damaging, or introducing any live animals or plants (except for fishing), or introducing any physical components from or to the reserve; use or possession of firearms; any activity that degrades ambient water quality; approaching islands beyond posted boundary areas in the vicinity of nesting birds; anchoring longer than 2 days (Florida Department of Environmental Protection, 2013).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Rookery Bay National Estuarine Research Reserve.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Jobos Bay National Estuarine Research Reserve (established in 1981, 10 km^2 in size)	12	Puerto Rico: Other AFTT Areas	Ecosystem (mangroves, seagrass beds, coral reefs, manatees, sea turtles)	Prohibited: motor vehicles; anchoring of boats, unless in designated areas (Jobos Bay National Estuarine Research Reserve, 2008).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Jobos Bay National Estuarine Research Reserve.
Federal Marine Protected Areas					
National Wildlife Refuges					
Cross Island National Wildlife Refuge (established in 1980, 7 (km^2) in size)	13	Maine: Other AFTT Areas	Ecosystem (restoring and managing colonies of nesting seabirds)	Prohibited: Seabird islands are closed to the public during the nesting season, 1 April through 31 August (U.S. Fish and Wildlife Service, 2015d).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Cross Island National Wildlife Refuge.
Monomoy National Wildlife Refuge (established in 1944, 37 km^2 in size)	14	Massachusetts: Within 2 NM of Boston OPAREA, Northeast Range Complexes	Focal Resource (habitat for migratory birds, including the federally protected piping plover [*Charadrius melodus*] and roseate tern [*Sterna dougallii*])	Prohibited: destruction, disturbance and removal of wildlife, vegetation, and government property. Closed areas apply between 15 April and 15 September (U.S. Fish and Wildlife Service, 2015e).	Unmanned vehicle development and payload testing is planned to occur in proximity to this marine protected area. The resources protected by this area could also be briefly exposed to aircraft overflights. However, the proposed activities are not likely to impact the area's protected natural resources.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Nomans Land Island National Wildlife Refuge (established in 1970, 3 km^2 in size)	15	Massachusetts: Located within Naval Undersea Warfare Center Division Newport Testing Range	Focal Resource (habitat for migratory birds)	Prohibited: any public use due to the potential safety risk of unexploded ordinance (U.S. Fish and Wildlife Service, 2013).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Nomans Land Island National Wildlife Refuge.
Cape May National Wildlife Refuge (established in 1989, 87 km^2 in size)	16	New Jersey: Other AFTT Areas	Ecosystem (nesting habitat for piping plover, shorebirds, and migratory birds)	Prohibited: disturbing, injuring, destroying, collecting plants, wildlife, or other natural objects (U.S. Fish and Wildlife Service, 2014b).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Cape May National Wildlife Refuge.
Chincoteague National Wildlife Refuge (established in 1943, 74 km^2 in size)	17	Virginia: Other AFTT Areas	Ecosystem (migratory birds)	Prohibited: disturbing or collecting plants and animals or artifacts; launching, landing or operating unmanned aircraft (U.S. Fish and Wildlife Service, 2016c).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Chincoteague National Wildlife Refuge.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Fisherman Island National Wildlife Refuge (established in 1969, 9 km^2 in size)	18	Virginia: Lower Chesapeake Bay; 1 NM from mine warfare training area	Ecosystem (migratory birds)	Prohibited: commercial and recreational fishing (U.S. Fish and Wildlife Service, 2004).	The resources protected by this area could be briefly exposed to aircraft overflights; however, as discussed in Chapter 5 (Mitigation), the Navy will implement mitigation to avoid potential impacts from rotary-wing aircraft overflights on piping plovers and other nesting birds during explosive ordnance disposal activities, including maneuvering to maintain a specified distance from the beach within the Virginia Capes Range Complex (except when transiting from Norfolk Naval Station to waters offshore) and from Fisherman Island National Wildlife Refuge off the coast of Cape Charles, Virginia (when transiting from Norfolk Naval Station to waters offshore). Therefore, no impacts are expected within Fisherman Island National Wildlife Refuge.
Plum Tree Island National Wildlife Refuge (established in 1972, 20 km^2 in size)	19	Virginia: Other AFTT Areas	Focal Resource (estuarine habitats)	Prohibited: public use due to fragile habitats and safety concerns associated with former use as a bombing range; anchoring or bottom disturbance on refuge-owned bottoms (U.S. Fish and Wildlife Service, 2016b).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Plum Tree Island National Wildlife Refuge.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Pea Island National Wildlife Refuge (established in 1937, 19 km^2 in size)	20	North Carolina: Other AFTT Areas	Ecosystem (migratory birds and wetland protection)	Prohibited: taking, possessing, injuring, disturbing, damaging, destroying, or collecting any plant or animal (U.S. Fish and Wildlife Service, 2016a).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Pea Island National Wildlife Refuge.
Cape Romain National Wildlife Refuge (established in 1930, 248 km^2 in size)	21	South Carolina: Other AFTT Areas, 1 NM from Charleston OPAREA, Charleston mine warfare alternate location #3	Ecosystem (loggerhead sea turtle [*Caretta caretta*], waterfowl, and shorebirds including the piping plover)	Prohibited: accessing Marsh Island or White Banks Island from 15 February through 15 September to protect nesting birds (U.S. Fish and Wildlife Service, 2015c).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Cape Romain National Wildlife Refuge.
Cedar Keys National Wildlife Refuge (established in 1929, 3 km^2 in size)	22	Florida: Other AFTT Areas	Ecosystem (wilderness island areas; nesting and breeding ground for colonial birds, wading birds and shorebirds)	Prohibited: injuring, disturbing, or destroying any plant or animal Closed areas: interiors of all islands (except Atsena Otie Key). Seahorse Key and a 300 foot zone around the island is closed to all public entry from 1 March until 30 June (U.S. Fish and Wildlife Service, 2015b).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Cedar Keys National Wildlife Refuge.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Chassahowitzka National Wildlife Refuge (established in 1943, 150 km^2 in size)	23	Florida: Other AFTT Areas	Ecosystem (estuarine habitat, waterfowl, West Indian manatees)	Restricted vessel speed in posted zones between 1 April and 31 August. Prohibited: firearms and weapons except during designated hunts (U.S. Fish and Wildlife Service, n.d.-b).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Chassahowitzka National Wildlife Refuge.
Great White Heron National Wildlife Refuge (established in 1938, 844 km^2 in size)	24	Florida: Other AFTT Areas, within 10 NM of Key West OPAREA and Key West Range Complex	Ecosystem (wading birds, coral reefs)	Prohibited: hunting or discharging firearms; feeding or harassing wildlife; landing airplanes, helicopters, or ultralights; personal watercraft, hovercrafts, or airboats (U.S. Fish and Wildlife Service, 2015h). Closed areas: most back country islands; public access is limited to some refuge managed and state-owned/refuge managed islands during daylight hours (U.S. Fish and Wildlife Service, n.d.-a).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Great White Heron National Wildlife Refuge.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Key West National Wildlife Refuge (established in 1908, 856 km^2 in size)	25	Florida: Bordering Key West OPAREA and Key West Range Complex	Focal Resource (breeding grounds for native birds and other wildlife)	Prohibited: hunting or discharging firearms; feeding or harassing wildlife; landing airplanes, helicopters, or ultralights; personal watercraft, hovercrafts, or airboats Closed Areas: some beach sections on Boca Grande Key and Woman Key to protect sensitive plants and wildlife; all beach sections above mean high tide line (U.S. Fish and Wildlife Service, 2015a).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Key West National Wildlife Refuge.
Lower Suwannee National Wildlife Refuge (established in 1979, 341 km^2 in size)	26	Florida: Other AFTT Areas	Ecosystem (West Indian manatees, Gulf sturgeon [*Acipenser oxyrinchus desotoi*], shorebirds and wading birds)	Prohibited: collecting plants, animals, minerals, antlers, or artifacts; discharging firearms, except when in accordance with refuge hunting regulations (U.S. Fish and Wildlife Service, 2015g).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Lower Suwannee National Wildlife Refuge.
Merritt Island National Wildlife Refuge (established in 1963, 562 km^2 in size	27	Florida: Other AFTT Areas, 3 NM from JAX OPAREA	Focal Resource (habitat for migratory birds)	Prohibited: use of air thrust boats, hover craft, or personal watercraft; feeding, capturing, or harassing wildlife; picking or cutting vegetation (U.S. Fish and Wildlife Service, 2016e).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Merritt Island National Wildlife Refuge.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
National Key Deer Refuge (established in 1954, 561 km^2 in size)	28	Florida: Other AFTT Areas (within 10 NM of Key West OPAREA and Key West Range Complex)	Focal Resource (protect and preserve Key deer (*Odocoileus virginianus clavium*) and other wildlife resources in the Florida Keys)	Prohibited: feeding, capturing, or harassing wildlife; hunting or discharging firearms (U.S. Fish and Wildlife Service, 2015f).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the National Key Deer Refuge.
St. Marks National Wildlife Refuge (established in 1931, 449 km^2 in size)	29	Florida: Other AFTT Areas	Ecosystem (shorebirds, marine mammals, American alligator [*Alligator mississippiensis*], sea turtles)	Prohibited: taking artifacts, natural features, animals, or plants; boats 16 October through 14 March, only non-motorized boats or boats with electric motors are allowed at other times (U.S. Fish and Wildlife Service, 2016d).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within St. Marks National Wildlife Refuge.
Ten Thousand Islands National Wildlife Refuge (established in 1996, 141 km^2 in size)	30	Florida: Other AFTT Areas	Ecosystem (birds, manatees, sea turtles, mangroves)	Prohibited: hunting, except duck hunting (U.S. Fish and Wildlife Service, n.d.-c).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Ten Thousand Island National Wildlife Refuge.
Breton National Wildlife Refuge (established in 1904, 31 km^2 in size)	31	Louisiana: Other AFTT Areas	Ecosystem (nesting or wintering birds)	Prohibited: carrying, possessing, or discharging firearms; entry into the nesting areas and any disturbance of the nesting colonies (U.S. Fish and Wildlife Service, 2006b).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Breton National Wildlife Refuge.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Delta National Wildlife Refuge (established in 1935, 206 km^2 in size)	32	Louisiana: Other AFTT Areas	Ecosystem (waterfowl, American alligator)	No area-specific regulations apply to Navy activities (U.S. Fish and Wildlife Service, 2014a).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Delta National Wildlife Refuge.
Shell Keys National Wildlife Refuge (established in 1907, 0.02 km^2 in size)	33	Louisiana: Other AFTT Areas	Ecosystem (nesting birds)	Prohibited: public access (U.S. Fish and Wildlife Service, 2008).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Shell Keys National Wildlife Refuge.
Gear Restricted Areas					
Lydonia Canyon Gear Restricted Area (established in 2009, 98 km^2 in size)	34	Massachusetts: Other AFTT Areas	Focal Resource (Tilefish [*Lopholatilus chamaeleonticeps*])	Fishing gear restrictions are not applicable to Navy; however, they are intended to prevent damage to bottom habitat (National Marine Fisheries Service, 2011).	Navy training and testing activities that release military expended materials are expected to occur in the vicinity of this area. This area is considered a Habitat Area of Particular Concern; all applicable analysis will be included in the Essential Fish Habitat Assessment.
Oceanographer Canyon Gear Restricted Area (established in 2009, 205 km^2 in size)	35	Massachusetts: Other AFTT Areas	Focal Resource (Tilefish)	Fishing gear restrictions are not applicable to Navy; however, they are intended to prevent damage to bottom habitat (National Marine Fisheries Service, 2011).	Navy training and testing activities that release military expended materials are expected to occur in the vicinity of this area. This area is considered a Habitat Area of Particular Concern; all applicable analysis will be included in the Essential Fish Habitat Assessment.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Veatch Canyon Gear Restricted Area (established in 2009, 68 km^2 in size)	36	Massachusetts: Within W-105 of the Narragansett Bay OPAREA, Northeast Range Complexes	Focal Resource (Tilefish)	Fishing gear restrictions are not applicable to Navy; however, they are intended to prevent damage to bottom habitat (National Marine Fisheries Service, 2011).	Navy training and testing activities that release military expended materials are expected to occur in the vicinity of this area. This area is considered a Habitat Area of Particular Concern; all applicable analysis will be included in the Essential Fish Habitat Assessment.
Norfolk Canyon Gear Restricted Area (established in 2009, 85 km^2 in size)	37	Virginia: Overlaps W-386 of the VACAPES OPAREA (Surface Area Grid 8C)	Focal Resource (Tilefish)	Fishing gear restrictions are not applicable to Navy; however, they are intended to prevent damage to bottom habitat (National Marine Fisheries Service, 2011).	Navy training and testing activities that release military expended materials and/or include use of active sonar are expected to occur in the vicinity of this area. This area is considered a Habitat Area of Particular Concern; all applicable analysis will be included in the Essential Fish Habitat Assessment.
National Parks					
Cape Cod National Seashore (established in 1961, 164 km^2 in size)	38	Massachusetts: Adjacent to the Boston OPAREA	Ecosystem (marine, estuarine, fresh water and terrestrial habitats; breeding habitat for piping plover	Prohibited: launching, landing, or operating an unmanned aircraft from or on lands and waters of the National Seashore; launching or recovering vessels, except in designated locations (National Park Service, 2016c).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Cape Cod National Seashore.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Fire Island National Seashore (established in 1964, 80 km^2 in size)	39	New York: Located within Naval Undersea Warfare Center Division Newport Testing Range	Ecosystem (nesting habitat for piping plover and roseate tern; population of seabeach amaranth [*Amaranthus pumilus*])	Prohibited: launching, landing, or operating an unmanned aircraft from or on lands and waters of the National Seashore (National Park Service, 2014c).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Fire Island National Seashore.
Gateway National Recreational Area (established in 1972, 109 km^2 in size)	40	New York/New Jersey: Other AFTT Areas (Sandy Hook Bay, less than 2 NM from the pier of Naval Weapons Station Earle, New Jersey)	Ecosystem (nesting habitat for piping plover, shorebirds, and migratory birds; salt marshes)	Prohibited: landing vessels on ocean beaches between 15 March and Labor Day; vessel operations within Spermaceti Cove or within 46 m of marshes (36 CFR section 1.5) (National Park Service, 2011b). National Park Service Management Policies (2006) apply (36 CFR § 7.29) (National Park Service, 2006a).	The Navy would conduct homeland security and anti-terrorism/force protection training activities in the waters around the nearby Naval Weapons Station Earle, New Jersey; however, these proposed activities are not expected to occur in the marine protected area. The resources protected by this area could also be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. Therefore, no impacts are expected within Gateway National Recreational Area.
Assateague Island National Seashore (established in 1965, 198 km^2 in size)	41	Maryland/Virginia: Other AFTT Areas, within 3 NM of VACAPES OPAREA and W-386 of VACAPES Range Complex	Ecosystem (barrier island and aquatic habitats and species, natural coastal environment and processes)	Prohibited: personal watercraft beaching on the ocean side of the island unless in an emergency (36 CFR section 7.65) (National Park Service, 2011a).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Assateague Island National Seashore.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Cape Hatteras National Seashore (established in 1937, 126 km^2 in size)	42	North Carolina: Other AFTT Areas, 3 NM from VACAPES and Cherry Point OPAREAs	Ecosystem (barrier island habitat; nesting habitat for sea turtles and migratory birds; population of seabeach amaranth)	Prohibited: launching, landing, or operating an unmanned aircraft from or on lands and waters of the National Seashore (National Park Service, 2016b).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Cape Hatteras National Seashore.
Cape Lookout National Seashore (established in 1966, 113 km^2 in size)	43	North Carolina: Other AFTT Areas, 3 NM from Cherry Point OPAREA	Ecosystem (barrier island and marsh habitats)	Prohibited: launching, landing, or operating an unmanned aircraft from or on lands and waters of the National Seashore; entry of vehicles into any area designated as a bird or turtle nesting area (National Park Service, 2015).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Cape Lookout National Seashore.
Cumberland Island National Seashore (established in 2009, 68 km^2 in size)	44	Georgia: Other AFTT Areas	Ecosystem (barrier island and marsh habitats)	Prohibited: operating unmanned aircraft in the National Seashore (National Park Service, 2014b).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Cumberland Island National Seashore.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Biscayne National Park (established in 1968, 706 km^2 in size)	45	Florida: Other AFTT Areas, bordering South Florida Ocean Measurement Facility Testing Range	Ecosystem (corals, sea turtles, smalltooth sawfish [*Pristis pectinata*], West Indian manatee, American crocodile [*Crocodylus acutus*], least tern [*Sterna antillarum*], Johnson's seagrass [*Halophila johnsonii*])	State regulations and National Park Service Management Policies apply (National Park Service, 2006a). Lobster and sponge closed areas. Tropical fish are protected (National Park Service, 2006b).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Biscayne National Park.
Canaveral National Seashore (established in 1975, 237 km^2 in size)	46	Florida: Other AFTT Areas	Ecosystem (sea turtles)	Prohibited: vessels operating or anchoring within 500 feet of the mean low tide line on any part of the National Seashore (National Park Service, 2014a).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Canaveral National Seashore.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Dry Tortugas National Park (established in 1935, 263 km^2 in size)	47	Florida: Entirely within W-174B of Key West Range Complex; 5 NM from Key West OPAREA	Ecosystem (corals)	Prohibited: anchoring outside of designated areas and times; operating a vessel in certain areas; discharging most materials; damaging or disturbing any living or dead organisms; allowing a vessel to strike or damage any immobile organism attached to the seabed; allowing a chain, rope, etc., to cause damage to coral, seagrasses, or submerged cultural resources. Closed areas apply (36 CFR section 7.27).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. Section 3.10.2.3.2 (Tortugas Military Operations Area) contains additional details regarding these activities. No other proposed activities are expected to occur in the area; therefore, no impacts are expected within the Dry Tortugas National Park.
Everglades National Park (established in 1934, 6,253 km^2 in size)	48	Florida: Other AFTT Areas	Ecosystem (subtropical wilderness, mangrove forest, wading birds, reptiles)	Prohibited: disturbance of aquatic life, except as allowable for fishing. Vessel closure areas and landing restrictions apply (36 CFR section 7.45).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Everglades National Park.
Padre Island National Seashore (established in 1962, 533 km^2 in size)	49	Texas: Other AFTT Areas, 3 NM from Corpus Christi OPAREA	Ecosystem (barrier island habitat; nesting habitat for sea turtles and migratory birds)	Prohibited: launching, landing, or operating an unmanned aircraft from or on lands and waters of the National Seashore; launching hard hull motorized vessels from all beaches (National Park Service, 2016a).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Padre Island National Seashore.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Buck Island Reef National Monument (established in 1961, 77 km^2 in size)	50	U.S. Virgin Islands: Other AFTT Areas	Ecosystem (coral reefs, sea turtles, reef fishes)	No take of any resources is allowed. Prohibited: operating a watercraft in such a manner as to cause damage to any underwater feature; maneuvering watercraft within waters that contain marked swimming trails or interpretive signs; anchoring (36 CFR section 7.73).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within Buck Island Reef National Monument.
Salt River Bay National Historic Park and Ecological Preserve (established in 1992, 4 km^2 in size)	51	U.S. Virgin Islands: Other AFTT Areas	Ecosystem (mangrove forests, estuaries, coral reefs, submarine canyon)	Firearms may be legally possessed as provided under state, local, and federal regulations (National Park Service, 2010). National Park Service Management Policies apply (National Park Service, 2006a).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Salt River Bay National Historic Park and Ecological Preserve.
Virgin Islands Coral Reef National Monument (established in 2001, 52 km^2 in size)	52	U.S. Virgin Islands: Other AFTT Areas (partially overlaps the North Atlantic Gyre Open Ocean Area)	Ecosystem (coral reefs, seagrass beds, sea turtles, humpback whale [*Megaptera novaeangliae*] and many marine mammals, reef fishes)	No take of any resources is allowed. Prohibited: operating a watercraft in such a manner as to cause damage to any underwater feature; casting or dragging an anchor or other mooring device (36 CFR section 7.46).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Virgin Islands Coral Reef National Monument.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Virgin Islands National Park (established in 1956, 60 km^2 in size)	53	U.S. Virgin Islands: Other AFTT Areas	Ecosystem (tropical coastal and marine ecosystem, including mangroves, corals, and tropical fishes)	Prohibited: operating a watercraft or casting or dragging an anchor or other mooring device in such a manner as to cause damage to any underwater feature; maneuvering watercraft within waters that contain marked swimming trails or interpretive signs. Prohibited: taking any form of marine life in Trunk Bay and in other waters containing underwater signs and markers (36 CFR section 7.74).	The resources protected by this area could be briefly exposed to aircraft overflights; however, overflights are not likely to harm the area's protected natural resources. No other proposed activities are expected to occur in the area. Therefore, no impacts are expected within the Virgin Islands National Park.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
National Marine Sanctuaries					
Gerry E. Studds Stellwagen Bank National Marine Sanctuary	Figure 6.1-4	Massachusetts: Bordering Boston OPAREA	Ecosystem (natural and cultural heritage)	See Section 6.1.2.6.1 for details.	Activities the Navy proposes to conduct in the Gerry E. Studds Stellwagen Bank National Marine Sanctuary are consistent with the activities considered when the Sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. Navy activities carried out in the sanctuary are conducted in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources and qualities. The Navy does not propose to conduct any new activities in the sanctuary that may affect sanctuary resources or qualities. Further, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since activities proposed to be conducted in the vicinity of Stellwagen Bank National Marine Sanctuary may affect sanctuary resources, the Navy intends to engage in 304(d) consultation under the National Marine Sanctuaries Act.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Monitor National Marine Sanctuary	Figure 6.1-4	North Carolina: 20 NM from VACAPES OPAREA	Focal Resource (cultural heritage – shipwreck of the Civil War ironclad, USS Monitor)	See Section 6.1.2.6.2 for details.	The Navy does not propose to conduct any new activities that would cause significant impacts on sanctuary resources. Furthermore, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since none of the Navy's training and testing activities proposed to be conducted within or in the vicinity of Monitor National Marine Sanctuary are likely to injure sanctuary resources, the Navy has determined that it is unnecessary to engage in 304(d) consultation under the National Marine Sanctuaries Act.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Gray's Reef National Marine Sanctuary	Figure 6.1-5	Georgia: Entirely within Jacksonville OPAREA	Ecosystem (natural heritage – live bottom reef)	See Section 6.1.2.6.3 for details.	Activities the Navy proposes to conduct in Gray's Reef National Marine Sanctuary are consistent with the activities exempted when the sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. The Navy does not propose to conduct any new activities that would cause significant impacts on sanctuary resources. Furthermore, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since activities conducted in and around the sanctuary could potentially result in harassment takes under the MMPA (defined as an injury to a sanctuary resource by the Office of National Marine Sanctuaries) the Navy will consult under Section 304(d) of the National Marine Sanctuaries Act.

Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Florida Keys National Marine Sanctuary	Figure 6.1-5	Florida: Bordering Key West OPAREA	Ecosystem (natural and cultural heritage: world's third largest barrier reef, shipwrecks)	See Section 6.1.2.6.4 for details.	Activities the Navy proposes to conduct in the Florida Keys National Marine Sanctuary are within the classes of activities exempted from requiring a permit as of the effective date of the sanctuary regulations and are consistent with Navy activities and planning included in the most recent management plan. Navy activities have not been modified as to be more likely to destroy, cause the loss of, or injure a sanctuary resource or quality in a manner significantly greater than was previously considered when exempted or in the management plan. Further, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since activities conducted in and around the sanctuary could potentially result in harassment takes under the MMPA (defined as an injury to a sanctuary resource by the Office of National Marine Sanctuaries) the Navy will consult under Section 304(d) of the National Marine Sanctuaries Act.

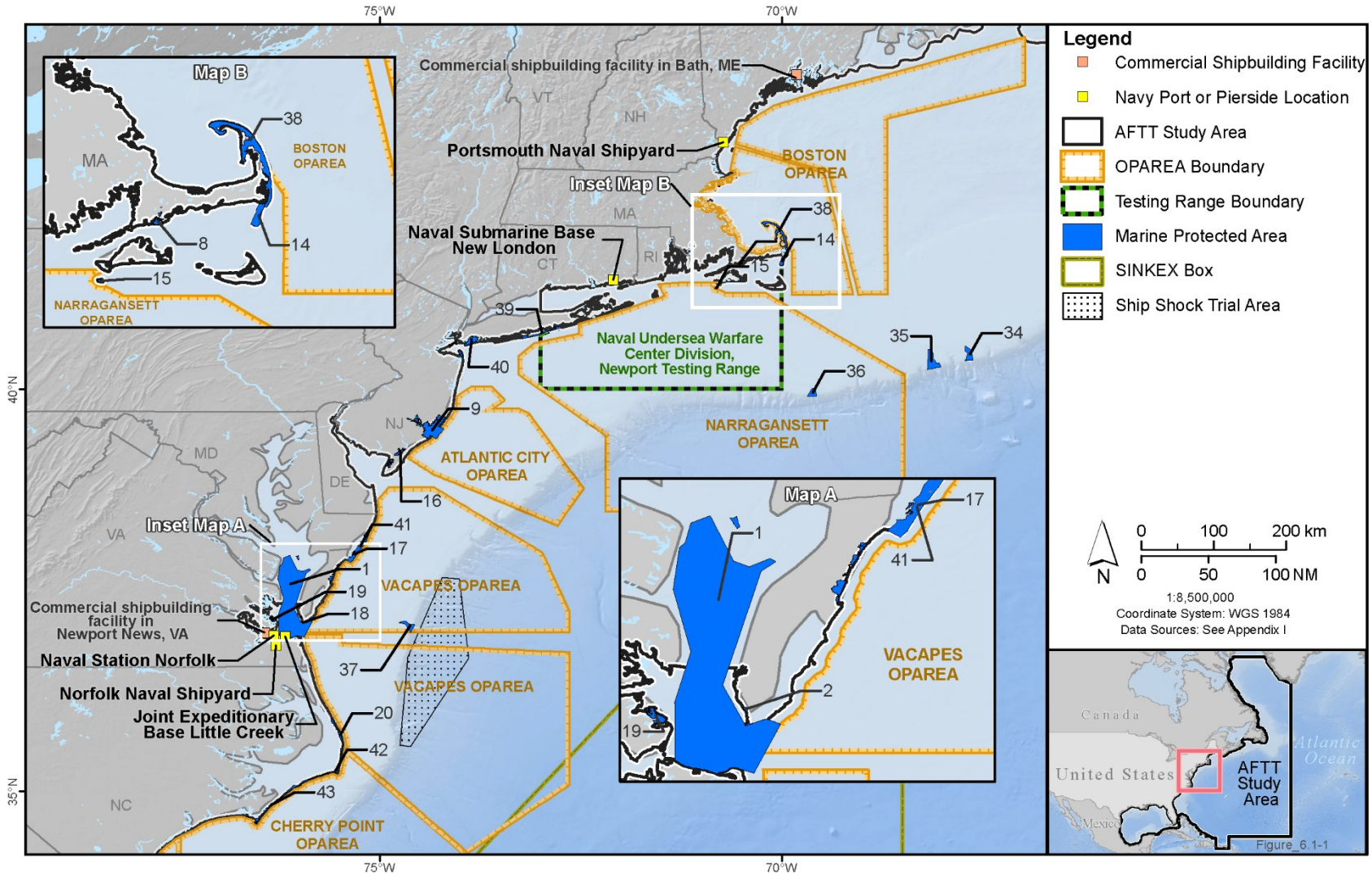
Table 6.1-2: National System of Marine Protected Areas within the Study Area (continued)

Marine Protected Area	*Figure Reference Number*	*Location within the Study Area*	*Protection Focus*	*Summary of Relevant Regulations*	*Navy Proposed Activities Under the Preferred Alternative and Marine Protected Area Considerations*
Flower Garden Banks National Marine Sanctuary	Figure 6.1-5	Texas: 70 NM from Corpus Christi OPAREA	Ecosystem (natural and cultural heritage)	See Section 6.1.2.6.5 for details.	Activities the Navy proposes to conduct in Flower Garden Banks National Marine Sanctuary are consistent with the activities exempted when the sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. The Navy does not propose to conduct any new activities that could have significant adverse impacts on sanctuary resources or qualities. Further, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since none of the Navy's training and testing activities proposed to be conducted within or in the vicinity of Flower Garden Banks National Marine Sanctuary are likely to injure sanctuary resources, the Navy has determined that it is unnecessary to engage in 304(d) consultation under the National Marine Sanctuaries Act.

