

APPENDIX C

U.S. COAST GUARD SUPPORTING INFORMATION

This page intentionally left blank.

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

TABLE OF CONTENTS

C	U.S. COAST GUARD SUPPORTING INFORMATION	C-1
C.1	Introduction	C-1
C.1.1	Summary of Coast Guard History	C-1
C.1.2	Coast Guard Missions	C-3
C.1.2.1	Coast Guard Defense Mission	C-4
C.1.3	Platforms, Weapons, Electronic Warfare, and Countermeasures	C-7
C.1.3.1	Cutters	C-8
C.1.3.2	Boats	C-8
C.1.3.3	Aircraft	C-10
C.1.3.4	Pyrotechnics, Electronic Warfare, and Countermeasures	C-11
C.1.4	Coast Guard Activities Analyzed in this Document	C-12
C.1.5	Coast Guard and the Protection of Marine Resources	C-13

List of Figures

Figure C.1-1:	Coast Guard Station Locations within the Study Area	C-2
---------------	---	-----

List of Tables

Table C.1-1:	Coast Guard Mission Training Overlap with Defense Training	C-5
Table C.1-2:	Navy–Coast Guard Comparison	C-6
Table C.1-3:	List of Coast Guard Surface Platforms	C-8
Table C.1-4:	Aircraft	C-11
Table C.1-5:	Pyrotechnics	C-11
Table C.1-6:	Electronic Warfare Systems	C-11
Table C.1-7:	Decoys and Countermeasures	C-11

This page intentionally left blank.

C U.S. COAST GUARD SUPPORTING INFORMATION

C.1 INTRODUCTION

This section provides more information about the United States (U.S.) Coast Guard (Coast Guard), its missions and assets, and the training and testing performed in support of these missions. This section will also explain how many Coast Guard missions are beneficial to the environment. Due to differing missions from the U.S. Navy (Navy), many of the of the Proposed Actions explained in [Chapter 2](#) (Description of Proposed Action and Alternatives) are not performed by the Coast Guard. The use of mid- or low-frequency sonar, missiles, and explosives are examples of actions that are not a part of the Coast Guard's mission requirements. Other training done by the Coast Guard which is as part of the Coast Guard's national defense training and testing mission, are also done in support of many of the other Coast Guard's statutory missions. For example, Coast Guard Search and Rescue training and operations not just related to our defense mission. The application of the Search and Rescue training in the real world may also be used to rescue boaters, perform law enforcement, perform drug or migrant interdiction, etc. Coast Guard locations within the Study Area are shown in Figure C.1-1.

The Coast Guard's purpose of and need for the Proposed Action, discussed in [Chapter 2](#) (Description of Proposed Action and Alternatives), is to ensure Coast Guard personnel can qualify and train jointly with, and independently of, the Navy and other services in the effective and safe operational use of Coast Guard vessels, aircraft, and weapons under realistic conditions. The Coast Guard has broad, multifaceted, jurisdictional authority for management of activities over all waters subject to jurisdiction of the United States. The Coast Guard's law enforcement and national defense mission authority is based in 14 United States Code (U.S.C.) § 102, requiring the Coast Guard to "maintain a state of readiness to function as a specialized service in the Navy in time of war, including the fulfillment of Maritime Defense Zone command responsibilities." The Coast Guard successfully achieves its missions in part by conducting training and testing within the Study Area of this Supplemental Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) to develop, sharpen, and maintain tactics, coordination, and personnel readiness. As a multi-mission agency, all training the Coast Guard does in support of national defense also supports many of the Coast Guard's other statutory missions and vice versa.

C.1.1 SUMMARY OF COAST GUARD HISTORY

The Coast Guard was established in 1790 by Secretary of the Treasury Alexander Hamilton as the Revenue Marine Service. It later became the Revenue Cutter Service and, in 1915, was combined with the U.S. Lifesaving Service (formed 1878) to become the Coast Guard. Until Congress established the Navy Department in 1798 it served as the nation's only armed force afloat, making it the longest continuous sea service in the United States. It was under the (peacetime) jurisdiction of the Treasury Department until 1967, when it was transferred to the Department of Transportation. In 2003, the Coast Guard was placed under the jurisdiction of the newly created Department of Homeland Security.

The Coast Guard is a military service within the U.S. armed forces that is charged with the enforcement of maritime laws. It consists of approximately 44,000 officers and enlisted personnel, in addition to 7,000 civilians. The Coast Guard enforces all applicable federal laws on the high seas and waters within the jurisdiction of the United States. It administers laws and promulgates and enforces regulations for the promotion of safety of life and property along the entire U.S. coast. In time of war, it functions as part of the Navy.

