



Coast Guard Mission Needs Statement

January 8, 2016

Fiscal Year 2015 Report to Congress



Homeland
Security

United States Coast Guard

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Foreword

January 8, 2016

I am pleased to present the following report, “Coast Guard Mission Needs Statement,” prepared by the United States Coast Guard.

This document has been compiled pursuant to requirements set out in the the Joint Explanatory Statement, House Report 113-481, and Senate Report 113-198, which accompany the *Fiscal Year 2015 Department of Homeland Security Appropriations Act* (P.L. 114-4), and within Section 215 of the *Howard Coble Coast Guard and Maritime Transportation Act of 2014* (P.L. 113-281).

Pursuant to congressional requirements, this report is provided to the following Members of Congress:



The Honorable John R. Carter
Chairman, House Appropriations
Subcommittee on Homeland Security

The Honorable Lucille Roybal-Allard
Ranking Member, House Appropriations
Subcommittee on Homeland Security

The Honorable John Hoeven
Chairman, Senate Appropriations
Subcommittee on Homeland Security

The Honorable Jeanne Shaheen
Ranking Member, Senate Appropriations
Subcommittee on Homeland Security

The Honorable Bill Shuster
Chairman, House Committee on
Transportation and Infrastructure

The Honorable Peter DeFazio
Ranking Member, House Committee on
Transportation and Infrastructure

The Honorable John Thune
Chairman, Senate Committee on
Commerce, Science, and Transportation

The Honorable Bill Nelson
Ranking Member, Senate Committee on
Commerce, Science, and Transportation

I am available to answer any questions that you may have. Please do not hesitate to contact me at (202) 372-4411 or the Department’s Deputy Under Secretary for Management and Chief Financial Officer, Chip Fulghum, at (202) 447-5751.

Sincerely,

A handwritten signature in blue ink that reads "Paul F. Zukunft". The signature is written in a cursive, flowing style.

Paul F. Zukunft
Admiral, U. S. Coast Guard
Commandant

Executive Summary

As a maritime nation, America's economic prosperity and national interests are inextricably linked to the sea. In an age of increasing globalization, rapid technological advancements, and growing threats, the Coast Guard remains an indispensable instrument of national security and prosperity. As a military service and branch of the armed forces, federal law enforcement agency, maritime first responder, regulatory agency, humanitarian organization, and member of the intelligence community, the Coast Guard brings a unique blend of authorities, capabilities, and competencies to the defense of the Nation.

Over the past 225 years, the Coast Guard's missions have evolved along with the United States and the world. Today, the Coast Guard ensures the safety, security, and stewardship of our Nation's maritime domain, protecting more than 100,000 miles of U.S. coastline and inland waterways – and its supporting infrastructure, saving thousands of lives per year, and safeguarding the world's largest Exclusive Economic Zone. The Service's 11 missions are both broad and complex, and range from Search and Rescue and Counter Drug Enforcement to Icebreaking and Marine Environmental Protection. While Coast Guard responsibilities are diverse, its multi-mission nature and culture of adaptability provide the Service with the ability to shift rapidly from one mission to another as conditions or national priorities change, ensuring its enduring value to the Nation.

To understand the mission needs of the Coast Guard, one must first understand its missions. As such, this document begins by providing an overview of each mission, describing its elements, goals and objectives, and the stakeholders who carry out and benefit from the associated activities. The mission sections also discuss the trends and strategic environment affecting each mission both now and in the future – from the rise of transnational organized crime and cyber threats to resource competition and climate change. These global forces impact all of our activities – driving demand for an increased Coast Guard presence both within the United States and internationally.

Finally, the document discusses the Coast Guard's broad statutory authorities, the enduring capabilities necessary to best use those authorities to carry out its missions, and the robust partnerships leading to greater unity of effort. Importantly, the Mission Needs Statement does not attempt to identify specific assets to meet mission requirements. The pace of technological development is too rapid and fluid to predict the tools that will be available to the Service in the coming decades. Rather, this document focuses on the enduring capabilities that the Coast Guard requires, regardless of the ultimate materiel solution.