Source: List of national system marine protected areas in the Study Area and their protection focuses (National Marine Protected Areas Center, 2013)

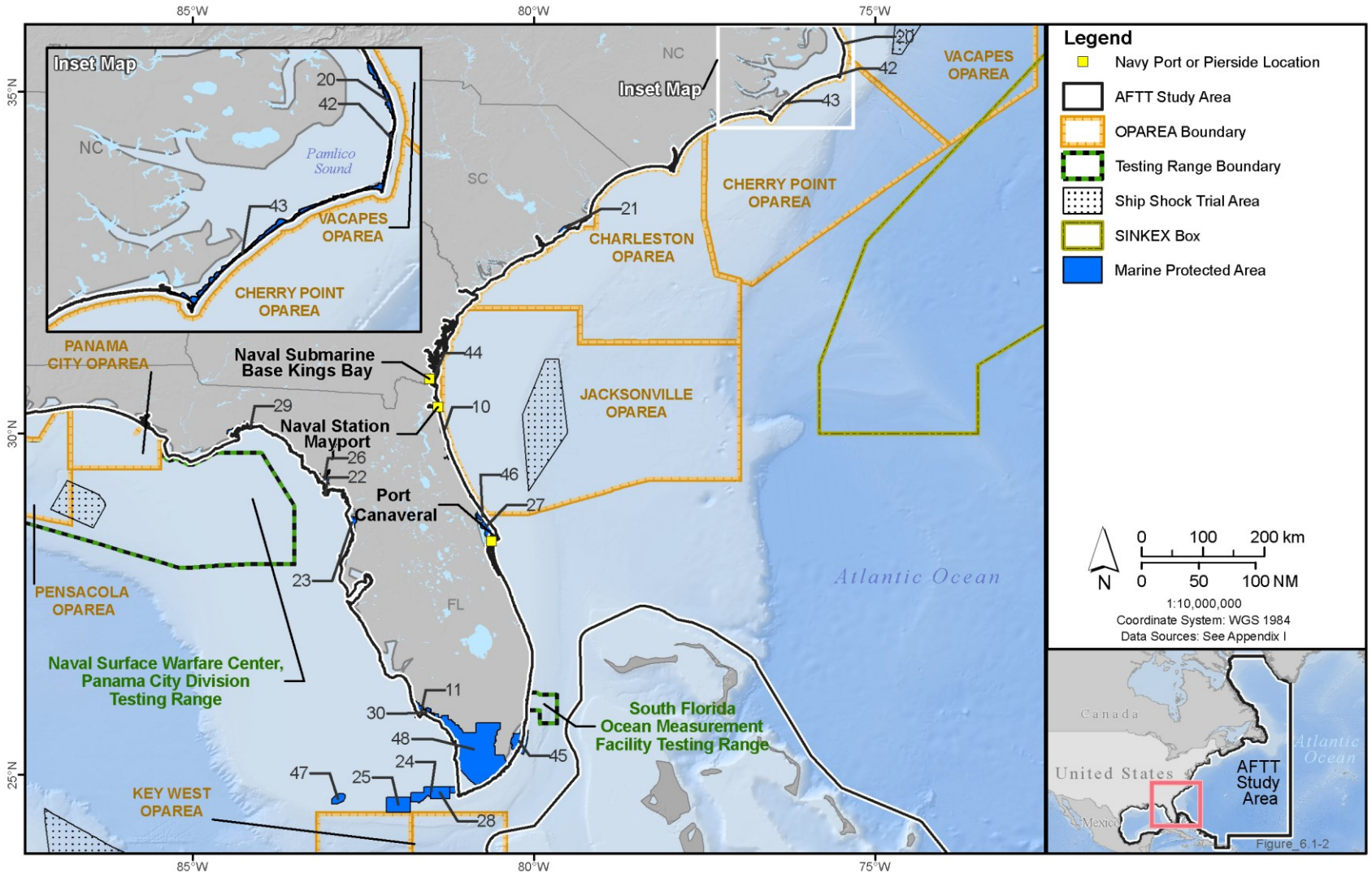
Notes: Other AFTT Areas include areas outside of range complexes and testing ranges but still within the AFTT Study Area. Other AFTT Area events typically refer to those events that occur while vessels are in transit.

AFTT: Atlantic Fleet Training and Testing; JAX: Jacksonville; VACAPES: Virginia Capes; OPAREA: Operating Area.



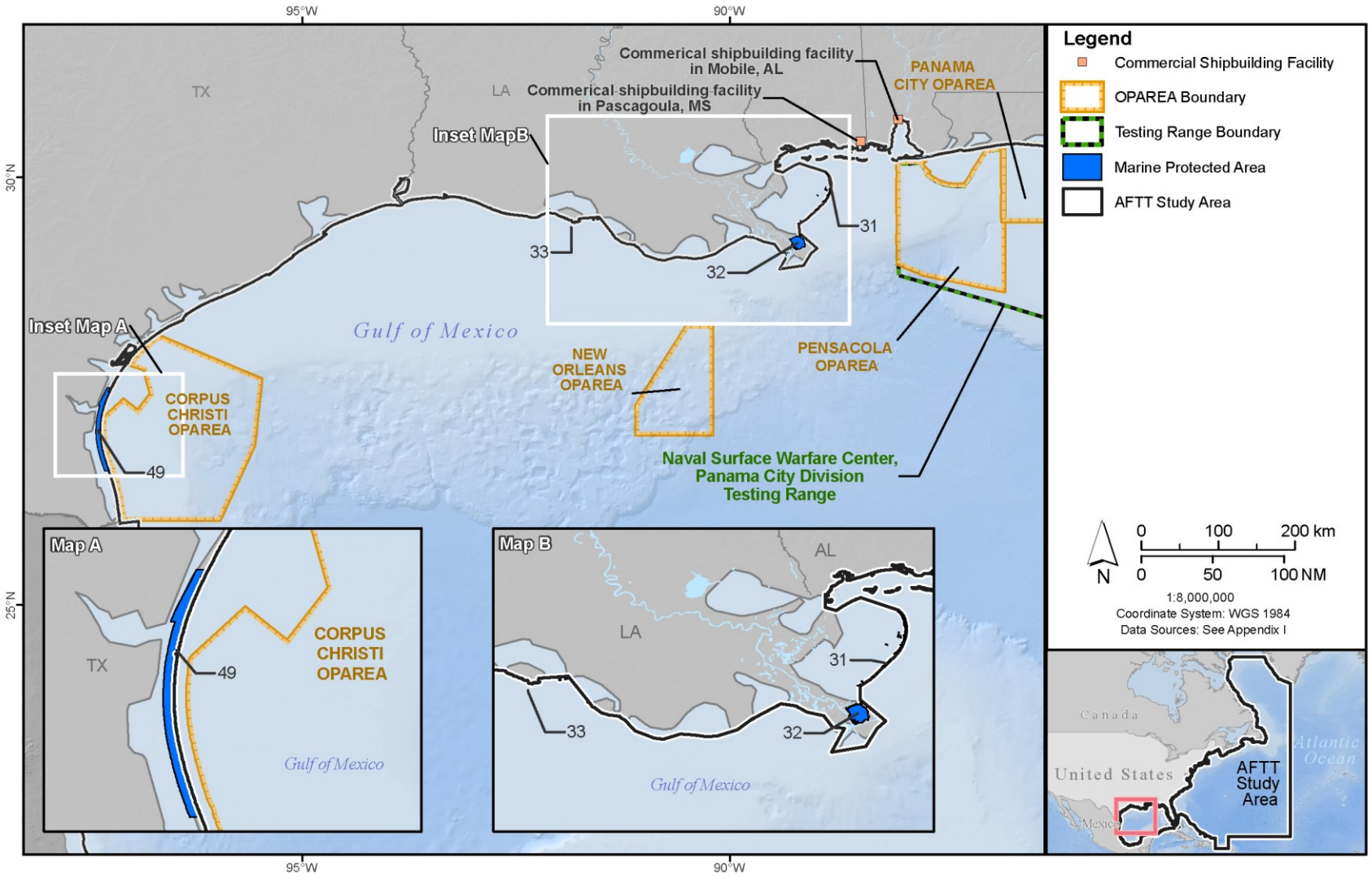
Notes: AFTT: Atlantic Fleet Training and Testing; OPAREA: Operating Area

Figure 6.1-1: Location of National System of Marine Protected Areas within the Northeast and Mid-Atlantic Portion of the Study Area



Notes: AFTT: Atlantic Fleet Training and Testing; OPAREA: Operating Area

Figure 6.1-2: Location of National System of Marine Protected Areas within the Southeast Atlantic and Caribbean Portion of the Study Area



Notes: AFTT: Atlantic Fleet Training and Testing; OPAREA: Operating Area

Figure 6.1-3: Location of National System of Marine Protected Areas within the Gulf of Mexico Portion of the Study Area

6.1.2.1 State Marine Protected Areas

State governments have established marine protected areas, including state parks and species-specific sanctuaries, for the management of fisheries, nursery grounds, shellfish beds, recreation, tourism, and for other uses. These areas have a diverse array of conservation objectives, from protecting ecological functions, to preserving shipwrecks, to maintaining traditional or cultural interaction with the marine environment. There are two state marine protected areas and five territorial marine protected areas in the Study Area (see Table 6.1-1).

6.1.2.2 National Estuarine Research Reserves

National Estuarine Research Reserve System sites protect estuarine land and water and provide habitat for wildlife. These sites also provide educational opportunities for students, teachers, and the public and serve as laboratories for scientists (15 CFR Part 921). The National Estuarine Research Reserve Program was established through the Coastal Zone Management Act and is administered in coordination with the National Marine Sanctuary System. Each reserve is managed by a state agency or university with input from local partners on a site-specific basis. There are five National Estuarine Research Reserves in the Study Area that are included in the National System of Marine Protected Areas (see Table 6.1-1).

6.1.2.3 National Wildlife Refuges

Refuges are managed by the U.S. Fish and Wildlife Service in accordance with Executive Order 12996, *Management and General Public Use of the National Wildlife Refuge System*, the National Wildlife Refuge System Administration Act of 1966, and the National Wildlife Refuge System Improvement Act of 1997. The National Wildlife Refuge System serves as a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and habitats. National wildlife refuges are managed on a site-specific basis. Activities conducted within a refuge must not impair existing wildlife-dependent recreational uses or reduce the potential of the refuge to provide quality, compatible, wildlife-dependent recreation into the future. The U.S. Fish and Wildlife Service is directed to continue, consistent with existing laws and interagency agreements, authorized or permitted refuge uses necessary to facilitate military preparedness; however, new agreements permitting military preparedness activities on refuges are discouraged (U.S. Fish and Wildlife Service, 2006a). There are 21 National Wildlife Refuges in the Study Area (see Table 6.1-1).

6.1.2.4 Gear Restricted Areas

The NMFS is responsible for overseeing Regional Fishery Management Councils that are established under the Magnuson-Stevens Act. These councils are used to create and implement Fishery Management Plans, which help conserve and manage important fisheries in the United States (50 CFR Chapter 6). One management strategy used is the creation of Gear Restricted Areas, some of which are included in the National System of marine protected areas. There are four Gear Restricted Areas in the Study Area (see Table 6.1-1).

6.1.2.5 National Parks

The National Park Service administers all national parks, national seashores, and some of the national recreation areas and national monuments to conserve the scenery and the natural and historic objects and wildlife contained within. Park managers control all park usage to ensure that park resources and values are preserved for the future; they must always seek ways to avoid, or to minimize to the greatest extent practicable, adverse impacts on park resources and values. In general, military activities are discouraged in parks; the use of weaponry is not allowed, and unacceptable impacts from aircraft

overflights (e.g., flights that unreasonably interfere with the atmosphere of peace and tranquility, or the natural soundscape maintained within the park) should be avoided. Unacceptable impacts are those that fall short of impairment but are still not acceptable within a particular park's environment, as determined by the professional judgment of the park manager in accordance with *National Park Service Management Policies 2006* (National Park Service, 2006a). Military services may request the use of park areas for noncombat exercises. Permits are approved at the discretion of the park superintendent. There are eight National Seashores, two Marine National Monuments, four National Parks, one National Recreation Area, and one National Historic Park and Ecological Preserve in the Study Area (see Table 6.1-1).