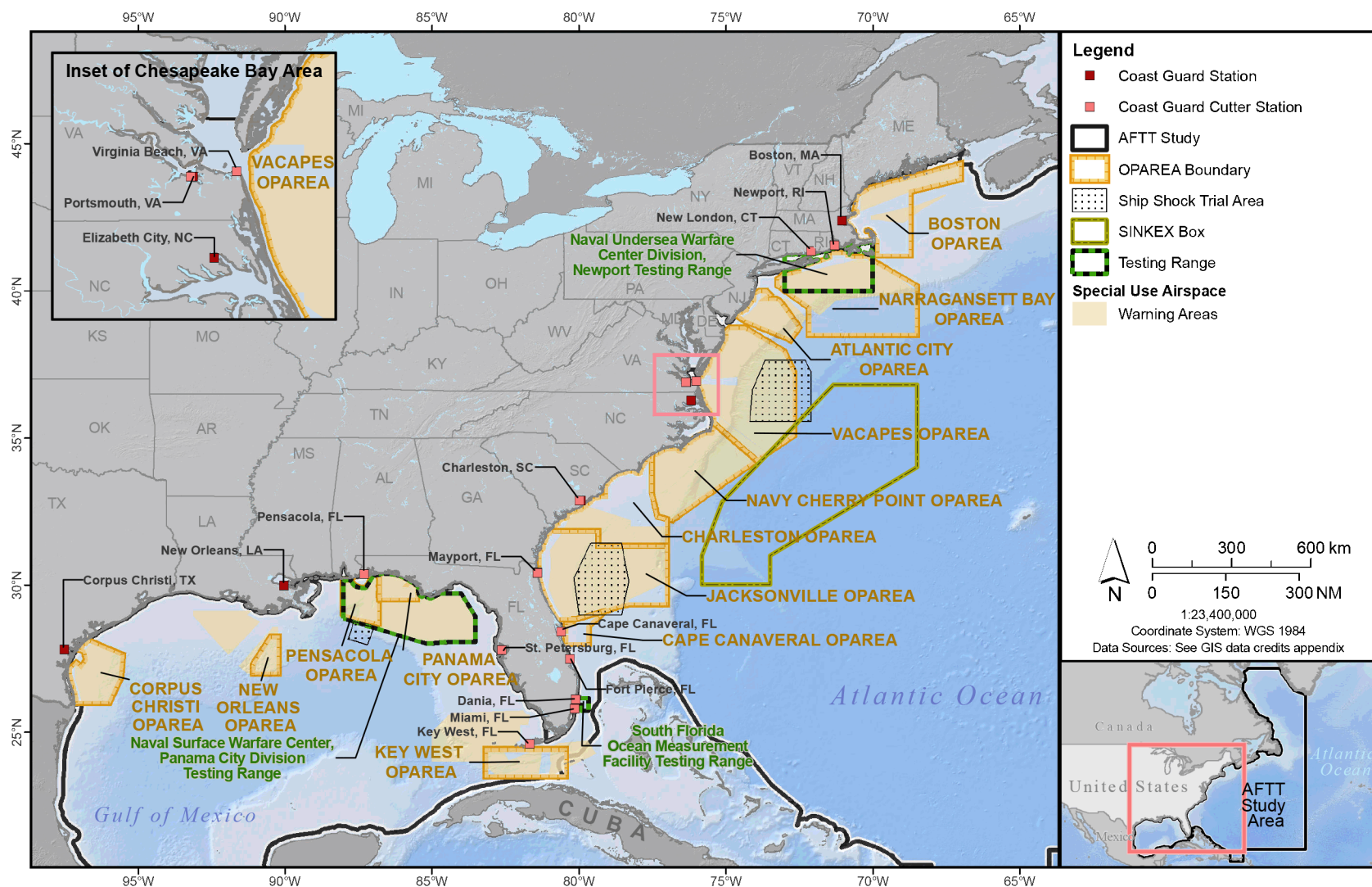


Figure C.1-1: Representative Coast Guard Locations within the Study Area

C.1.2 COAST GUARD MISSIONS

The Coast Guard manages six major operational mission programs: maritime law enforcement, maritime response, maritime prevention, marine transportation system management, maritime security operations, and defense operations. Within these 6 mission programs are 11 statutory missions. These statutory missions are:

1. **Marine Environmental Protection**—The Coast Guard regulates and inspects vessels and maritime facilities to reduce the risk of marine pollution incidents. The Marine Environmental Protection mission includes the planning, preparations, and operations to prevent, enforce, investigate, respond to, and mitigate the threat, frequency, and consequences of oil discharges and hazardous substance releases in U.S. waters. When spills occur, the Coast Guard leads response efforts to contain the damage.
2. **Living Marine Resources**—U.S. fisheries support over \$240 billion in economic activity annually, but nearly 20% are considered overfished. The Coast Guard is the lead federal agency for at-sea enforcement of U.S. fisheries laws. The Coast Guard’s legal authority to enforce fisheries laws flows from the Magnuson-Stevens Fisheries Conservation and Management Act of 1976. The Coast Guard enforces environmental laws that protect commercial and endangered species.
3. **Ports and Waterway Security**—The Coast Guard is responsible for the security of 361 U.S. ports and 95,000 statute miles (150,000 kilometers) of waterways. The local Coast Guard commander has legal authority over shipping in American waters as Captain of the Port. The Captain of the Port can declare inland waters in his jurisdiction to be “special security zones,” wherein commercial vessels must report their movements to the nearest Coast Guard station. The Coast Guard can direct ports closed or opened, and the Coast Guard’s vessel traffic managers direct ships on critical waterways.
4. **Other Law Enforcement**—The Coast Guard patrols America’s coasts and international waters using cutters, aircraft, and intelligence to detect, intercept, and disrupt dangerous and illegal activities such as drug smuggling and human trafficking.
5. **Drug Interdiction**—The Coast Guard is the lead agency in maritime drug interdiction, which is a shared legal responsibility with U.S. Customs and Border Protection. Coast Guard units coordinate their Caribbean Sea activities with the Navy.
6. **Migrant Interdiction**—The Coast Guard, especially its Florida-based Seventh District, enforces U.S. immigration law at sea. Many of these missions are also search-and-rescue missions since many migrants take to sea in unseaworthy vessels.
7. **Aids to Navigation**—Recreational and commercial boaters can safely navigate America’s waterways due to the Coast Guard’s managed and maintained network of buoys, lighthouses, and electronic aids.
8. **Ice Operations**—The effects of climate change have increased the Arctic’s scientific, economic, and national security importance. The Coast Guard has the only American-owned heavy icebreaker capable of supporting Arctic and Antarctic operations.
9. **Marine Safety**—Coast Guard personnel inspect commercial vessels, respond to pollution, investigate marine casualties and merchant mariners, manage waterways, and license merchant mariners.