Coast Guard Mission Needs Statement

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I. Legislative Language

This report responds to the language set forth in the Joint Explanatory Statement, House Report 113-481, and Senate Report 113-198, which accompany the *Fiscal Year (FY) 2015 Department of Homeland Security (DHS) Appropriations Act* (P.L. 114-4) and Section 215 of the *Howard Coble Coast Guard and Maritime Transportation Act of 2014* (P.L. 113-281).

The Joint Explanatory Statement includes the following:

Mission Needs Statement

Not later than July 1, 2015, the Commandant shall submit to the Committees a new Mission Needs Statement (MNS), which will be used to inform the out-year CIP. The MNS should assume that the Coast Guard requires the capability to continue to carry out all of its eleven statutory missions.

House Report 113-481 includes the following:

Mission Needs Statement

The Committee directs the Commandant to conduct a new mission needs statement (MNS), to be submitted with the fiscal year 2016 budget, which takes into account the funding proposed in the five-year Capital Investment Plan (CIP) submitted for that fiscal year. The MNS shall describe which missions the Coast Guard will not be able to achieve for any year in which a gap exists between the mission hour targets and projected mission hours for new and legacy assets based on the proposed CIP.

Senate Report 113-198 includes the following:

Analysis of Mission Requirements

To ensure the out-year CIP adequately meets Coast Guard operational needs, the Coast Guard shall conduct an analysis of mission requirements. This analysis should assume that the Coast Guard needs the capability to continue to carry out all of its 11 statutory missions. In this analysis, the Coast Guard should also outline options for acquisition plans that consider reasonable combinations of alternative capabilities of surface assets (including an icebreaker) and air assets to determine the most cost effective method of executing mission needs as determined in the analysis described above.

The *Howard Coble Coast Guard and Maritime Transportation Act of 2014* includes the following:

SEC. 215. MISSION NEED STATEMENT

(a) IN GENERAL.—Section 569 of title 14, United States Code, is amended to read as follows:

§ 569. Mission need statement

(a) IN GENERAL.—On the date on which the President submits to Congress a budget for fiscal year 2016 under section 1105 of title 31, on the date on which the President submits to Congress a budget for fiscal year 2019 under such section, and every 4 years thereafter, the Commandant shall submit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate an integrated major acquisition mission need statement.

(b) DEFINITIONS.—In this section, the following definitions apply:

(1) INTEGRATED MAJOR ACQUISITION MISSION NEED STATEMENT.—The term ‘integrated major acquisition mission need statement’ means a document that—

(A) identifies current and projected gaps in Coast Guard mission capabilities using mission hour targets;

(B) explains how each major acquisition program addresses gaps identified under subparagraph (A) if funded at the levels provided for such program in the most recently submitted capital investment plan; and

(C) describes the missions the Coast Guard will not be able to achieve, by fiscal year, for each gap identified under subparagraph (A).

(2) MAJOR ACQUISITION PROGRAM.—The term ‘major acquisition program’ has the meaning given that term in section 569a(e).

(3) CAPITAL INVESTMENT PLAN.—The term ‘capital investment plan’ means the plan required under section 663(a)(1).’

II. Introduction and Strategic Context

The Coast Guard last updated its MNS in 2004, less than a year and a half after the formation of DHS. The 2004 MNS discussed the role of the Coast Guard and its missions in the post-9/11 environment; identified strategic threats and demands; and established a foundation for future capability investment priorities. Since then, the global strategic landscape has evolved considerably leading to new national strategies and policies. As examples, the DHS Quadrennial Homeland Security Review (QHSR) has aligned intra-agency efforts to DHS strategic priorities, and the Cooperative Strategy for 21st Century Seapower has provided joint guidance to the U.S. Navy, U.S. Marine Corps, and Coast Guard for the future maritime operating environment.