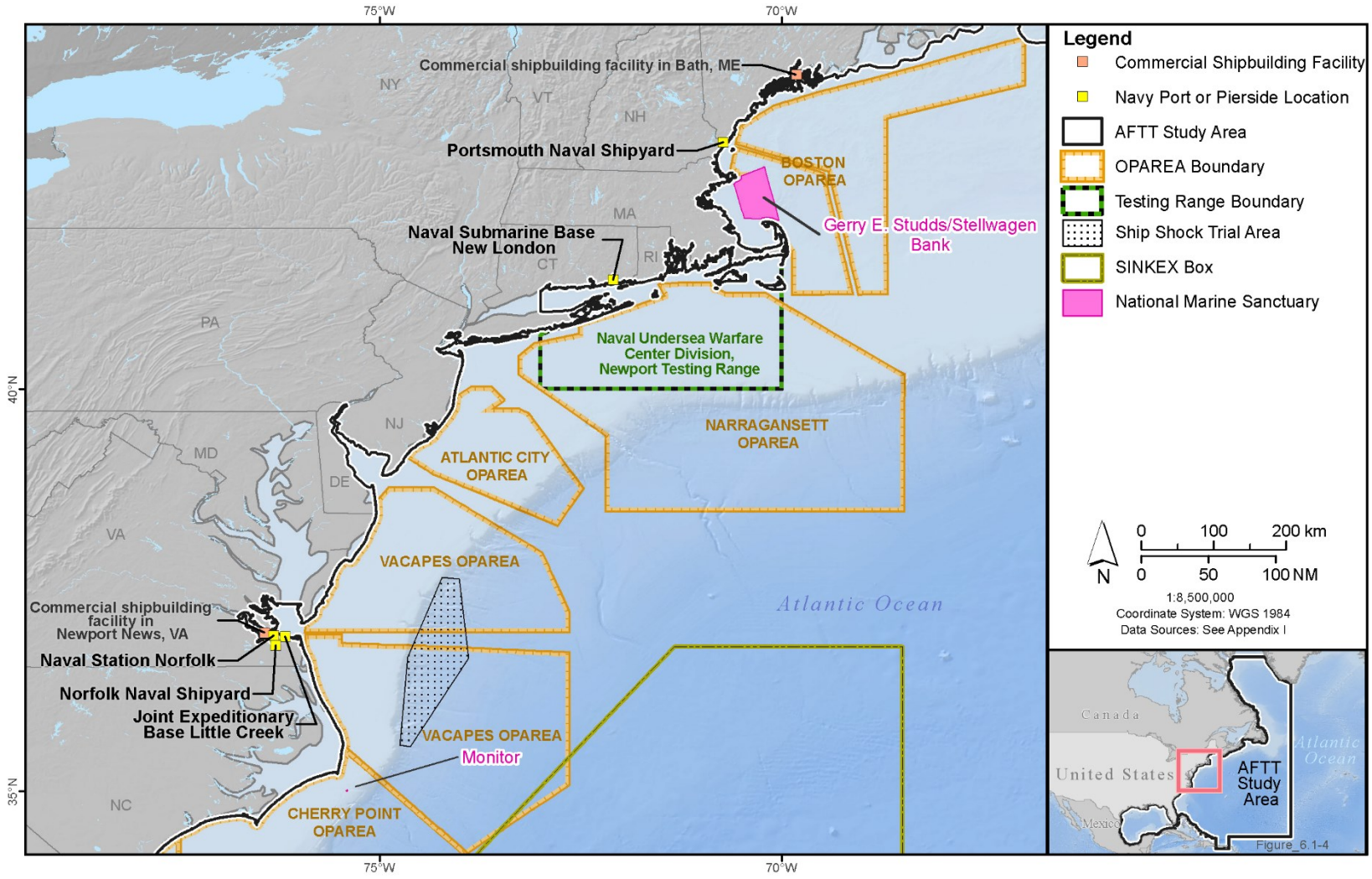
6.1.2.6 National Marine Sanctuaries

Under the Marine Protection, Research, and Sanctuaries Act of 1972 (also known as the National Marine Sanctuaries Act), the National Oceanic and Atmospheric Administration establishes a national marine sanctuary for marine areas with special conservation, recreational, ecological, historical, cultural, archaeological, scientific, educational, or aesthetic qualities. The National Marine Sanctuaries Act, in addition to sanctuary regulations, prohibit destroying, causing the loss of, or injuring any sanctuary resource managed under the law or regulations for that sanctuary (16 U.S.C. section 1436(a); 15 CFR Part 922). National marine sanctuaries are managed on a site-specific basis, and most sanctuaries have site-specific regulatory prohibitions. Each sanctuary also has site specific regulatory exemptions from the prohibitions for certain military activities.

Additionally, section 304(d) of the National Marine Sanctuaries Act requires federal agencies to consult with the Office of National Marine Sanctuaries whenever their proposed actions are likely to destroy, cause the loss of, or injure a sanctuary resource. Within the Study Area there are five national marine sanctuaries included in the List of National System Marine Protected Areas. The national marine sanctuaries within the Study Area are mapped in Figure 6.1-4 and Figure 6.1-5. The sanctuaries are described in additional detail below, along with a summary of the potential environmental impacts of the proposed training and testing activities anticipated to occur within or within the vicinity of each sanctuary. Where appropriate, the Navy intends to prepare a Sanctuary Resources Statement describing its proposed actions and potential effects on sanctuary resources, which will be submitted to the Office of National Marine Sanctuaries to initiate National Marine Sanctuaries Act section 304(d) consultation.

6.1.2.6.1 Gerry E. Studds Stellwagen Bank National Marine Sanctuary

The Gerry E. Studds Stellwagen Bank National Marine Sanctuary is located within the Northeast U.S. Continental Shelf Large Marine Ecosystem in the eastern portion of Massachusetts Bay between Cape Ann and Cape Cod and the southwest corner of the Gulf of Maine (Figure 6.1-4). The sanctuary includes an area of nearly 638 square nautical miles (NM^2) and was designated in 1992 to preserve the area's natural and historic resources, including nearly 50 shipwrecks (National Oceanic and Atmospheric Administration, 2010). Stellwagen Bank provides habitat for invertebrates, sea turtles including the leatherback and Kemp's ridley, and 17 species of cetaceans (National Marine Sanctuary Program, 2007a). The area supports important feeding grounds for the fin, humpback, sei, and North Atlantic right whale. A diversity of seabird species dominated by loons, fulmars, shearwaters, storm petrels, cormorants, phalaropes, alcids, gulls, jaegers, and terns use the area for foraging (National Oceanic and Atmospheric Administration, 2010). Human uses of the Gerry E. Studds Stellwagen Bank National Marine Sanctuary include commercial shipping, recreational fishing, whale watching, and scuba diving.



Notes: AFTT: Atlantic Fleet Training and Testing; NMS: National Marine Sanctuary; OPAREA: Operating Area

Figure 6.1-4: Location of National Marine Sanctuaries within the Mid-Atlantic Portion of the Study Area

Regulations for the Gerry E. Studds Stellwagen Bank National Marine Sanctuary prohibit the following (15 CFR section 922.142(a)):

(1) (i) Discharging or depositing, from within the boundary of the sanctuary, any material or other matter except:

(A) Fish, fish parts, chumming materials or bait used in or resulting from traditional fishing operations in the sanctuary;
(B) Biodegradable effluent incidental to vessel use and generated by marine sanitation devices approved in accordance with Section 312 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1322 et seq.;
(C) Water generated by routine vessel operations (e.g., cooling water, deck wash down and graywater as defined by Section 312 of the Federal Water Pollution Control Act) excluding oily wastes from bilge pumping; or
(D) Engine exhaust.

(ii) Discharging or depositing, from beyond the boundary of the sanctuary, any material or other matter, except those listed in paragraphs (a)(1)(i) (A) through (D) of this section, that subsequently enters the sanctuary and injures a sanctuary resource or quality.

(2) Exploring for, developing or producing industrial materials within the sanctuary.
(3) Drilling into, dredging or otherwise altering the seabed of the sanctuary; or constructing, placing or abandoning any structure, material or other matter on the seabed of the sanctuary, except as an incidental result of:

(i) Anchoring vessels;
(ii) Traditional fishing operations; or
(iii) Installation of navigation aids.

(4) Moving, removing or injuring, or attempting to move, remove or injure, a sanctuary historical resource. This prohibition does not apply to moving, removing or injury resulting incidentally from traditional fishing operations.
(5) Taking any marine reptile, marine mammal or seabird in or above the sanctuary, except as permitted by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 et seq., the Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 et seq., and the Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 et seq.
(6) Lightering [cargo transfer between vessels] in the sanctuary.
(7) Possessing within the sanctuary (regardless of where taken, moved or removed from), except as necessary for valid law enforcement purposes, any historical resource, or any marine mammal, marine reptile or seabird taken in violation of the MMPA, ESA or MBTA.
(8) Interfering with, obstructing, delaying or preventing an investigation, search, seizure or disposition of seized property in connection with enforcement of the Act or any regulation or permit issued under the Act.

The Gerry E. Studds Stellwagen Bank National Marine Sanctuary does not have specific military exemptions from the applicable Office of National Marine Sanctuaries Regulations. The regulations simply state that all Department of Defense (DoD) military activities are to be carried out in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources and

qualities (15 CFR section 922.142(c)(1)(i)). Activities carried out by the DoD may be exempted from certain sanctuary prohibitions after consultation with the Office of National Marine Sanctuaries (15 CFR section 922.142(c)(1)(ii)).

The Gerry E. Studds Stellwagen Bank National Marine Sanctuary Management Plan and Environmental Assessment was released in June 2010 (National Oceanic and Atmospheric Administration, 2010) and states the following:

> U.S. Navy seldom conducts activities in the sanctuary, due to the shallow depths which are unsuitable for submarine operations, and the crowded waters which make warfare training exercises inadvisable. Naval ships transit the sanctuary approximately seven times a year primarily to access the Port of Boston and in so doing follow internal protocols of posting a lookout for whales and avoiding discharges in the sanctuary (Tom Fetherston, U.S. Navy, personal communication, 2004). Operations in deep waters (greater than 200 meters) beyond the sanctuary have the potential to acoustically disturb sanctuary resources.

The discussion of Navy activities below is still applicable to the activities conducted in and around the Sanctuary.

The Navy considered all proposed training and testing activities that could occur within the sanctuary. All activities would be conducted in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources. The Navy concluded that the proposed activities could fall into the following two categories:

1. The following platforms, sources, or items that are part of Navy activities may be used within the Gerry E. Studds Stellwagen Bank National Marine Sanctuary, because they (1) are not prohibited under the sanctuary regulations, or (2) are carried out in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources and qualities (15 CFR section 922.142(c)(1)(i)):

    - <u>Aircraft and Aerial Targets</u>

    Aircraft and aerial targets are expected to cause only a minor and temporary behavioral reaction due to noise for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, or fish that may be present in the area. In addition to possible minor behavioral reactions due to noise, there is slight potential for seabirds to be struck by aircraft or aerial targets. As discussed in Section 2.3.3 (Standard Operating Procedures), the Navy implements standard operating procedures for aircraft safety that will reduce the potential for aircraft strikes. Targets are not expendable and will not be discharged into the waters of the Sanctuary. For a more detailed discussion of potential impacts to these resources from the use of aircraft and aerial targets, see the following sections:

    Section 3.6.3.4.2 (Impacts from Aircraft and Aerial Targets) for fishes
    Section 3.7.3.4.2 (Impacts from Aircraft and Aerial Targets) for marine mammals
    Section 3.8.3.4.2 (Impacts from Aircraft and Aerial Targets) for reptiles
    Section 3.9.3.4.2 (Impacts from Aircraft and Aerial Targets) for birds, which includes discussion of applicable seabirds

    - <u>Vessels and in-water devices (that do not make contact with seafloor)</u>

Noise from vessels and in-water devices (excluding sonar and other active acoustic sources) is expected to cause only a minor and temporary behavioral reaction for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, seabirds, or fishes that may be present in the area. There is potential for marine mammals, sea turtles, seabirds, floating vegetation, invertebrates, and large slow-moving fish species, to be struck by or to collide with vessels. As discussed in section 2.3.3 (Standard Operating Procedures), the Navy implements standard operating procedures for vessel and towed in-water device safety that will reduce the marine mammal strike potential. As discussed in Section 5.3.4 (Physical Disturbance and Strike Stressors), the Navy will implement mitigation to further reduce the potential for marine mammal strikes by vessels and in-water devices. For a more detailed discussion of potential impacts to these resources from the use of vessels and in-water devices, see the following sections:

Section 3.3.3.4.1 (Impacts from Vessels and In-Water Devices) for vegetation
Section 3.4.3.4.1 (Impacts from Vessels and In-Water Devices) for invertebrates
Section 3.6.3.4.1 (Impacts from Vessels and In-Water Devices) for fishes
Section 3.7.3.4.1 (Impacts from Vessels and In-Water Devices) for marine mammals
Section 3.8.3.4.1 (Impacts from Vessels and In-Water Devices) for reptiles
Section 3.9.3.4.1 (Impacts from Vessels and In-Water Devices) for birds

2. The following platforms, sources, or items that are part of Navy activities, but are not planned to be used within the Gerry E. Studds Stellwagen Bank National Marine Sanctuary (including a 2.7 NM buffer) as part of the Proposed Action:

- Sonar and other active acoustic sources
- Explosives detonated in-air, at the surface, or underwater
- Military expended materials
- Seafloor devices

Activities the Navy proposes to conduct in the Gerry E. Studds Stellwagen Bank National Marine Sanctuary are consistent with the activities considered when the Sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. Navy activities carried out in the sanctuary are conducted in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources and qualities. The Navy does not propose to conduct any new activities in the sanctuary that may affect sanctuary resources or qualities. Further, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since activities proposed to be conducted in the vicinity of Stellwagen Bank National Marine Sanctuary may affect sanctuary resources, the Navy intends to engage in 304(d) consultation under the National Marine Sanctuaries Act.

6.1.2.6.2 *Monitor* National Marine Sanctuary

The *Monitor* National Marine Sanctuary is located within the Southeast U.S. Continental Shelf Large Marine Ecosystem off the coast of Cape Hatteras, North Carolina (Table 6.1-1). The geographical extent of the sanctuary is defined by the shipwreck and its surrounding 1 NM diameter area. The sanctuary includes the column of water extending from the ocean surface to the seabed. The sanctuary was established in 1975 to preserve the historical and cultural artifacts of the USS *Monitor* shipwreck, the

nation's first ironclad warship. The *Monitor* serves as a valuable national heritage and naval cultural specimen (Office of National Marine Sanctuaries, 2013).

Regulations for the *Monitor* National Marine Sanctuary prohibit the following (15 CFR 922.61):

(a) Anchoring in any manner, stopping, remaining, or drifting without power at any time;
(b) Any type of subsurface salvage or recovery operation;
(c) Diving of any type, whether by an individual or by a submersible;
(d) Lowering below the surface of the water any grappling, suction, conveyor, dredging or wrecking device;
(e) Detonating below the surface of the water any explosive or explosive mechanism;
(f) Drilling or coring the seabed;
(g) Lowering, laying, positioning or raising any type of seabed cable or cable-laying device;
(h) Trawling; or
(i) Discharging waste material into the water in violation of any Federal statute or regulation.

Free passage through the Sanctuary is not a prohibited activity under the Sanctuary regulations, and therefore is permissible. The *Monitor* National Marine Sanctuary does not have specific military exemptions from the applicable Office of National Marine Sanctuaries Regulations (15 CFR sections 922.60–62).

The *Monitor* National Marine Sanctuary Final Management Plan and Environmental Assessment was released in February 2013 (Office of National Marine Sanctuaries, 2013).