10. **Search and Rescue**—Search and Rescue is one of the Coast Guard’s oldest missions. The National Search and Rescue Plan designates the Coast Guard as the federal agency responsible for maritime Search and Rescue operations in U.S. and international waters.
11. **Defense Readiness**—During wartime, by order of the President, the Coast Guard can fall under the operational orders of the Navy. Discussion of this mission is expanded below.

C.1.2.1 Coast Guard Defense Mission

Under Title 14 U.S.C. § 1, the Coast Guard is “at all times an armed force of the United States.” As part of the Joint Forces, the Coast Guard maintains its readiness to carry out military operations in support of the policies and objectives of the U.S. government. As an armed force, the Coast Guard trains and operates in the joint military arena at any time and functioning as a specialized service under the Navy in time of war or when directed by the President. Coast Guard service members are trained to respond immediately to support military operations and national security. As a member of the armed forces (10 U.S.C. § 101), the U.S. Coast Guard is purposefully embedded into different **national strategic level doctrines** that are used to guide the employment of the armed forces. These doctrinal pieces are:

1. **National Strategic Direction**—The National Strategic Direction is governed by the Constitution, federal laws, government policies, internationally recognized laws, and national interest (as represented by national security policies). This directional doctrine provides policy and planning to support the national strategic direction.
2. **National Strategic Strategy**—Issued by the President, the National Strategic Strategy provides a broad strategic context for employing military capabilities in concert with other instruments of national power.
3. **National Defense Strategy**—Issued by the Secretary of Defense, the National Defense Strategy outlines the Department of Defense’s (DoD) approach to implementing the President’s National Strategic Strategy.
4. **National Military Strategy**—Issued by the Chairman of the Joint Chiefs of Staff, the National Military Strategy supports the aims of the National Strategic Strategy and implements the National Defense Strategy. It describes the armed forces’ plan to achieve military objectives in the near term and provides a vision for maintaining a force capable of meeting future challenges.

Federal law created the framework for the relationship between the Navy and the Coast Guard.¹ To meet these statutory requirements, the Coast Guard must train in a realistic manner to ensure when they perform these similar activities in a “real-world” environment, they are doing so safely and effectively.

The Coast Guard has four major national defense missions:

- Maritime intercept operations
- Deployed port operations/security and defense
- Peacetime engagement
- Environmental defense operations (which includes oil and hazardous substance response)

¹ 10 U.S.C. § 101; 14 U.S.C. § 2 (7); 22 U.S.C.; 50 U.S.C.

These missions are essential military tasks assigned to the Coast Guard as a component of joint and combined forces in peacetime, crisis, and war. To effectively carry out these missions, the Coast Guard's air and surface units train using realistic scenarios, to include training with the Navy and the other armed services. Like the other services, the Coast Guard seeks to train in a realistic manner so that when the real-world missions arise, Coast Guard personnel are prepared to respond.

The Defense Readiness mission supports the National Military Strategy and DoD operations by ensuring Coast Guard assets are capable and equipped to deploy and conduct joint operations that support the most critical needs of combatant commanders in the major national-defense missions listed below. Every Coast Guard unit is trained to support all 11 statutory missions and, thus, trained to meet all mission requirements, which includes their defense mission requirements. Since all Coast Guard's missions generally entail the deployment of cutters or boats and either fixed-wing or rotary aircraft, the Coast Guard training requirements for one mission generally overlaps with the training requirements of other missions. Thus, when the Coast Guard is training for its defense mission, the same skill sets are utilized for its other statutory missions.

Table C.1-1 provides examples of how the training skills that assist the Coast Guard with conducting its Defense Readiness Mission are also used to assist the Guard in carrying out its other missions.