As the Department of Defense (DOD) rebalances and apportions its forces across a myriad of global threats, the Coast Guard is focused primarily on the Western Hemisphere while also complementing DOD in international theaters where the Coast Guard's unique authorities, capabilities, and partnerships advance national diplomatic objectives. The Coast Guard also has developed functional and regional strategies, such as the Coast Guard Western Hemisphere Strategy, the Coast Guard Arctic Strategy, and the Coast Guard Cyber Strategy to best align with other DHS components and national priorities. Taken in whole, these new strategies and policies validate the critical role that the Coast Guard plays in protecting the Nation's broad maritime equities. The 2015 MNS provides an overview of the Coast Guard's missions within the context of the current and emerging strategic environment, and provides an overview of the enduring capabilities required for the Service.

Given the dynamic and complex nature of the maritime domain, this document does not seek to identify a materiel solution to meet future mission needs, but rather to identify the enduring, high-level capabilities required for the Coast Guard to execute its broad statutory authorities effectively and efficiently. The MNS provides a foundation for long-term investment planning that will culminate with detailed modeling scenarios to evaluate the effectiveness of various fleet mixes, and inform the evolution of the Coast Guard's CIP. Like its predecessor, the 2015 MNS is designed to be an enduring document and broad enough in scope to remain relevant over a 5- to 10-year period.

At all times a military service and a branch of the armed forces, a federal law enforcement agency, a regulatory agency, a first responder, a humanitarian service, and a member of the Intelligence Community (IC), the United States Coast Guard is the world's premier, multi-mission, maritime service responsible for the safety, security, and stewardship of the Nation's waters. In the execution of its duties within DHS, the Coast Guard serves on the front line for a Nation whose economic prosperity and national security are inextricably linked to its maritime interests. In this capacity, the Coast Guard protects and defends more than 100,000 miles of U.S. coastline and inland waterways, saves thousands of lives per year, and safeguards the world's largest Exclusive Economic Zone (EEZ), encompassing 4.5 million square miles.

The Coast Guard has always adapted to meet evolving threats and changing operating environments. Today, the maritime domain has never been more complex, and the challenges and threats in our operating environment have never been greater. Rapid changes in domestic energy production, instability in Central America fueled by violent Transnational Organized Criminal (TOC) networks, increased human activity in the Arctic, and greater reliance on cyberspace are enduring challenges facing our Nation. Globalization has led to an interconnected world, where the security and prosperity of any one nation relies on productive international relationships, and the safety and security of the maritime global commons. Today's economy is critically dependent on global trade,

which in turn relies on safe, resilient, and efficient transportation systems. More than 90 percent of global trade travels through maritime conveyance, making the safety, security, and environmental stewardship of the U.S. Maritime Transportation System (MTS) an economic and national security imperative. Technological advancements have led to greater efficiencies in maritime trade and have allowed for greater exploitation of critical maritime natural resources. Efficiencies in extracting critical, yet finite, resources have increasingly challenged our collective ability to govern and manage the competing needs of growing populations, particularly in coastal areas. The impacts of climate change in the maritime environment, already evident in the Arctic, may also exacerbate many of these competing demands. Rising sea levels and the potential for more severe tropical cyclonic activity will challenge national preparedness.

Technological innovations have led to a more interconnected and productive world, while introducing new vulnerabilities and risks for virtually all consumers, businesses, organizations, and governments. Cyber threats pose grave risks to our national critical infrastructure as well as to government cyber systems. The reliance of vessels and maritime facilities upon cyber systems is growing, making them increasingly vulnerable to criminal and terrorist cyber-attacks. New developments in technology and communications equipment have also enabled TOC networks involved in drug trafficking and other illicit activities to plan, coordinate, and perpetrate their schemes with increased mobility and anonymity. The rise and convergence of TOC networks has also destabilized many governments, fueled violence and corruption, and stymied economic growth and development, particularly in the Western Hemisphere.