To ensure compliance with the Office of National Marine Sanctuaries Regulations, the Navy considered all proposed training and testing activities that could occur within the sanctuary. All activities would be conducted in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources. The Navy concluded that the proposed activities could fall into the following two categories:

1. The following platforms, sources, or items that are part of Navy activities may be used within the Monitor National Marine Sanctuary because they are not prohibited under the sanctuary regulations:

   - Aircraft and Aerial Targets

     Aircraft and aerial targets would have no impact on the *Monitor* shipwreck, as all targets are recovered and will not reach the ocean floor.

   - Vessels and in-water devices (that do not make contact with seafloor)

     The *Monitor* National Marine Sanctuary allows transit of vessels through the sanctuary. Furthermore, vessels and in-water devices would have no impact on the *Monitor* shipwreck.

   - Sonar and other active acoustic sources

     Sonar and other active acoustic sources would have no impact on the *Monitor* shipwreck.

   - Electromagnetic devices

     Electromagnetic devices would have no impact on the *Monitor* shipwreck.

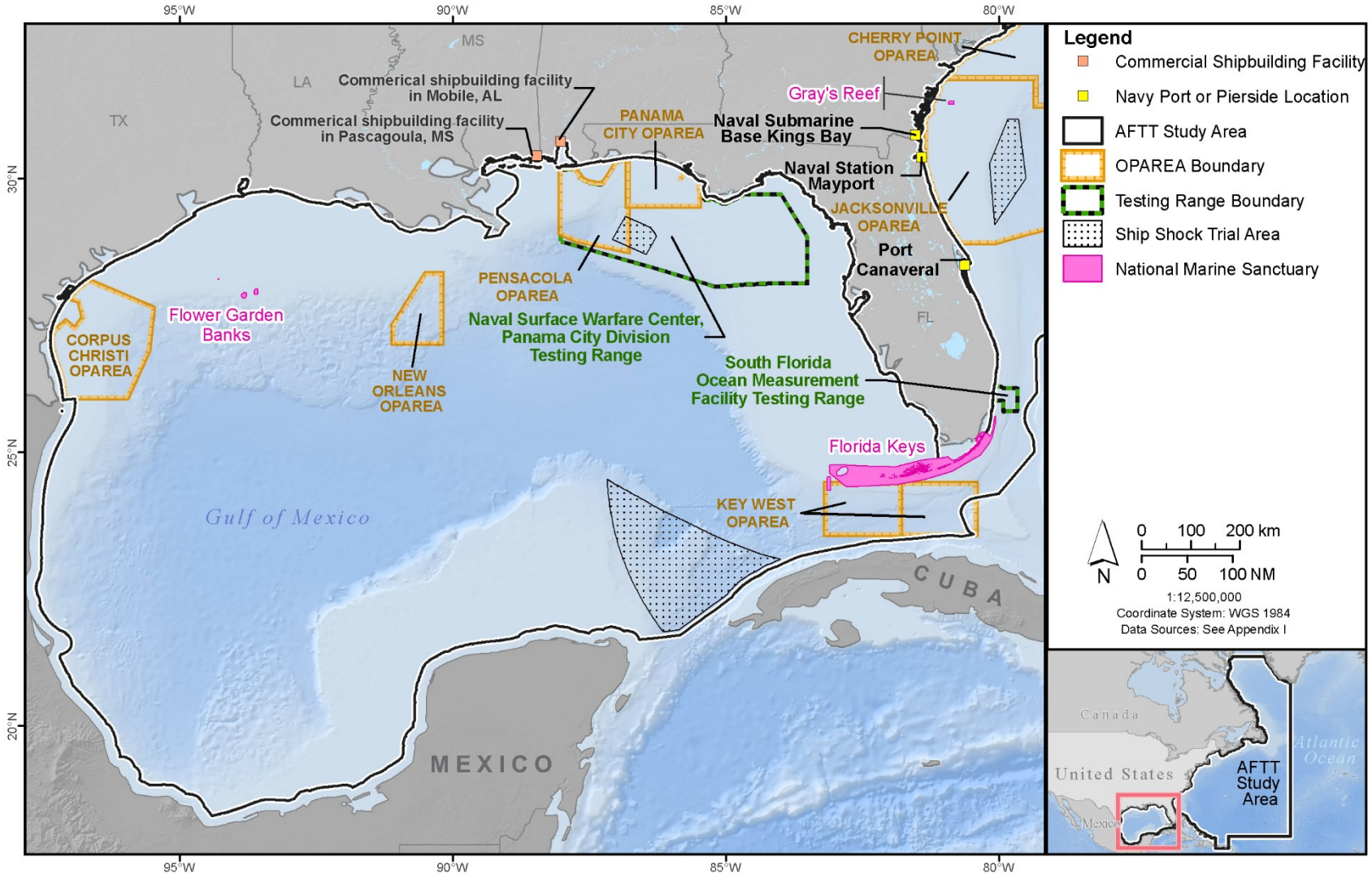
2. The following platforms, sources, or items that are part of Navy activities, but are not planned to be used within *Monitor* National Marine Sanctuary (including a 2.7 NM buffer) as part of the Proposed Action:

    - Explosives detonated in-air, at the surface, or underwater
    - Military expended materials
    - Seafloor devices

The Navy does not propose to conduct any new activities that would cause significant impacts on sanctuary resources. Furthermore, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since none of the Navy's training and testing activities proposed to be conducted within or in the vicinity of Monitor National Marine Sanctuary are likely to injure sanctuary resources, the Navy has determined that it is unnecessary to engage in 304(d) consultation under the National Marine Sanctuaries Act.

6.1.2.6.3 Gray's Reef National Marine Sanctuary

The Gray's Reef National Marine Sanctuary is located within in the Southeast U.S. Continental Shelf Large Marine Ecosystem 16.5 NM off Sapelo Island, Georgia (Table 6.1-1). The sanctuary includes an area of approximately 17 NM^2 and was designated in 1981 to preserve the area's open ocean and live bottom habitat. Gray's Reef National Marine Sanctuary is the only marine protected area in the region that focuses on protection and conservation of all natural marine resources (National Marine Sanctuary Program, 2006). Gray's Reef supports an unusual assemblage of temperate and tropical species. A series of rock ledges and sand expanses have created deep burrows, troughs, and caves that support bottom-dwelling plants and animals, such as sponges, barnacles, sea fans, hard coral, crabs, lobsters, and snails. The diverse topography provides habitat for a diverse fish community, with an estimated 200 species, including black sea bass (*Centropristis striata*), snapper (*Lutjanidae* spp.), grouper (*Epinephelinae* spp.), and mackerel (*Scombridae* spp.). Gray's Reef is an important area for resting and foraging for both adult and juvenile loggerhead turtles throughout the year. Atlantic spotted dolphins and bottlenose dolphins are the most common marine mammals at the sanctuary; however, the highly endangered North Atlantic right whale has been observed during winter migration and calving season. Pelagic birds observed at Gray's reef include gulls, petrels, shearwaters, Northern Gannet, phalaropes, jaegers, and terns (National Marine Sanctuary Program, 2006).



Notes: AFTT: Atlantic Fleet Training and Testing; NMS: National Marine Sanctuary; OPAREA: Operating Area

Figure 6.1-5: Location of National Marine Sanctuaries within the Gulf of Mexico Portion of the Study Area

Numerous cover types are found on the sanctuary's ledges, including macroalgae, sponges, tunicates, coral, and gorgonians; sessile invertebrates are the most diverse and abundant components, while corals are less common and form smaller colonies than in tropical regions (Bauer et al., 2008). The primary coral species in Gray's Reef National Marine Sanctuary is the branching coral *Oculina arbuscula*—present on 75 percent of ledge sites, but contributing to a small percentage of overall cover. Sessile benthic organisms are susceptible to both direct and indirect damage from marine debris, ranging from abrasion by lines and wires, to entanglement (particularly *Oculina* sp.), to algal fouling and eventual coral death (Bauer et al., 2008).

General regulations for the Gray's Reef National Marine Sanctuary prohibit the following (15 CFR section 922.92(a)):

(1) Dredging, drilling into, or otherwise altering in any way the submerged lands of the sanctuary (including bottom formations).

(2) Constructing any structure other than a navigation aid, or constructing, placing, or abandoning any structure, material, or other matter on the submerged lands of the Sanctuary except weighted marker buoys that are continuously tended and used during otherwise lawful fishing or diving activities and that are not attached to a vessel and not capable of holding a boat at anchor. Weights used with a marker buoy shall not have a combined weight of more than 10 pounds, shall be attached with not greater than one-fourth inch (1/4") line and shall be removed from the Sanctuary within twelve (12) hours of deployment. Any weighted marker buoy that is not continuously tended may be removed by the Assistant Administrator or designee or an authorized officer, without notice.

(3) Discharging or depositing any material or other matter except:

  (i) Fish or fish parts, bait, or chumming materials;
  (ii) Effluent from marine sanitation devices; and
  (iii) Vessel cooling water.

(4) Operating a watercraft other than in accordance with the Federal rules and regulations that would apply if there were no sanctuary.

(5) (i) Injuring, catching, harvesting, or collecting, or attempting to injure, catch, harvest, or collect, any marine organism, or any part thereof, living or dead, within the sanctuary by any means except by use of rod and reel, and handline gear;
  (ii) There shall be a rebuttable presumption that any marine organism or part thereof referenced in this paragraph found in the possession of a person within the sanctuary has been collected from the sanctuary.

(6) Using any fishing gear within the sanctuary except rod and reel, and handline gear, or for law enforcement purposes.

(7) Using underwater any explosives, or devices that produce electric charges underwater.

(8) Breaking, cutting, damaging, taking, or removing any bottom formation.

(9) Moving, removing, damaging, or possessing, or attempting to move, remove, damage, or possess, any sanctuary historical resource.

(10) Anchoring, or attempting to anchor, any vessel in the Sanctuary, except as provided in paragraph (d) of this section when responding to an emergency threatening life, property, or the environment.

(11) Possessing or carrying any fishing gear within the sanctuary except:

(i) Rod and reel, and handline gear;
(ii) Fishing gear other than rod and reel, handline gear, and spearfishing gear, provided that it is stowed on a vessel and not available for immediate use;
(iii) Spearfishing gear provided that it is stowed on a vessel, not available for immediate use, and the vessel is passing through the sanctuary without interruption; and
(iv) For law enforcement purposes.

In addition to the prohibitions outlined in 15 CFR section 922.92(a), which apply throughout the Sanctuary, the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted within the research area (15 CFR section 922.94):

(a)

(1) Injuring, catching, harvesting, or collecting, or attempting to injure, catch, harvest, or collect, any marine organism, or any part thereof, living or dead.
(2) There shall be a rebuttable presumption that any marine organism or part thereof referenced in this paragraph found in the possession of a person within the research area has been collected from the research area.

(b) Using any fishing gear, or possessing, or carrying any fishing gear unless such gear is stowed and not available for immediate use while on board a vessel transiting through the research area without interruption or for valid law enforcement purposes.
(c) Diving.
(d) Stopping a vessel in the research area.

All activities carried out by the DoD within the sanctuary at the time of designation were considered essential for national defense, and therefore, are not subject to the sanctuary's general prohibitions. These activities include surface and aerial gunnery, bombing, torpedo and missile activities, as well as vessel and submarine maneuvers, and aircraft overflights (typically above 1,500 feet or beyond a 1 NM radius of the sanctuary). The exemption of additional activities having significant impacts shall be determined in consultation between the Office of National Marine Sanctuaries and the DoD.

The Gray's Reef National Marine Sanctuary Final Environmental Assessment for Implementation of the Sanctuary Management Plan and New Regulations was released in July 2014 (Office of National Marine Sanctuaries, 2014). It states:

> Ongoing and proposed military activities, primarily U.S. Navy Atlantic Fleet Training and Testing operations, including active sonar, have the potential to adversely impact the habitat and living marine resources of the affected environment. The extent of these activities, however, and the potential to affect GRNMS biological and physical resources is unknown due to national defense protocols.

The Navy considered all proposed training and testing activities that could occur within the sanctuary. All activities would be conducted in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources. The Navy concluded that the proposed activities could fall into the following categories:

1. The following platforms, sources, or items that are part of Navy activities may be used within the Gray's Reef National Marine Sanctuary because they were carried out at the time the regulations were promulgated and therefore are not prohibited:

- Aircraft and Aerial Targets

Aircraft and aerial targets are expected to cause only a minor and temporary behavioral reaction due to noise for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, birds, or fishes that may be present in the area. However, in addition to behavioral reactions due to noise, there is potential for seabirds to be struck by aircraft or aerial targets. As discussed in Section 2.3.3 (Standard Operating Procedures), the Navy implements standard operating procedures for aircraft safety that will reduce the potential for aircraft strikes. For a more detailed discussion of potential impacts to these resources from the use of aircraft and aerial targets, see the following sections:

Section 3.6.3.4.3 (Impacts from Aircraft and Aerial Targets) for fishes
Section 3.7.3.4.3 (Impacts from Aircraft and Aerial Targets) for marine mammals
Section 3.8.3.4.3 (Impacts from Aircraft and Aerial Targets) for reptiles
Section 3.9.3.4.3 (Impacts from Aircraft and Aerial Targets) for birds, which includes discussion of applicable seabirds

- Vessels and in-water devices (that do not make contact with seafloor)

Noise from vessels and in-water devices (excluding sonar and other active acoustic sources) is expected to cause only a minor and temporary behavioral reaction for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, seabirds, or fishes that may be present in the area. There is potential for marine mammals, sea turtles, seabirds, floating vegetation, invertebrates, and large slow-moving fish species, to be struck by or to collide with vessels. As discussed in Section 2.3.3 (Standard Operating Procedures), the Navy implements standard operating procedures for vessel and towed in-water device safety that will reduce the marine mammal strike potential. As discussed in Section 5.3.4 (Physical Disturbance and Strike Stressors), the Navy will implement mitigation to further reduce the potential for marine mammal strikes by vessels and in-water devices. For a more detailed discussion of potential impacts to these resources from the use of vessels and in-water devices, see the following sections:

Section 3.3.3.4.1 (Impacts from Vessels and In-Water Devices) for vegetation
Section 3.4.3.4.1 (Impacts from Vessels and In-Water Devices) for invertebrates
Section 3.6.3.4.1 (Impacts from Vessels and In-Water Devices) for fishes
Section 3.7.3.4.1 (Impacts from Vessels and In-Water Devices) for marine mammals
Section 3.8.3.4.1 (Impacts from Vessels and In-Water Devices) for reptiles
Section 3.9.3.4.1 (Impacts from Vessels and In-Water Devices) for birds

- Explosives detonated in-air or at the surface (includes gunnery, bombing, torpedoes, and missiles)

Explosives detonated in-air or at the surface could impact marine mammals, sea turtles, birds, invertebrates, floating vegetation, or fishes that may be present in the area. Impacts are expected to range from temporary behavioral reactions to injury, damage, or death. As discussed in Section 5.3.3 (Explosive Stressors), the Navy will implement mitigation to avoid impacts from explosives on marine mammals and sea turtles. For a more detailed discussion of potential impacts to these resources from the use of explosives detonated in-air or at the surface, see the following sections:

Section 3.3.3.2.1 (Impacts from Explosives) for vegetation
Section 3.4.3.2.1 (Impacts from Explosives) for invertebrates
Section 3.6.3.2.1 (Impacts from Explosives) for fishes
Section 3.7.3.2.1 (Impacts from Explosives) for marine mammals
Section 3.8.3.2.1 (Impacts from Explosives) for reptiles
Section 3.9.3.2.1 (Impacts from Explosives) and Section 3.9.3.1.3 (Impacts from Air Guns) for birds

- Military expended materials resulting from exempted activities

Military expended materials resulting from exempted activities include fragments from high-explosive munitions, non-explosive practice munitions, and targets. These items could directly strike marine mammals, sea turtles, birds, invertebrates, floating vegetation, or fishes that may be present in the area. However, the probability of military expended materials directly striking a marine resource is extremely low. As discussed in Section 5.3.4 (Physical Disturbance and Strike Stressors) and Section 5.4.1 (Mitigation Areas for Seafloor Resources), the Navy will implement mitigation to avoid impacts from military expended materials on marine mammals, sea turtles, and applicable seafloor resources. For a more detailed discussion of potential impacts to these resources from the use of non-explosive practice munitions fired in-air or at the surface, see the following sections:

Section 3.3.3.4.3 (Impacts from Military Expended Materials) for vegetation
Section 3.4.3.4.3 (Impacts from Military Expended Materials) for invertebrates
Section 3.5.3.4.3 (Impacts from Military Expended Materials) for habitats
Section 3.6.3.4.3 (Impacts from Military Expended Materials) for fishes
Section 3.7.3.4.3 (Impacts from Military Expended Materials) for marine mammals
Section 3.8.3.4.3 (Impacts from Military Expended Materials) for reptiles
Section 3.9.3.4.3 (Impacts from Military Expended Materials) for birds

2. The following platforms, sources, or items that are part of Navy activities were not conducted at the time that the sanctuary regulations were promulgated but may be used within the Gray's Reef National Marine Sanctuary because they would not cause significant impacts on sanctuary resources:

- Sonar and other active acoustic sources

Sonar and other active acoustic sources are expected to cause only a minor and temporary behavioral reaction for invertebrates (cephalopods and crustaceans), diving birds, or fish that may be present in the area. No effect is anticipated to corals. There is potential for marine mammals and sea turtles to be injured (permanent threshold shifts in hearing) from sonar and other active acoustic sources. However, due to the water depth in the vicinity of the sanctuary, the types of active sonar and other acoustic sources that could be used would typically be limited to lower source levels and higher frequency systems such as mine-hunting, bottom mapping and underwater communication type systems. Regarding the more powerful hull-mounted mid-frequency sonars, the types of activities that could occur would typically be limited to maintenance, testing or mine countermeasure training, and these events would typically be less than an hour in the

vicinity of the sanctuary. Therefore, the likelihood of causing significant impacts on sanctuary resources, including marine mammals or sea turtles, is low. As discussed in Section 5.3.2 (Acoustic Stressors), the Navy will implement mitigation to avoid impacts from sonar on marine mammals and sea turtles. For a more detailed discussion of potential impacts to these resources from the use of sonar and other active acoustic sources, see the following sections:

Section 3.4.3.1.2 (Impacts from Sonar and Other Transducers) for invertebrates
Section 3.6.3.1.2 (Impacts from Sonar and Other Transducers) for fishes
Section 3.7.3.1.2 (Impacts from Sonar and Other Transducers) for marine mammals
Section 3.8.3.1.2 (Impacts from Sonar and Other Transducers) for reptiles
Section 3.9.3.1.2 (Impacts from Sonar and Other Transducers) for birds

- Electromagnetic devices

Electromagnetic devices are expected to cause only a minor and temporary behavioral reaction for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, birds, invertebrates (arthropods, such as lobsters), or fishes that may be present in the area. For a more detailed discussion of potential impacts to these resources from the use of electromagnetic devices, see the following sections:

Section 3.4.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.4.3.3.2 (Impacts from In-Air Electromagnetic Devices) for invertebrates
Section 3.6.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.6.3.3.2 (Impacts from In-Air Electromagnetic Devices) for fishes
Section 3.7.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.7.3.3.2 (Impacts from In-Air Electromagnetic Devices) for marine mammals
Section 3.8.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.8.3.3.2 (Impacts from In-Air Electromagnetic Devices) for reptiles
Section 3.9.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.9.3.3.2 (Impacts from In-Air Electromagnetic Devices) for birds

3. The following platforms, sources, or items that are part of Navy activities, but are not planned to be used within the Gray's Reef National Marine Sanctuary (including a 2.7 NM buffer) as part of the Proposed Action:

   - Explosives detonated underwater
   - Military expended materials resulting from non-exempted activities
   - Seafloor devices

Activities the Navy proposes to conduct in Gray's Reef National Marine Sanctuary are consistent with the activities exempted when the sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. The Navy does not propose to conduct any new activities that would cause significant impacts on sanctuary resources. Furthermore, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since activities conducted in and around the sanctuary could potentially result in harassment takes under the MMPA (defined as an injury to a

sanctuary resource by the Office of National Marine Sanctuaries) the Navy will consult under Section 304(d) of the National Marine Sanctuaries Act.

6.1.2.6.4 Florida Keys National Marine Sanctuary

The Florida Keys National Marine Sanctuary is located within portions of the Southeast U.S. Continental Shelf, Caribbean Sea, and Gulf of Mexico Large Marine Ecosystems (Figure 6.1-5). The geographical extent of the sanctuary encompasses an area 2,900 NM^2, including waters surrounding the 126 mile long Florida Keys archipelago, Florida Bay, and portions of the Gulf of Mexico and Atlantic Ocean (National Marine Sanctuary Program, 2007b). The sanctuary was established in 1990 to preserve historical, cultural, and natural resources, including coral reefs, shipwrecks, seagrass beds, and fisheries. The Florida Keys National Marine Sanctuary contains a complex marine ecosystem that supports a variety of unique and nationally significant habitats: seagrass meadows, mangrove islands, and extensive living coral reefs. The ecosystem supports more than 6,000 species of plants, fish, and invertebrates, including the nation's only coral reef that lies next to the continent and one of the largest seagrass communities in the hemisphere (National Marine Sanctuary Program, 2007b).

Management of the Florida Keys National Marine Sanctuary involves a zoning strategy, with regulations applicable to either the entire sanctuary or to specific zones. Regulations focus on reducing direct and indirect threats to the reef by protecting ecologically important habitats and resources and improving water quality. Sanctuary-wide regulations prohibit the following (15 CFR section 922.163(a)):

(1) Mineral and hydrocarbon exploration, development and production. Exploring for, developing, or producing minerals or hydrocarbons within the sanctuary.

(2) Removal of, injury to, or possession of coral or live rock.

  (i) Moving, removing, taking, harvesting, damaging, disturbing, touching, breaking, cutting, or otherwise injuring, or possessing (regardless of where taken from) any living or dead coral, or coral formation, or attempting any of these activities, except as permitted under 50 CFR part 622.

  (ii) Harvesting, or attempting to harvest, any live rock from the sanctuary, or possessing (regardless of where taken from) any live rock within the sanctuary, except as authorized by a permit for the possession or harvest from aquaculture operations in the Exclusive Economic Zone, issued by the National Marine Fisheries Service pursuant to applicable regulations under the appropriate Fishery Management Plan, or as authorized by the applicable State authority of competent jurisdiction within the sanctuary for live rock cultured on State submerged lands leased from the State of Florida, pursuant to applicable State law. See section 370.027, Florida Statutes and implementing regulations.

(3) Alteration of, or construction on, the seabed. Drilling into, dredging, or otherwise altering the seabed of the sanctuary, or engaging in prop-dredging; or constructing, placing or abandoning any structure, material, or other matter on the seabed of the sanctuary, except as an incidental result of:

  (i) Anchoring vessels in a manner not otherwise prohibited by this part (see sections 922.163(a)(5)(ii) and 922.164(d)(1)(v));

  (ii) Traditional fishing activities not otherwise prohibited by this part;

  (iii) Installation and maintenance of navigational aids by, or pursuant to valid authorization by, any Federal, State, or local authority of competent jurisdiction;

(iv) Harbor maintenance in areas necessarily associated with federal water resource development projects in existence on July 1, 1997, including maintenance dredging of entrance channels and repair, replacement, or rehabilitation of breakwaters or jetties;

(v) Construction, repair, replacement, or rehabilitation of docks, seawalls, breakwaters, piers, or marinas with less than ten slips authorized by any valid lease, permit, license, approval, or other authorization issued by any Federal, State, or local authority of competent jurisdiction.

(4) Discharge or deposit of materials or other matter.

(i) Discharging or depositing, from within the boundary of the sanctuary, any material or other matter, except:

(A) Fish, fish parts, chumming materials, or bait used or produced incidental to and while conducting a traditional fishing activity in the sanctuary;
(B) Water generated by routine vessel operations (e.g., deck wash down and graywater as defined in Section 312 of the Federal Water Pollution Control Act), excluding oily wastes from bilge pumping; or
(C) Cooling water from vessels or engine exhaust;

(ii) Discharging or depositing, from beyond the boundary of the sanctuary, any material or other matter that subsequently enters the sanctuary and injures a sanctuary resource or quality, except:

(A) Those listed in paragraph (a)(4)(i)(A) through (a)(4)(i)(C) of this section;
(B) Sewage incidental to vessel use and generated by a marine sanitation device approved in accordance with Section 312 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1322 et seq.;
(C) Those authorized under Monroe County land use permits; or
(D) Those authorized under State permits.

(5) Operation of vessels.

(i) Operating a vessel in such a manner as to strike or otherwise injure coral, seagrass, or any other immobile organism attached to the seabed, including, but not limited to, operating a vessel in such a manner as to cause prop-scarring.
(ii) Having a vessel anchored on living coral other than hard bottom in water depths less than 40 feet when visibility is such that the seabed can be seen.
(iii) Except in officially marked channels, operating a vessel at a speed greater than 4 knots or in manner which creates a wake:

(A) Within an area designated idle speed only/no wake;
(B) Within 100 yards of navigational aids indicating emergent or shallow reefs (international diamond warning symbol);
(C) Within 100 yards of the red and white “divers down” flag (or the blue and white “alpha” flag in Federal waters);
(D) Within 100 yards of residential shorelines; or
(E) Within 100 yards of stationary vessels.

(iv) Operating a vessel in such a manner as to injure or take wading, roosting, or nesting birds or marine mammals.

(v) Operating a vessel in a manner which endangers life, limb, marine resources, or property.

(vi) Having a marine sanitation device that is not secured in a manner that prevents discharges or deposits of treated and untreated sewage. Acceptable methods include, but are not limited to, all methods that have been approved by the U.S. Coast Guard (at 33 CFR section 159.7(b) and (c)).

(6) Conduct of diving/snorkeling without flag. Diving or snorkeling without flying in a conspicuous manner the red and white "divers down" flag (or the blue and white "alpha" flag in Federal waters).

(7) Release of exotic species. Introducing or releasing an exotic species of plant, invertebrate, fish, amphibian, or mammals into the sanctuary.

(8) Damage or removal of markers. Marking, defacing, or damaging in any way or displacing, removing, or tampering with any official signs, notices, or placards, whether temporary or permanent, or with any navigational aids, monuments, stakes, posts, mooring buoys, boundary buoys, trap buoys, or scientific equipment.

(9) Movement of, removal of, injury to, or possession of sanctuary historical resources. Moving, removing, injuring, or possessing, or attempting to move, remove, injure, or possess, a sanctuary historical resource.

(10) Take or possession of protected wildlife. Taking any marine mammal, sea turtle, or seabird in or above the sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 et seq., the Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 et seq., and the Migratory Bird Treaty Act, as amended, (MBTA) 16 U.S.C. 703 et seq.

(11) Possession or use of explosives or electrical charges. Possessing, or using explosives, except powerheads, or releasing electrical charges within the sanctuary.

(12) Harvest or possession of marine life species. Harvesting, possessing, or landing any marine life species, or part thereof, within the sanctuary, except in accordance with rules 68B–42 of the Florida Administrative Code, and such rules shall apply mutatis mutandis (with necessary editorial changes) to all Federal and State waters within the sanctuary.

(13) Interference with law enforcement. Interfering with, obstructing, delaying or preventing an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Acts or any regulation or permit issued under the Acts.

Zone specific sanctuary regulations prohibit certain activities by sanctuary area (15 CFR section 922.164). The prohibitions listed above and at 15 CFR section 922.164 do not apply to existing classes of DoD military activities conducted prior to the effective date of these regulations as identified in the EIS and Management Plan for the sanctuary (15 CFR section 922.163(d)(1)). New military activities in the sanctuary are allowed and may be exempted from the prohibitions summarized after consultation between the Office of National Marine Sanctuaries and the Navy pursuant to Section 304(d) of the National Marine Sanctuary Act. New activities are allowed and may be exempted from the prohibitions after consultation between the Office of National Marine Sanctuaries and the DoD pursuant to section 304(d) of the National Marine Sanctuaries Act. An activity is considered new when it is modified so it is likely to destroy, cause the loss of, or injure a sanctuary resource or quality in a manner significantly greater than was considered in a previous consultation under Section 304(d) of the National Marine

Sanctuary Act. All military activities shall be carried out in a manner that avoids to the maximum extent practical any adverse impacts on Sanctuary resources and qualities.