Table C.1-1: Coast Guard Mission Training Overlap with Defense Training

<i>Skill/Training Element</i>	<i>Defense Mission</i>	<i>Other Coast Guard Missions</i>
Stopping, boarding, searching, diverting, or redirecting vessel traffic	Maritime Interception/Interdiction	Drug interdiction; law enforcement; living marine resource protection; safety zone establishment; migrant interdiction
Flying helicopters, hovering, swimming in difficult seas	Search and Rescue. Recovering downed pilots, response to natural disasters	Search and rescue; law enforcement; drug interdiction; migrant interdiction; peacetime operations
Clearing battle space of oil and hazardous substances	Environmental Defense Operations. Clearing the sea of obstacles that may adversely affect other armed forces. It could include deployment of oil booms and establishing the National Command Center. Provides for efficient, coordinated, and effective response to discharges of oil and releases of hazardous substances, pollutants, and contaminants in accordance with the authorities of federal laws.	Marine safety; living marine resource protection; safety zone establishment; migrant interdiction; peacetime operations; aids to navigation. As the Vice-Chair of the multi-agency National Response Team and a leader of the National Contingency Plan, the Coast Guard (working with many other agencies to include the Navy) utilize many of the same tactics used while training for the defense mission to respond to oil spills in U.S. waters.
Ensuring port and harbor areas are free of hostile threats, terrorist actions, and safety deficiencies that would be a threat to the deployment of military resources	Port Operations, Security, and Defense	Law enforcement; drug interdiction; and safety zone establishment; port security; waterways management
Conducting humanitarian assistance (providing aid by air or by sea), professional exchanges, combined operations, training, exercises, and	Theater Security Cooperation	Responding to natural disasters; search and rescue; marine safety; waterways management; marine environmental protection; peacetime engagement

Table C.1-1: Coast Guard Mission Training Overlap with Defense Training (continued)

<i>Skill/Training Element</i>	<i>Defense Mission</i>	<i>Other Coast Guard Missions</i>
other diplomatic activities to foster international cooperation		
Protecting Offshore Strategic Assets by establishing and enforcing security zones	Maritime Interception Operations	Law enforcement; other law enforcement; marine safety; marine environmental protection; living marine resources
Conducting national air defense activities with helicopters	Rotary Wing Air Intercept, Port Security, Maritime Interception Operations	Surface and air training in support of the defense mission can be used in all Coast Guard statutory missions
Combatting terrorism—Providing special capabilities, such as training host nation forces and building the capacity of foreign maritime security forces that serve as a force multiplier to Department of Defense forces	Peacetime Engagement, Port Operations/Security and Defense; Coast Guard has relationships with many smaller navies/coast guards around the world and trains with these forces regularly	Surface and air training in support of the defense mission can be used in all Coast Guard statutory missions
Supporting Department of Defense response to maritime security threats, including terrorism, piracy, and other criminal or unlawful acts	Maritime Operational Threat Response/Defense	Surface and air training in support of the defense mission can be used in all Coast Guard statutory missions
Conducting offensive and defensive cyberspace operations to achieve military objectives and preserve system availability, integrity, and confidentiality	Military Cyberspace Operations	Cyberspace units in boat and cutter forces will most likely support maritime interception/interdiction operations, military environment response, and port operations, security, and defense

There are some Coast Guard similarities and differences with the Navy that are worth noting. These differences and similarities were considered in the analysis within the body of this Supplemental EIS/OEIS. Table C.1-2 highlights some of these contrasts/similarities.

Table C.1-2: Navy–Coast Guard Comparison

<i>Similarities</i>	<i>Differences</i>
Both Navy and Coast Guard are armed services of the United States.	Coast Guard reports to the Department of Homeland Security. Navy reports to the Secretary of Defense. Navy has approximately 320,000 personnel while the Coast Guard has approximately 40,000. Deployments by the Navy are normally measured in terms of months, whereas the Coast Guard generally measures time away from port in terms of days or weeks.
When joint or combined training occurs, Coast Guard generally falls under the Navy for purposes of the exercise. Coast Guard will follow the Navy’s exercise operations order which includes environmental mitigation.	Coast Guard training largely occurs at the unit level and at less intensity than the Navy.
Coast Guard trains using Navy procedures. Coast Guard borrows heavily from Shipboard Manuals published by Navy for many common standard operating procedures pertaining to watch stations,	Differences are minimal. Coast Guard draws its surface training requirements from the Navy’s Surface Force Training Manual. Coast Guard requires many of the same skills as Navy personnel.

Table C.1-2: Navy–Coast Guard Comparison (continued)

<i>Similarities</i>	<i>Differences</i>
and Navy-Type, Navy-Owned equipment such as Weapons Systems. Per Title 14 U.S.C., generally, Coast Guard weapons systems are Navy systems.	
Coast Guard systems and platforms are Navy systems and platforms.	Coast Guard has similar (or identical) weapons and communications systems to Navy assets, but their weapons and systems are significantly less impactful in terms of types and capabilities than the Navy. For example, the Coast Guard does not have mid-frequency or low-frequency sonar on any of its cutters or boats. Coast Guard explosive rounds are of much less weight and are less impactful.
Both Navy and Coast Guard have a global mission and reach.	Due to the size of Coast Guard cutters (and boats), Coast Guard training generally occurs close to the vessel homeport or close to shore, on established Navy ranges, or quite frequently, Coast Guard training commonly occurs enroute to a scheduled patrol/mission.
Both Navy and Coast Guard use Navy at-sea training ranges.	Navy maintains and schedules all usage of their at-sea training ranges. Coast Guard does not have their own at-sea ranges and regularly schedules usage of the Navy's at-sea ranges. Coast Guard meets with Navy annually to discuss necessary training in support of the Navy and the common defense mission. Access to Navy ranges and the procedures required on the range are also discussed.
Both Navy and Coast Guard may participate in a Sinking Exercise.	Sinking Exercise (SINKEX) is managed under the Navy's SINKEX program. There is a real-world scenario where the Coast Guard will sink a distressed vessel that is a hazard to navigation.
Both Navy and Coast Guard may participate in a law enforcement action.	The Navy cannot make arrests, but the Coast Guard can. Coast Guard crews with officers or petty officers assigned has law-enforcement authority (14 U.S.C. § 89) and can conduct armed boardings in support of defense or its law enforcement operation.
Both Navy and Coast Guard participate in dummy/inert mine shape placement.	Coast Guard does not perform a mine warfare mission but will at times assist the Navy with the placement of mine shapes for Navy training purposes. The Coast Guard's Aids to Navigation platforms may utilize their specialized equipment to place targets in the water.
Both Navy and Coast Guard work together as mission requirements dictate.	There are instances when the Navy will depend on the Coast Guard's unique capabilities not possessed by the Navy. For example, as part of Port and Waterway Security, the Coast Guard may escort Navy submarines in and out of harbors.