The Coast Guard has 11 statutory missions, all of which contribute to national policy objectives and are fundamental to preserving the sovereign maritime interests of the United States. Many of these missions, such as Search and Rescue (SAR); Ports, Waterways, and Coastal Security (PWCS); Living Marine Resources (LMR); and Drug Interdiction (DRUG), present steady-state demands that require continuous or near-continuous use of intelligence and other operational capabilities to meet mission requirements. Other missions, such as Alien Migrant Interdiction Operations (AMIO), have both steady-state demands and the need to surge for major events such as a mass migration. Finally, missions such as Defense Readiness (DR) require capabilities to maintain a high state of readiness for war and other defense contingencies, and also allow the Coast Guard to serve the Nation as a unique instrument of foreign policy. While diverse, these missions are closely interrelated, and are carried out most effectively and efficiently by a single government entity. The Coast Guard's multi-mission focus and culture of adaptability allow it to shift seamlessly from one mission to another as conditions or national priorities change. Likewise, the Coast Guard's expansive authorities, capabilities, competencies, and partnerships allow it to lead or support a broad range of operations both domestically and internationally.

Using the core operational concept of prevention-response, the Coast Guard employs its forces to meet mission needs by utilizing its authorities, capabilities, and partnerships to conduct operations in the maritime domain. Prevention activities include establishing standards and regulations, educating the public, credentialing mariners, inspecting vessels and facilities, and conducting other operations to prevent dangerous or illicit activities. Prevention efforts are balanced with intelligence and operational resources capable of responding to incidents when they occur in order to save lives, mitigate damage to the U.S. MTS and the environment, and recover from the effects of natural or man-made incidents or disasters. The United States is a global leader in maritime governance in part because the Coast Guard has the authority, responsibility, and capability to prevent, prepare for, and respond to safety, security, and environmental threats in the maritime domain, on the high seas, and even the territorial seas of some partner nations.

Intelligence-driven operations include immediate action to defend national interests, stabilize disaster situations, assist persons in distress, mitigate environmental and property damage, and prosecute illegal activity. Within the prevention-response model, the Coast Guard provides at-sea presence and deploys forces in mutually supportive layers based on asset endurance and capabilities. Whether stopping drug smugglers at sea, interdicting undocumented migrants, rescuing mariners, enforcing fisheries, safety, and environmental protection laws, responding to disasters, or protecting ports, the Coast Guard uses its broad authorities, capabilities, and expansive partnerships to provide Maritime Domain Awareness (MDA) and sustain persistent presence ensuring the most vital national interests in the maritime operating environment are met.

The Coast Guard's efforts are bolstered by strong domestic and international partnerships and unprecedented unity of effort across the Federal Government. Many of our international partners also rely upon the Coast Guard to execute counter-drug and fishery missions, as well as intercept possible illicit shipments of weapons of mass destruction (WMD). This reliance is manifested in more than 60 agreements and arrangements.

The Coast Guard supports the Homeland Security Enterprise principle -- "Homeland security is national risk management"-- by using information and analysis to inform decision-making and prioritize our work. The Coast Guard focuses on the most significant risks in the maritime domain. To do this, the Coast Guard developed the National Maritime Strategic Risk Assessment model. A flexible and adaptable maritime force allows operational commanders to best manage risk and flow assets to meet the greatest threats.

III. Coast Guard Missions

Within DHS, the Coast Guard functions simultaneously as one of the armed forces, a law enforcement agency, a regulatory agency, and a member of the National IC. The Coast Guard is responsible for 11 missions (table below). The true value of the Coast Guard to the Nation is not only its ability to perform any single mission but in its versatile, highly adaptive, multi-mission character.