The Navy has played an important role in the lower Florida Keys since the early 1800s. Existing classes of DoD military activities conducted prior to the effective date of sanctuary regulations and identified in the original Final Management Plan/EIS for the Florida Keys National Sanctuary (National Marine Sanctuary Program, 1996) include:

- Research on radar and missile systems and test missile operations and evaluation
- Underwater explosives testing (including weapon systems testing and shock testing of ship hull designs) in "Site A"
- Mine countermeasure research
- Corrosion and coatings tests
- Acoustic research
- General air operations
- Air combat maneuvering
- Air-to-surface ordnance (inert ordnance and smoke markers) at Patricia Range
- Submarine activities (including firing and recovery of non-explosive torpedoes outside sanctuary)
- Sonobuoy testing and diver training (typically includes recovery of sonobuoys)
- Special warfare activities at Fleming Key
- Search and rescue
- General transits, anchoring in designated areas, moorings, and pierside maintenance at Naval Air Station Key West piers
- Harbor management
- Fuel deliveries

The Florida Keys National Marine Sanctuary Revised Management Plan was released in December 2007 (National Marine Sanctuary Program, 2007b). The 2007 revised management plan does not alter the exemptions of the original 1996 management plan/environmental impact statement (National Marine Sanctuary Program, 1996).

To ensure compliance with the Office of National Marine Sanctuaries Regulations, the Navy considered all proposed training and testing activities that could occur within the sanctuary. All activities would be conducted in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources. The Navy concluded that the proposed activities could fall into the following categories:

1. The following platforms, sources, or items that are part of Navy activities may be used within the Florida Keys National Marine Sanctuary because they are either exempted from the prohibitions as pre-existing activities (i.e., were conducted prior to the effective date of these regulations) or do not involve prohibited activities:

    - <u>Aircraft and Aerial Targets</u>

    Aircraft and aerial targets are expected to cause only a minor and temporary behavioral reaction due to noise for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, birds, or fishes that may be present in the area. However, in addition to behavioral reactions due to noise, there is potential for seabirds to be struck

by aircraft or aerial targets. As discussed in Section 2.3.3 (Standard Operating Procedures), the Navy implements standard operating procedures for aircraft safety that will reduce the potential for aircraft strikes. For a more detailed discussion of potential impacts to these resources from the use of aircraft and aerial targets, see the following sections:

Section 3.6.3.4.2 (Impacts from Aircraft and Aerial Targets) for fishes
Section 3.7.3.4.2 (Impacts from Aircraft and Aerial Targets) for marine mammals
Section 3.8.3.4.2 (Impacts from Aircraft and Aerial Targets) for reptiles
Section 3.9.3.4.2 (Impacts from Aircraft and Aerial Targets) for birds, which includes discussion of applicable seabirds

- Vessels and in-water devices (that do not make contact with seafloor)

Noise from vessels and in-water devices (excluding sonar and other active acoustic sources) is expected to cause only a minor and temporary behavioral reaction for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, seabirds, or fishes that may be present in the area. There is potential for marine mammals, sea turtles, seabirds, floating vegetation, invertebrates, and large slow-moving fish species, to be struck by or to collide with vessels. As discussed in Section 2.3.3 (Standard Operating Procedures), the Navy implements standard operating procedures for vessel and towed in-water device safety that will reduce the marine mammal strike potential. As discussed in Section 5.3.4 (Physical Disturbance and Strike Stressors), the Navy will implement mitigation to further reduce the potential for marine mammal strikes by vessels and in-water devices. For a more detailed discussion of potential impacts to these resources from the use of vessels and in-water devices, see the following sections:

Section 3.3.3.4.1 (Impacts from Vessels and In-Water Devices) for vegetation
Section 3.4.3.4.1 (Impacts from Vessels and In-Water Devices) for invertebrates
Section 3.6.3.4.1 (Impacts from Vessels and In-Water Devices) for fishes
Section 3.7.3.4.1 (Impacts from Vessels and In-Water Devices) for marine mammals
Section 3.8.3.4.1 (Impacts from Vessels and In-Water Devices) for reptiles
Section 3.9.3.4.1 (Impacts from Vessels and In-Water Devices) for birds

- Sonar and other active acoustic sources (including mine countermeasure research, acoustic research, submarine activities, sonobuoy testing, and special warfare activities)

Sonar and other active acoustic sources are expected to cause only a minor and temporary behavioral reaction for marine mammals, sea turtles, invertebrates (cephalopods and crustaceans), diving birds, or fish that may be present in the area. No effect is anticipated to corals. There is potential for marine mammals and sea turtles to be injured (permanent threshold shifts in hearing) from sonar and other active acoustic sources. As discussed in Section 5.3.2 (Acoustic Stressors), the Navy will implement mitigation to avoid impacts from sonar on marine mammals and sea turtles. For a more detailed discussion of potential impacts to these resources from the use of sonar and other active acoustic sources, see the following sections:

Section 3.4.3.1.2 (Impacts from Sonar and Other Transducers) for invertebrates

Section 3.6.3.1.2 (Impacts from Sonar and Other Transducers) for fishes
Section 3.7.3.1.2 (Impacts from Sonar and Other Transducers) for marine mammals
Section 3.8.3.1.2 (Impacts from Sonar and Other Transducers) for reptiles
Section 3.9.3.1.2 (Impacts from Sonar and Other Transducers) for birds

2. The following platforms, sources, or items that are part of Navy activities but were not conducted as of the effective date of the regulations may be used within the Florida Keys National Marine Sanctuary because they are not a prohibited activity under the sanctuary regulations:

   - Electromagnetic devices

   Electromagnetic devices are expected to cause only a minor and temporary behavioral reaction for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, birds, invertebrates (arthropods, such as lobsters), or fish that may be present in the area. For a more detailed discussion of potential impacts to these resources from the use of electromagnetic devices, see the following sections:

   Section 3.4.3.3.2 (Impacts from In-Water Electromagnetic Devices) and Section 3.4.3.3.3 (Impacts from In-Air Electromagnetic Devices) for invertebrates
   Section 3.6.3.3.2 (Impacts from In-Water Electromagnetic Devices) and Section 3.6.3.3.3 (Impacts from In-Air Electromagnetic Devices) for fishes
   Section 3.7.3.3.2 (Impacts from In-Water Electromagnetic Devices) and Section 3.7.3.3.3 (Impacts from In-Air Electromagnetic Devices) for marine mammals
   Section 3.8.3.3.2 (Impacts from In-Water Electromagnetic Devices) and Section 3.8.3.3.3 (Impacts from In-Air Electromagnetic Devices) for reptiles
   Section 3.9.3.3.2 (Impacts from In-Water Electromagnetic Devices) and Section 3.9.3.3.3 (Impacts from In-Air Electromagnetic Devices) for birds

3. The following platforms, sources, or items that are part of Navy activities, but are not planned to be used within the Florida Keys National Marine Sanctuary (including a 2.7 NM buffer) as part of the Proposed Action:

   - Sonar and other active acoustic sources (not included in activities listed in Category 1 above)
   - Explosives detonated in-air, at the surface, or underwater
   - Military expended materials
   - Seafloor devices

Activities the Navy proposes to conduct in the Florida Keys National Marine Sanctuary are within the classes of activities exempted from requiring a permit as of the effective date of the sanctuary regulations and are consistent with Navy activities and planning included in the most recent management plan. Navy activities have not been modified as to be more likely to destroy, cause the loss of, or injure a sanctuary resource or quality in a manner significantly greater than was previously considered when exempted or in the management plan. Further, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since activities conducted in and around the sanctuary could potentially result in harassment takes under the MMPA (defined as an injury to a sanctuary resource by the Office of

National Marine Sanctuaries) the Navy will consult under Section 304(d) of the National Marine Sanctuaries Act.

6.1.2.6.5 Flower Garden Banks National Marine Sanctuary

The Flower Garden Banks National Marine Sanctuary is located within the northwestern portion of the Gulf of Mexico Large Marine Ecosystem, nearly 96 NM offshore of Texas and Louisiana (Figure 6.1-5). The Flower Garden Banks National Marine Sanctuary was designated in 1992 to include East Flower Garden Bank and West Flower Garden Bank, and was expanded in 1996 to include Stetson Bank. Now encompassing an area of 42.34 NM^2, the sanctuary is designed to preserve the ecological and recreational value of three areas of coral reef that exist atop salt domes rising from the ocean floor. The East and West Flower Garden Banks coral reef ecosystem and associated biological communities support nearly 280 fish species, as well as loggerhead and hawksbill sea turtles, and a variety of shark, ray, and invertebrate species. Shark species found at the sanctuary include scalloped hammerhead sharks, sandbar sharks, tiger sharks, spinner sharks, and whale sharks (Office of National Marine Sanctuaries, 2008). Stetson Bank is primarily habitat for sponge communities, but is also scattered with coral colonies and provides habitat for diverse fish and plant assemblages (Moretzsohn et al., 2011). The sanctuary is used for recreational fishing and diving, which in some isolated cases has degraded the quality of reef habitat because of damage from anchoring (Office of National Marine Sanctuaries, 2008).

General regulations for Flower Garden Banks National Marine Sanctuary prohibit the following (15 CFR section 922.122(a)):

(1) Exploring for, developing, or producing oil, gas, or minerals except outside of all no-activity zones and provided all drilling cuttings and drilling fluids are shunted to the seabed through a downpipe that terminates an appropriate distance, but no more than ten meters, from the seabed.

(2) (i) Anchoring any vessel within the sanctuary.
(ii) Mooring any vessel within the sanctuary, except that vessels 100 feet (30.48 meters) or less in registered length may moor to a sanctuary mooring buoy.
(iii) Mooring a vessel in the sanctuary without clearly displaying the blue and white International Code flag "A" ("alpha" dive flag) or the red and white "sports diver" flag whenever a SCUBA diver from that vessel is in the water and removing the "alpha" dive flag or "sports diver" flag after all SCUBA divers exit the water and return back on board the vessel, consistent with U.S. Coast Guard guidelines relating to sports diving as contained within "Special Notice to Mariners" (00–208) for the Gulf of Mexico.

(3) (i) Discharging or depositing from within or into the sanctuary any material or other matter except:

(A) Fish, fish parts, chumming materials, or bait used in or resulting from fishing with conventional hook and line gear in the sanctuary, provided that such discharge or deposit occurs during the conduct of such fishing within the sanctuary;
(B) Clean effluent generated incidental to vessel use by an operable Type I or Type II marine sanitation device (U.S. Coast Guard classification) approved in accordance with Section 312 of the Federal Water Pollution Control Act, as

amended 33 U.S.C. 1322. Vessel operators must lock marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

(C) Clean vessel deck wash down, clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, or anchor wash;

(D) Engine exhaust;

(E) In areas of the sanctuary outside the no-activity zones, drilling cuttings and drilling fluids necessarily discharged incidental to the exploration for, development of, or production of oil or gas in those areas and in accordance with the shunting requirements of paragraph (a)(1) of this section unless such discharge injures a sanctuary resource or quality.

(ii) Discharging or depositing, from beyond the boundaries of the sanctuary, any material or other matter, except those listed in paragraphs (a)(3)(i)(A) through (D) of this section, that subsequently enters the sanctuary and injures a sanctuary resource or quality.

(4) Drilling into, dredging, or otherwise altering the seabed of the sanctuary (except as allowed under paragraph (c) of this section); or constructing, placing, or abandoning any structure, material, or other matter on the seabed of the sanctuary.

(5) Injuring or removing, or attempting to injure or remove, any coral or other bottom formation, coralline algae or other plant, marine invertebrate, brine-seep biota, or carbonate rock within the sanctuary.

(6) Taking any marine mammal or turtle within the sanctuary, except as permitted by regulations, as amended, promulgated under the Marine Mammal Protection Act, as amended, 16 U.S.C. 1361 et seq., and the Endangered Species Act, as amended, 16 U.S.C. 1531 et seq.

(7) Killing, injuring, attracting, touching, or disturbing a ray or whale shark in the sanctuary. Notwithstanding the above, the incidental and unintentional injury to a ray or whale shark as a result of fishing with conventional hook and line gear is exempted from this prohibition.

(8) Injuring, catching, harvesting, collecting, or feeding, or attempting to injure, catch, harvest, collect, or feed, any fish within the sanctuary by use of bottom longlines, traps, nets, bottom trawls, or any other gear, device, equipment, or means except by use of conventional hook and line gear.

(9) Possessing within the sanctuary (regardless of where collected, caught, harvested or removed), except for valid law enforcement purposes, any carbonate rock, coral or other bottom formation, coralline algae or other plant, marine invertebrate, brine-seep biota, or fish (except for fish caught by use of conventional hook and line gear).

(10) Possessing or using within the sanctuary, except possessing while passing without interruption through it or for valid law enforcement purposes, any fishing gear, device, equipment or means except conventional hook and line gear.

(11) Possessing, except for valid law enforcement purposes, or using explosives or releasing electrical charges within the sanctuary.

The prohibitions listed above do not apply to activities being carried out by the DoD as of the effective date of sanctuary designation. Pre-existing Navy activities will be carried out in a manner that minimizes any adverse impact on sanctuary resources and qualities. New activities may be carried out by the DoD if they do not have the potential for any significant adverse impacts on sanctuary resources or qualities.

New activities with the potential for significant adverse impacts on sanctuary resources or qualities may be exempted after consultation between the Office of National Marine Sanctuaries and the DoD. If it is determined that an activity may be carried out, such activity shall be carried out in a manner that minimizes any adverse impact on sanctuary resources and qualities (15 CFR section 922.122(e)(1)). Activities that were carried out prior to the effective date of the sanctuary designation and identified in the original Final EIS/Management Plan for the Flower Garden Banks National Sanctuary (National Marine Sanctuary Program, 1991) include:

- Carrier maneuvers
- Missile testing and development
- Rocket firing
- Air-to-air gunnery
- Air-to-surface gunnery
- Minesweeping operations
- Submarine operations
- Air combat maneuvers
- Aerobatic training
- Instrument training

The Flower Garden Banks National Marine Sanctuary Final Management Plan was released in April 2012 (Office of National Marine Sanctuaries, 2012), which included a summary of the revised environmental impact statement and contained the revised regulations as an appendix. The 2012 revised management plan does not alter the exemptions of the original 1991 management plan/environmental impact statement (National Marine Sanctuary Program, 1991).