Notes: § = Section; SINKEX = Sinking Exercise; U.S.C. = United States Code

C.1.3 PLATFORMS, WEAPONS, ELECTRONIC WARFARE, AND COUNTERMEASURES

The platforms, weapons, electronic warfare, and countermeasures discussed below all exist within the Study Area and are utilized by the Coast Guard in the training and testing addressed in this

Supplemental EIS/OEIS. Since the Coast Guard trains the way it will operate, and many of its missions are emergent (akin to a firefighter responding immediately to a fire), often there is no time to consult with regulators or do environmental studies before responding to an emergent issue that may lead to the loss of life or property. The impacts to the environment caused by Coast Guard defense training and testing activities discussed in the body of this Supplemental EIS/OEIS are like those that would be caused by Coast Guard operations associated with responding to various emergent non-defense related issues such as a Search and Rescue for a fishing boat in distress, or a boarding done for law enforcement.

C.1.3.1 Cutters

Whereas the Navy has ships (that are much larger than the Coast Guard Cutters), carriers, fixed-wing aircraft, including fighter aircraft, rotary aircraft, and submarines, the Coast Guard deploys cutters, boats, fixed-wing, and rotary aircraft. A Coast Guard Cutter is any vessel which has a permanently assigned crew and accommodations for the extended support of that crew and includes all vessels of 65 feet (20 meters [m]) or more in length.

The Coast Guard currently operates approximately 240 cutters. Larger cutters are controlled by Area Commands—Atlantic Area (located in Portsmouth, Virginia) or Pacific Area (located in Alameda, California). Smaller cutters come under control of district commands. There are five districts within the Atlantic Area and four districts in the Pacific Area. Cutters usually carry a motor surf boat and/or a rigid-hulled inflatable boat. Polar-class icebreakers carry an Arctic survey boat and landing craft.

The endurance of a cutter to operate without provisioning is highly dependent upon several variables that change based on mission conditions. Coast Guard cutters are not designed to a specific endurance standard but rather to a set of performance requirements. The performance requirements are utilized to determine such parameters as maximum and cruising speeds, fuel capacity, water capacity, stores capacity, armament, crew size, and special mission characteristics (ice breaking, buoy handling, towing, defense etc.). The original performance requirements assume a specific set of operating conditions such as most economical speed. Actual endurance will vary depending on mission demands. Endurance is measured in days, whereas most Navy ships measure endurance in terms of months.

C.1.3.2 Boats

The Coast Guard operates approximately 1,400 boats, defined as any vessel less than 65 feet (20 m) in length, which generally operate near shore and on inland waterways. The most common is 25 feet (7.6 m) long, of which the Coast Guard has more than 350; the shortest is 13 feet (4 m). Boat training includes small boat crews engaging surface targets with small- and medium-caliber weapons. Boat crews may use high or low speeds to approach and engage targets simulating other boats, floating mines, or near shore land targets with up to 7.62-mm weapons. A commonly used target is an empty steel drum. Table C.1-3 describes different types of surface vessels.

Table C.1-3: List of Coast Guard Surface Platforms

<i>Type</i>	<i>Weapons</i>	<i>Length (Feet)</i>	<i>Notes</i>
Cutters			
Legend Class (replacing Hamilton Class)	MK 110 57-mm gun 20-mm Phalanx Close-In Weapons System Crew-served .50-caliber Browning M2 machine guns	Approximately 420	Known as National Security Cutter, there are approximately 12 in service or scheduled to be in service.