Coast Guard Statutory Missions

PWCS	The Coast Guard conducts the PWCS mission in order to protect people and property in the U.S. MTS by preventing, disrupting, and responding to transnational threats.
DRUG	The Coast Guard conducts the DRUG mission in support of national and international strategies to deter and disrupt illegal drugs; dismantle TOC/drug trafficking organizations; prevent transnational threats from reaching the United States; ensure regional stability; and provide both national security and economic stability.
AMIO	The Coast Guard conducts the AMIO mission to deter undocumented migrants and transnational smugglers from using maritime routes to enter the United States, and to detect and interdict undocumented migrants and smugglers away from the U.S. border, denying them entry via maritime routes to the United States, its territories, and possessions.
DR	The Coast Guard conducts the DR mission to support national military strategy and DOD operations by ensuring that Coast Guard assets are capable and equipped to deploy and conduct joint operations in support of the most critical needs of combatant commanders.
Other Law Enforcement (OLE)	The Coast Guard conducts the OLE mission to enforce federal laws; deter, detect, and interdict any foreign fishing vessel making incursions into the U.S. EEZ; ensure compliance with international agreements for the management of LMR; and deter illegal, unreported, and unregulated fishing activity.
Marine Safety (MS)	The Coast Guard conducts the MS mission to prevent personnel casualties, accidents, and property losses in the maritime environment by establishing standards; conducting vessel, container, and facility inspections; partnering with state and boating safety organizations to reduce recreational boating accidents and deaths; investigating marine casualties; and licensing U.S. mariners.
SAR	The Coast Guard conducts the SAR mission to prevent loss of life, injury, and property damage at sea by promoting safety and rendering timely and effective assistance to those in distress.

Aids to Navigation (ATON) and MTS Management	<p>The Coast Guard conducts the ATON and MTS Management mission to ensure a safe, secure, efficient, and environmentally sound waterways system.</p>
LMR	<p>The Coast Guard conducts the LMR mission to provide effective and professional enforcement to advance national goals for the conservation, management, and recovery of living marine resources, marine protected species, and national marine sanctuaries/monuments.</p>
Marine Environmental Protection (MEP)	<p>The Coast Guard conducts the MEP mission to reduce the risk of harm to the maritime environment by preventing, mitigating the effects of, and responding to oil spills and hazardous substance discharges; the introduction of invasive species; and unauthorized dumping.</p>
Ice Operations	<p>The Coast Guard conducts the Ice Operations mission to facilitate domestic commerce through ice covered waters and prevent/respond to ice that causes flooding; support United States national security, economic, and scientific interests in the polar regions; and safeguard commerce by reducing the risk of collision between ships and icebergs.</p>

IV. Link to DHS Strategic Priorities

The 2014 DHS QHSR and DHS FY 2014-2018 Strategic Plan are the foundational documents establishing the Department's strategic priorities over the next 4 years and serve as the analytic framework for the Department's Unity of Effort Initiative. The QHSR reaffirms the enduring missions of the homeland security enterprise and establishes the strategic context in which the Coast Guard and its DHS counterparts must operate. The Coast Guard conducts its prevention and response operations with full consideration of the six guiding principles presented in the QHSR:

- The cornerstone of homeland security is preventing terrorism, but homeland security must address the broad spectrum of evolving threats and hazards.
- Homeland security supports economic security.
- Homeland security requires a networked community.
- Homeland security relies upon the use of market-driven solutions and innovation.
- Homeland security upholds privacy, civil rights, and civil liberties.
- Homeland security is national risk management.

Since its inception, DHS has evolved and adapted to the ever-changing environment in which it operates. Reflecting the Nation's current security challenges, the DHS FY 2014-2018 Strategic Plan establishes the missions and goals of homeland security and describes how the Department's strategic priorities will be achieved through the DHS Unity of Effort Initiative. The Coast Guard's 11 statutory missions support, and are aligned with, the DHS missions and their associated goals.