The Navy considered all proposed training and testing activities that could occur within the sanctuary. All activities would be conducted in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources. The Navy concluded that the proposed activities could fall into the following two categories:

1. The following platforms, sources, or items that are part of Navy activities may be used within the Flower Garden Banks National Marine Sanctuary because they (1) do not have the potential for any significant adverse impacts on sanctuary resources or qualities, and (2) are carried out in a manner that minimizes any adverse impact on sanctuary resources and qualities:

    - Aircraft and Aerial Targets

    Aircraft and aerial targets are expected to cause only a minor and temporary behavioral reaction due to noise for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, birds, or fishes that may be present in the area. However, in addition to behavioral reactions due to noise, there is potential for seabirds to be struck by aircraft or aerial targets. As discussed in Section 2.3.3 (Standard Operating Procedures), the Navy implements standard operating procedures for aircraft safety that will reduce the potential for aircraft strikes. For a more detailed discussion of potential impacts to these resources from the use of aircraft and aerial targets, see the following sections:

    Section 3.6.3.4.2 (Impacts from Aircraft and Aerial Targets) for fishes
    Section 3.7.3.4.2 (Impacts from Aircraft and Aerial Targets) for marine mammals

Section 3.8.3.4.2 (Impacts from Aircraft and Aerial Targets) for reptiles
Section 3.9.3.4.2 (Impacts from Aircraft and Aerial Targets) for birds, which includes discussion of applicable seabirds

- Vessels and in-water devices

Noise from vessels and in-water devices (excluding sonar and other active acoustic sources) is expected to cause only a minor and temporary behavioral reaction for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, seabirds, or fishes that may be present in the area. There is potential for marine mammals, sea turtles, seabirds, floating vegetation, invertebrates, and large slow-moving fish species, to be struck by or to collide with vessels. As discussed in Section 2.3.3 (Standard Operating Procedures), the Navy implements standard operating procedures for vessel and towed in-water device safety that will reduce the marine mammal strike potential. As discussed in Section 5.3.4 (Physical Disturbance and Strike Stressors), the Navy will implement mitigation to further reduce the potential for marine mammal strikes by vessels and in-water devices. For a more detailed discussion of potential impacts to these resources from the use of vessels and in-water devices, see the following sections:

Section 3.3.3.4.1 (Impacts from Vessels and In-Water Devices) for vegetation
Section 3.4.3.4.1 (Impacts from Vessels and In-Water Devices) for invertebrates
Section 3.6.3.4.1 (Impacts from Vessels and In-Water Devices) for fishes
Section 3.7.3.4.1 (Impacts from Vessels and In-Water Devices) for marine mammals
Section 3.8.3.4.1 (Impacts from Vessels and In-Water Devices) for reptiles
Section 3.9.3.4.1 (Impacts from Vessels and In-Water Devices) for birds

- Sonar and other non-impulsive acoustic sources

Sonar and other active acoustic sources are expected to cause only a minor and temporary behavioral reaction for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, invertebrates (cephalopods and crustaceans), diving birds, or fishes that may be present in the area. No effect is anticipated to corals. As discussed in Section 5.3.2 (Acoustic Stressors), the Navy will implement mitigation to avoid impacts from sonar on marine mammals and sea turtles. For a more detailed discussion of potential impacts to these resources from the use of sonar and other active acoustic sources, see the following sections:

Section 3.4.3.1.2 (Impacts from Sonar and Other Transducers) for invertebrates
Section 3.6.3.1.2 (Impacts from Sonar and Other Transducers) for fishes
Section 3.7.3.1.2 (Impacts from Sonar and Other Transducers) for marine mammals
Section 3.8.3.1.2 (Impacts from Sonar and Other Transducers) for reptiles
Section 3.9.3.1.2 (Impacts from Sonar and Other Transducers) for birds

- Electromagnetic devices

Electromagnetic devices are expected to cause only a minor and temporary behavioral reaction for marine mammals (reactions do not rise to the level of take under the MMPA), sea turtles, birds, invertebrates (arthropods, such as lobsters), or fishes that may be

present in the area. For a more detailed discussion of potential impacts to these resources from the use of electromagnetic devices, see the following sections:

Section 3.4.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.4.3.3.2 (Impacts from In-Air Electromagnetic Devices) for invertebrates
Section 3.6.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.6.3.3.2 (Impacts from In-Air Electromagnetic Devices) for fishes
Section 3.7.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.7.3.3.2 (Impacts from In-Air Electromagnetic Devices) for marine mammals
Section 3.8.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.8.3.3.2 (Impacts from In-Air Electromagnetic Devices) for reptiles
Section 3.9.3.3.1 (Impacts from In-Water Electromagnetic Devices) and Section 3.9.3.3.2 (Impacts from In-Air Electromagnetic Devices) for birds

2. The following platforms, sources, or items that are part of Navy activities, but that are not planned to be used within the Flower Garden Banks National Marine Sanctuary (including a 2.7 NM buffer) as part of the Proposed Action:

Explosives detonated in-air, at the surface or underwater
Military expended materials
Seafloor devices

Activities the Navy proposes to conduct in Flower Garden Banks National Marine Sanctuary are consistent with the activities exempted when the sanctuary was designated and are consistent with Navy activities and planning during the development of the most recent management plan. The Navy does not propose to conduct any new activities that could have significant adverse impacts on sanctuary resources or qualities. Further, the Navy does not propose to increase the level of existing activities within the sanctuary from what was previously considered at the time of sanctuary designation. Since none of the Navy's training and testing activities proposed to be conducted within or in the vicinity of Flower Garden Banks National Marine Sanctuary are likely to injure sanctuary resources, the Navy has determined that it is unnecessary to engage in 304(d) consultation under the National Marine Sanctuaries Act.

6.1.3 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 (16 United U.S.C. section 1801–1891[d]), as amended by the 1996 Sustainable Fisheries Act (Public Law 104–297), and the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (Public Law 109-479), governs marine fisheries management in U.S. waters in order to promote long-term economic and biological sustainability for fisheries up to 200 NM from shore. Its main objectives are to prevent overfishing, rebuild overfished stocks, increase long-term economic and social benefits, and ensure a safe and sustainable supply of seafood (National Oceanic and Atmospheric Administration Fisheries, 2017). The Sustainable Fisheries Act of 1996 amended the law to establish procedures that identify, conserve, and enhance Essential Fish Habitat for species regulated under a Federal fisheries management plan. Consultation with the National Oceanic and Atmospheric Administration's National Marine Fisheries Service on all actions or proposed actions that may adversely affect Essential Fish Habitat is required for Federal action agencies under Section 305(b)(2) of the Magnuson-Stevens Act. In accordance with the Magnuson-Stevens Fishery Conservation and Management Act, the Navy is preparing an Essential Fish Habitat Assessment and consultation will be completed accordingly.

6.2 Relationship Between Short-Term Use of the Environment and Maintenance and Enhancement of Long-Term Productivity

In accordance with the Council on Environmental Quality regulations (40 CFR Part 1502), this EIS/OEIS analyzes the relationship between the short-term impacts on the environment and the effects those impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. Impacts that narrow the range of beneficial uses of the environment are of particular concern. This means that choosing one option may reduce future flexibility in pursuing other options, or that committing a resource to a certain use may often eliminate the possibility for other uses of that resource. The Navy, in partnership with NMFS, is committed to furthering understanding of marine resources and to developing ways to lessen or eliminate the impacts that Navy training and testing activities may have on these resources. For example, the Navy and NMFS collaborate on the Integrated Comprehensive Monitoring Program for marine species to assess the impacts of training activities on marine species and investigate population-level trends in marine species distribution, abundance, and habitat use in various range complexes and geographic locations where Navy training occurs.

The Proposed Action could result in both short- and long-term environmental impacts. However, these are not 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 general welfare of the public. The Navy is committed to sustainable military range management, including co-use of the Study Area with the general public and commercial and recreational interests. This commitment to co-use of the Study Area would maintain long-term accessibility of the AFTT EIS/OEIS training and testing areas. Sustainable range management practices are specified in range complex management plans under the Navy's Range Sustainment Program. Among other benefits, these practices protect and conserve natural and cultural resources and preserve access to training areas for current and future training requirements while addressing potential encroachments that threaten to impact range and training area capabilities.

6.3 Irreversible or Irretrievable Commitment of Resources

NEPA requires that environmental analyses include identification of "any irreversible and irretrievable commitments of resources which would be involved in the Proposed Action should it be implemented" (42 U.S.C. section 4332). Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the impacts that the uses of these resources have on future generations. Irreversible impacts primarily result from the use or destruction of a specific resource (e.g., energy or minerals) that cannot be replaced within a reasonable time. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., the disturbance of a cultural site).

For the Proposed Action, most resource commitments would be neither irreversible nor irretrievable. Most impacts would be short term and temporary, or long lasting but within historical or desired conditions. Because there would be no building or facility construction, the consumption of material typically associated with such construction (e.g., concrete, metal, sand, fuel) would not occur. Energy typically associated with construction activities would not be expended and irretrievably lost.

Implementation of the Proposed Action would require fuels used by aircraft and vessels. Since fixed- and rotary-wing aircraft and ship activities may increase or decrease relative to the baseline, total fuel use would fluctuate depending on the year under the Proposed Action. Therefore, total fuel consumption would fluctuate depending on the year under the Proposed Action (Section 6.4, Energy Requirements

and Conservation Potential of Alternatives and Efficiency Initiatives), and this nonrenewable resource would be considered irretrievably lost (see Chapter 4, Cumulative Impacts, and the following discussion on the Navy's Climate Change Roadmap).

6.4 Energy Requirements and Conservation Potential of Alternatives and Efficiency Initiatives

The DoD consumed approximately 1.3 percent of the total U.S. oil and petroleum consumption in Fiscal Year 2013. It is the largest single user in the nation (Burke, 2014). The Navy consumes approximately 26 percent of the total DoD share (U.S. Department of Defense, 2016). in Fiscal Year 2013, the Navy consumed almost 90 million barrels of liquid fuel (Burke, 2014). In 2016 the DoD published a new Operational Energy Strategy to update the 2011 strategy and transform the way energy is consumed in military operations; the strategy sets the overall direction for operational energy security (U.S. Department of Defense, 2016). The 2016 strategy shifts focus towards three objectives: 1) increasing future warfighting capability by including energy throughout future force development; 2) identifying and reducing logistic and operational risks from operational energy vulnerabilities; 3) and enhancing the force's mission effectiveness with updated equipment and improvements in training, exercises and operations (U.S. Department of Defense, 2016).

Pursuant to the operational strategy report in 2011, the DoD published an implementation plan to integrate operational energy considerations and transformation into existing programs, processes, and institutions (U.S. Department of Defense, 2012). These documents will provide guidance to the DoD in how to better use energy resources and transform the way we power current and future forces.

Training and testing activities within the Study Area would result in an increase in energy demand over the No Action Alternative. The increased energy demand would arise from an increase in fuel consumption, mainly from aircraft and vessels participating in training and testing. Aircraft fuel consumption is estimated to remain fairly consistent across both Action Alternatives. Vessel fuel consumption is estimated to increase by approximately 35 percent per year under Alternative 2, compared to Alternative 1. Conservative assumptions were made in developing the estimates, and therefore the actual amount of fuel consumed during training and testing events may be less than estimated. The alternatives could result in a net cumulative reduction in the global energy (fuel) supply.

Energy requirements would be subject to any established energy conservation practices. The use of energy sources has been minimized wherever possible without compromising safety, training, or testing activities. No additional conservation measures related to direct energy consumption by the proposed activities are identified. The Navy's energy vision given in the Operational Energy Strategy report (U.S. Department of Defense, 2016) is consistent with energy conservation practices and states that the Navy values energy as a strategic resource, understands how energy security is fundamental to executing our mission afloat and ashore, and is resilient to any potential energy future.

The Navy is committed to improving energy security and environmental stewardship by reducing its reliance on fossil fuels. The Navy is actively developing and participating in energy, environmental, and climate change initiatives that will increase use of alternative energy and help conserve the world's resources for future generations. The Navy Climate Change Roadmap identifies actions the Environmental Readiness Division is taking to implement Executive Order 13653, *Preparing the United States for the Impacts of Climate Change*. The Navy's Task Force Energy is responding to the Secretary of the Navy's Energy Goals through energy security initiatives that reduce the Navy's carbon footprint.

Two Navy programs—the Incentivized Energy Conservation Program and the Naval Sea Systems Command's Fleet Readiness, Research and Development Program—are helping the fleet conserve fuel via improved operating procedures and long-term initiatives. The Incentivized Energy Conservation Program encourages the operation of ships in the most efficient manner while conducting their mission and supporting the Secretary of the Navy's efforts to reduce total energy consumption on naval ships. The Naval Sea Systems Command's Fleet Readiness, Research, and Development Program includes the High-Efficiency Heating, Ventilating, and Air Conditioning and the Hybrid Electric Drive for DDG-51 class ships, which are improvements to existing shipboard technologies that will both help with fleet readiness and decrease the ships' energy consumption and greenhouse gas emissions. These initiatives are expected to greatly reduce the consumption of fossil fuels (Section 3.1, Air Quality). Furthermore, to offset the impact of its expected near-term increased fuel demands and achieve its goals to reduce fossil fuel consumption and greenhouse gas emissions, the Navy has launched the first vessels of its "Great Green Fleet in San Diego (Olson, 2016). The Great Green Fleet was a year-long, Department of the Navy initiative that demonstrated the sea service's efforts to transform its energy use (U.S. Department of the Navy, 2016). The Great Green Fleet's centerpiece was a Carrier Strike Group that deployed on alternative fuels including nuclear power for the carrier, and a blend of advanced biofuel made from beef fat and traditional petroleum for its escort ships (U.S. Department of the Navy, 2016). Throughout 2016, other platforms included ships, aircraft, amphibious and expeditionary forces, and shore installations from the Department of the Navy that participated in the Great Green Fleet by using energy efficient systems, operational procedures, and/or alternative fuel during the course of planned mission functions throughout the world (U.S. Department of the Navy, 2016).

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