Table C.1-3: List of Coast Guard Surface Platforms (continued)

<i>Type</i>	<i>Weapons</i>	<i>Length (Feet)</i>	<i>Notes</i>
	Crew served 7.62-mm machine guns. Various small arms		
Famous-Class	76-mm/62-caliber naval gun 50-caliber (12.7-mm) machine guns Various small arms	> 250	Entered service in 1983, there are 13 in the inventory and they are being phased out as they reach their maximum service life.
Juniper-Class	.50-caliber (12.7 mm) machine guns Various small arms	Approximately 225	The Juniper-Class buoy tenders are responsible for maintaining short- and long-range aids to navigation such as fixed structures and buoys. Buoy tenders are multi-mission vessels and conduct maritime law enforcement, homeland security, and defense operations, as well as provide Search and Rescue (SAR) as needed. Entered service in 1996. Maximum Speed: 15 knots. Sixteen are in the inventory.
Reliance-Class	25-mm gun .50-caliber (12.7 mm) machine guns Various small arms	Approximately 210	Entered service in 1964.
Keeper-Class	None	Approximately 175	Entered service in 1997. Fourteen are in the inventory.
160-Foot-Class Island Construction Tender	None	Approximately 160	Entered service in 1976. Maximum Speed: 11 knots. Four are in the inventory.
Sentinel-Class	25-mm autocannon Crew-served Browning M2 machine guns	Approximately 150	Ultimately approximately 64 will be in service and will be multi-mission platforms capable of performing most of the USCG's statutory missions.
Bay-Class	M240 machine guns	140	Entered service in 1979. Up to 10 will be built.
Island-Class	25-mm chain gun .50-cal machine gun	110	(WPB): Entered service in 1985. These multi-mission platforms are being phased out and will be replaced by the Sentinel-Class cutters.
Marine Protector-Class	.50-caliber M2 Browning machine guns	87	Entered service in 1998. Approximately 70 are in the inventory.
Small Harbor Tug (WYTL)	None	65	These 65-foot tugs are multi-mission platforms.

Table C.1-3: List of Coast Guard Surface Platforms (continued)

<i>Type</i>	<i>Weapons</i>	<i>Length (Feet)</i>	<i>Notes</i>
Boats			
Aids to Navigation Boats	Small arms	Approximately 20–70	Varies in size
Screening Vessels	Small arms	Approximately 60	Multi-mission
Motor Lifeboat	Small arms	Approximately 50	Also known as “Special Purpose Craft – Heavy Weather (SPC-HWX).” Only located in Pacific Northwest.
Response Boat-Medium	None	Approximately 50	The Coast Guard has a contract for 180 Response Boat—Medium (RB-M) boats that were delivered starting in 2008 to replace the 41-foot utility boats. The RB-M is a multi-mission capable boat, operable from Coast Guard shore stations whose missions include PWCS, maritime law enforcement, and SAR.
Buoy Utility Stern Loading	None	Approximately 50	
Training Boats	None	Approximately 40	
Near-Shore Lifeboats	None	Approximately 40	
Boarding Team Delivery	Small arms	Approximately 40	
Long-Range Interceptor	Small arms	Approximately 40	Launched from National Security Cutters.
33-Foot Law Enforcement	Small arms	Approximately 30	
Response Boat-Small II	Replacement for Defender Class	Approximately 30	The Response Boat-Small II (RB-SII) is a multi-mission capable boat, operable from Coast Guard shore stations and designed to operate year-round in shallow waters. RB-S II missions include PWCS, maritime law enforcement, and SAR.
Cutter Boat Over the Horizon	Small arms	25	
Transportable Security Boats	Small arms	25	Used for Port Security.
Response Small Boat	None	25	To be replaced by a 29-foot boat.

Notes: > = greater than; cal = caliber; mm = millimeter; PWCS = Ports, Waterways, and Coastal Security; RB-M = Response Boat—Medium; RB-SII = Response Boat-Small II; SAR = Search and Rescue; SPC-HWX = Special Purpose Craft – Heavy Weather

C.1.3.3 Aircraft

The Coast Guard operates approximately 210 aircraft. Fixed-wing aircraft (such as Lockheed HC-130 Hercules turboprops) operate from air stations on long-duration missions. Helicopters (HH-65 Dolphin and Sikorsky HH-60J Jayhawk) operate from air stations, air facilities, and flight-deck equipped cutters, and can rescue people or intercept smuggling vessels or perform defense related missions. Some special MH-designated helicopters are armed with guns and some are equipped with armor to protect against small arms fire. Table C.1-4 describes different types of Coast Guard aircraft.

Table C.1-4: Aircraft

<i>Name</i>	<i>Quantity</i>	<i>Notes</i>
Lockheed HC-130 Hercules	Approximately 30	Multi-mission aircraft utilized in nearly all the Coast Guard statutory missions. No weapons.
HC-27J Spartan	Approximately 10	Fourteen on order.
CASA HC-144A Ocean Sentry	Approximately 20	-
Gulfstream C-37A	2	Aircraft used as a VIP transport for high-ranking Coast Guard and Homeland Security officials.
Airbus MH-65 Dolphin	Approximately 100	Helicopter used for most of the Coast Guard missions.
Sikorsky MH-60T Jayhawk	Approximately 40	Helicopter used for most of the Coast Guard missions.
RG-8A Condors	Unspecified number	-
Boeing Insitu ScanEagle	Unspecified number	-

Note: VIP = very important person

C.1.3.4 Pyrotechnics, Electronic Warfare, and Countermeasures

Table C.1-5, Table C.1-6, and Table C.1-7 list pyrotechnics, electronic warfare, and countermeasures used by the Coast Guard.