V. Operating Area

The Coast Guard operates in three broad geographic operational areas that are immense in size, extending to Hawaii and Alaska, overseas territories, foreign ports, across the world's largest EEZ, and beyond, including millions of square miles of high seas. The designated operational areas include:¹

- *Offshore.* The Offshore operational area extends from 50 Nautical Miles (NM)² seaward of the U.S. baseline (recognized as the low-water line along the coast in accordance with the articles of the Law of the Sea) to the far reaches of the sea, including foreign waters, when authorized. It includes international operations, including land-based forces deployed to foreign territory, when directed. This operational area also includes the Polar Regions, defined as north of 60°N latitude (Arctic) and areas south of 60°S latitude (Antarctic).
- *Coastal.* The Coastal operational area includes waters extending from the U.S. baseline seaward to a distance of 50 NM offshore, including the territorial sea, contiguous zone, and that part of the U.S. EEZ extending seaward to 50 NM from the baseline. This operational area includes the waters seaward of the baseline on the United States side of the international boundary on the Great Lakes.
- *Inland.* The Inland operational area includes all waters shoreward of the U.S. baseline that are subject to the jurisdiction of the United States, including the Western Rivers System. This area includes the waterfront facilities, piers, wharves, docks, and similar structures over which the Coast Guard exercises jurisdiction.

United States and international geographic boundaries directly affect maritime operations by determining the degree of jurisdiction a coastal state may exercise in a particular location. National waters include internal waters and territorial seas of a coastal state. International waters include waters seaward of the territorial seas of any state. Jurisdictional classifications are described below:

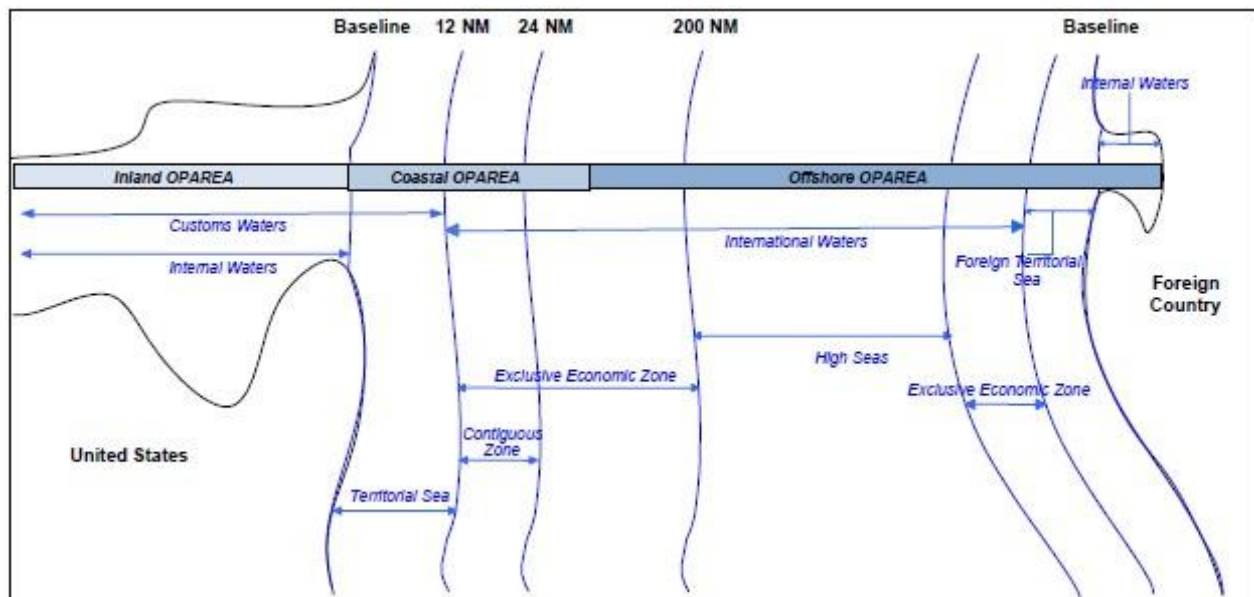
- *Internal Waters.* All U.S. waters shoreward of the baseline, including all waters on the United States side of the international boundary of the Great Lakes.
- *Territorial Sea.* The waters within the belt that is 12 NM wide and adjacent to the U.S. coast measured seaward from the baseline. For the purpose of enforcing some domestic U.S. laws, the territorial sea extends only 3 NM seaward of the baseline.
- *Contiguous Zone.* The area beyond the U.S. territorial sea that extends seaward up to 24 NM from the baseline. In the contiguous zone, the United States may exercise the control necessary to prevent the infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory or territorial sea, and punish infringement of those laws and regulations committed within its territory or territorial sea.