Table C.1-5: Pyrotechnics

<i>Item</i>
7.62-mm Grenade
Signal Kits
Flares
Marine Location Markers
Warning Flash Bang

Note: mm = millimeter

Table C.1-6: Electronic Warfare Systems

<i>Name</i>	<i>Notes</i>
Surface search and navigation radar	None of these systems is unique to the Coast Guard. Navy uses these same systems.
SCCS-Lite combat data system	-
AN/SLQ-32B(V)2 Electronic Warfare System	-
L-3 C4ISR suite	-
Sea Commander Aegis derived combat system	-
AN/SPS-50 surface search radar	-
AN/APX-123(V)1 IFF (ship automation system)	-

Table C.1-7: Decoys and Countermeasures

<i>Name</i>	<i>Notes</i>
Mark 36 SRBOC	Chaff countermeasures
Nulka	MK 53 Mod 10

C.1.4 COAST GUARD ACTIVITIES ANALYZED IN THIS DOCUMENT

Maritime Security Operations: Helicopter and surface ship crews conduct a suite of maritime security operations (e.g., visit, board, search and seizure, maritime interdiction operations, force protection, and anti-piracy operations). These activities involve training of boarding parties delivered by helicopters and surface ships to surface vessels for the purpose of simulating vessel search and seizure operations. Various training scenarios are employed and may include small arms with non-explosive blanks and surveillance or reconnaissance unmanned surface and aerial vehicles. The entire exercise may last 2 to 3 hours. This Coast Guard training is critical to all Coast Guard statutory missions.

Vessel Visit, Board, Search, and Seizure: Military personnel from ships and aircraft board suspect vessels, potentially under hostile conditions.

Maritime Interdiction Operations: Ships and aircraft train in pursuing, intercepting, and ultimately detaining suspect vessels.

Maritime Infrastructure Protection and Harbor Defense: Naval and Coast Guard personnel train to defend oil platforms, similar at-sea structures, harbors, piers, and other infrastructure.

Warning Shot/Disabling Fire: Coast Guard personnel train in the use of weapons to force fleeing or threatening small boats (typically operating at high speeds) to come to a stop.

Ship Force Protection: Coast Guard personnel train in tracking multiple approaching, circling small craft, assessing threat potential, and communicating among crewmates and other vessels to ensure ships are protected against attack.

Precision Anchoring: Ship crews choose the best available anchoring sites. The ship uses all means available to determine its position when anchor is dropped to demonstrate calculating and plotting the anchor's position within 100 yards of center of planned anchorage.

Waterborne Training: Waterborne training may include qualification and certification as safety observer, safety swimmer, coxswain, and crewman utilizing a variety of small crafts to include but not limited to rigid hull inflatables, aluminum chambered boat, stand-up paddleboards, kayaks, and jet skis. Boat crews train to launch and recover boats, operate crew-served unmanned vehicles, moor to buoys, anchor, and operate a variety of missions in shallow waters. Coast Guard may perform this training enroute to a scheduled patrol.

Civilian Port Defense—Homeland Security Anti-Terrorism/Force Protection Exercises: The Coast Guard provides close support to Naval forces Mine Warfare capabilities to support Department of Homeland Security-sponsored events. The Coast Guard is a component of the Department of Homeland Security. The three pillars of mine warfare, airborne (helicopter), surface (surface ships), and undersea (divers, marine mammals, and unmanned vehicles) mine countermeasures will be brought to bear to ensure strategic U.S. ports remain free of mine threats. Various mine warfare sensors, which utilize active acoustics, will be employed in the detection, classification, and neutralization of mines. Along with traditional mine warfare techniques, such as helicopter-towed mine countermeasures, new technologies (unmanned vehicles) will be utilized. Marine mammal systems may be used during this exercise. Event locations and scenarios will vary according to the Department of Homeland Security's strategic goals and evolving world events.

Humanitarian Assistance Operations: Military units evacuate noncombatants from hostile or unsafe areas to safe havens or to provide humanitarian assistance in times of disaster. The Coast Guard has a leadership role in many disaster relief operations, with their aircraft and surface vessels significantly contributing to the humanitarian assistance operations.

Search and Rescue: The Coast Guard maintains Search and Rescue facilities on the East, West and Gulf coasts, Hawaii, Alaska, Guam, and inland waterways. To maintain this perishable skill, the Coast Guard trains its helicopter and fixed-wing crews and Search and Rescue personnel in the air and on the water. Helicopter, ship, and submarine crews practice the skills required to recover personnel lost at sea. Helicopters locate survivors and deploy rescue swimmers and rescue baskets. Survivors are winched up to the hovering helicopter. Surface ships would conduct man overboard drills and deploy a dummy figure in the water. Ship crews would launch a small boat, direct the recovery of the dummy, and recover the small boat. Submarine crews would maneuver submarine to effect recovery of personnel.

Maritime Environmental Response: This defense mission in which the Coast Guard trains for by conducting spill response events that may prevent the Navy access to a beach or a port, is also an extremely important stand-alone mission. Coast Guard is a leader of the National Response Team that train to respond to events such as those that have occurred after ships run aground or oil wells are compromised and, thus, resulting in oil or hazardous materials releasing into the Waters of the U.S. Coast Guard as the Federal On-Scene Coordinator may deploy oil booms and setting up the National Command Center. Training for this inevitable mission directly supports its Defense Mission.

Gunnery Exercise: As an armed force, the Coast Guard may be called to perform gunnery operations as a part of its mission. This same training directly correlates to its law enforcement mission that may require a warning shot to get a vessel to stop or necessary for Coast Guard to board a vessel.

Small Boat Attacks: This defense mission is also a law enforcement mission, and the Coast Guard trains in a similar manner for both missions.

C.1.5 COAST GUARD AND THE PROTECTION OF MARINE RESOURCES

Many of the Coast Guard missions provide a direct and measurable positive impact on the marine environment, to include marine mammals, birds, coral reefs, and fishes. The inherent protective measures that the Coast Guard provides by conducting these missions are discussed below.

Through the Marine Environmental Protection program, the Coast Guard develops and enforces regulations to avert the introduction of invasive species into the maritime environment, stop unauthorized ocean dumping, and prevent oil and chemical spills. The Coast Guard serves as the Federal On-Scene Coordinator for oil spills and hazardous waste incidents in the marine environment. In this capacity, the Coast Guard oversees the clean-up of the marine environment, including authorizing wildlife operations to do reconnaissance and recovery of marine mammals (and other animals impacted). In a time of conflict, the Coast Guard would perform this function as a defense mission if there were oil spill, whether it be a result of the conflict or intentionally done by an adversary.

The Coast Guard spends tens of millions of dollars annually protecting living marine resources, to include an estimated \$65 million in fiscal year 2021 enforcing the Endangered Species Act. The Coast Guard is also a member of the National Marine Fisheries Service (NMFS) marine mammal stranding network and, in this capacity, assists NMFS and stranding response partners in aiding marine mammals in distress. Coast Guard assets have also been used to transport marine mammals to be taken in for rehabilitation or release.

Additionally, the Ports and Waterways Safety Act includes Coast Guard's responsibility in designating Traffic Separation Schemes for commercial vessels across the United States. The Coast Guard works with the National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries and NMFS to develop Traffic Separation Schemes that reduce the spatial overlap of commercial ships and large whales on the East Coast (to protect North Atlantic right whales) and off California (to protect blue, fin, and humpback whales). The Coast Guard provides marine mammal information to all mariners via a weekly notice to mariners (online) and broadcast notice to mariners (immediate information via very high frequency broadcasts). Both formats are used to convey information about whales, any closures

implemented by NMFS to reduce risk of strikes, and to raise general awareness of marine mammals in specific areas.

The Coast Guard protects our ocean environment and the marine life that inhabits it by enforcing domestic and international fisheries laws, as well as protects the U.S. Exclusive Economic Zone from foreign encroachment. The U.S. Exclusive Economic Zone is the largest in the world, comprising 3.4 million square miles of ocean and more than 90,000 miles of coastline. Keeping these waters clean and safe is critical to both our nation's economy and its environment. Using its law enforcement function, the Coast Guard enforces fisheries regulations from NMFS designed to reduce interactions with fisheries and marine mammals (e.g., patrols of groundfish fisheries in Alaska near Steller sea lion closed areas). Coast Guard auxiliaries help to raise awareness by providing information about protected species, including marine mammals, at various events. For example, Coast Guard is part of NMFS' "Be Whale Wise" campaign to promote safe vessel practices around endangered southern resident killer whales. This often entails the need for Coast Guard personnel to board a fishing vessel, which is also a requirement of the Coast Guard defense mission.

Protecting the integrity of the nation's maritime borders and ensuring the health of U.S. fisheries is a vital part of the Coast Guard mission. The Coast Guard also enforces international agreements to suppress illegal, unreported, and unregulated fishing activity in international waters. This provides a direct benefit to the marine environment and its resources.

Another important mission entrusted to the Coast Guard is the care and maintenance of maritime aids to navigation and the marine safety that this service provides. Much like drivers need stoplights, street signs, and universally accepted driving rules, boaters also need the nautical equivalent "rules of the road." The Coast Guard is responsible for ensuring this network of signs, symbols, buoys, markers, lighthouses, are functioning properly so recreational and commercial boaters can safely navigate the maritime environment. This function has a direct impact to safety of navigation and helps to prevent accidents that could harm the environment and its marine resources.

The United States has vital national interests in the polar regions. Polar security cutters enable the United States to maintain defense readiness in the Arctic and Antarctic regions; enforce treaties and other laws needed to safeguard both industry and the environment; provide ports, waterways, and coastal security; and provide logistical support—including vessel escort—to facilitate the movement of goods and personnel necessary to support scientific research, commerce, national security activities and maritime safety. Ice operations in areas like the Great Lakes and the Northeast Atlantic and rivers like the Hudson River facilitate the safe movement of ships delivering vital cargo in a safe manner, thus providing the added benefits of both marine safety, and preventing pollution through avoidance of accidents caused due to iced waterways.

To safely perform these statutory missions that provide direct benefits to the environment, the Coast Guard must provide its people realistic training. Defense training relating to aircraft and ship operations, and all the missions that relate to the usage of these assets, directly impact the ability of the Coast Guard to perform all their missions. The training utilized in support of defense readiness directly overlaps with many of the other Coast Guard missions that rely on ship and aircraft operations. Coast Guard personnel not only may perform these missions supporting the Navy and the Defense Readiness mission, but they also require the same skills for their law enforcement, marine protection, and other related missions.