¹ U.S. Coast Guard. *Operations* (Coast Guard Publication 3-0; February 2012).

² This is not a jurisdictional boundary, merely an operational limit.

- *Customs Waters.* Generally defined as the waters shoreward of a line drawn 12 NM from the baseline (including territorial sea and inland waters with ready access to the sea). The term “customs waters” also means, in the case of a foreign vessel subject to a treaty or other arrangement between a foreign government and the United States enabling or permitting the authorities of the United States to board, examine, search, seize, or otherwise to enforce upon such vessel upon the high seas the laws of the United States, the waters within such distance of the coast of the United States as the said authorities are or may be so enabled or permitted by such treaty or arrangement and, in the case of every other vessel, the waters within four leagues (12 NM) of the coast of the United States.
- *EEZ.* The zone of waters beyond and adjacent to the territorial sea not extending beyond 200 NM from the baseline. Within the EEZ, the United States has, to the extent permitted by international law, (a) sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources, both living and nonliving, of the seabed and subsoil and the superjacent waters and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds; and (b) jurisdiction with regard to the establishment and use of artificial islands, and installations and structures having economic purposes, and the protection and preservation of the marine environment.
- *International Waters.* Waters seaward of the outer limit of the territorial sea of any nation, but including the high seas, EEZ, and contiguous zones (when claimed seaward of the territorial sea). It does not include archipelagic waters.
- *High Seas.* The high seas are comprised of all parts of the sea that are not included in the EEZ, in the territorial sea, in the internal waters of a state, or in the archipelagic waters of an archipelagic state. See 33 C.F.R. §2.32 for certain applications.
- *Foreign Territorial Sea.* The United States recognizes territorial sea claims of other nations up to a maximum distance of 12 NM from the baseline.

Jurisdictional Classifications



VI. Missions in Depth

This section provides an in-depth overview of the Coast Guard's 11 missions, the strategic environment and associated trends for each mission, and a description of primary stakeholders, mission elements, and mission goals and objectives.

1. Ports, Waterways, and Coastal Security

In response to the September 11, 2001, terror attacks, the Federal Government underwent its largest reorganization since World War II. The Homeland Security Act of 2002 established DHS, and moved the Coast Guard out of the Department of Transportation (DOT). Amid this reorganization, the Coast Guard was tasked with new and expanded roles and responsibilities, including the formal establishment of the Ports, Waterways, and Coastal Security mission, which expanded upon the existing Port Security mission. In 2002, the *Maritime Transportation Security Act* (MTSA) was signed into law, establishing a layered security regime for domestic vessels and port facilities; creating Area Maritime Security Committees (AMSC) and Area Maritime Security Plans; designating Captain of the Port (COTP) as Federal Maritime Security Coordinators; directing the Coast Guard to approve and ensure compliance with vessel, facility, and area security plans; and assessing the effectiveness of anti-terrorism measures in foreign ports. In 2006, the Security and Accountability for Every Port Act was signed into law, directing among other things that the Coast Guard inspect MTSA-regulated facilities biannually for compliance with their Coast Guard approved security plans, and authorized the Coast Guard to conduct capacity building to improve port security.

The PWCS mission protects people and property in the U.S. MTS by preventing, disrupting, and responding to terrorist attacks, sabotage, espionage, or subversive acts. With more than 90 percent of global trade by weight (62 percent by value) moving by sea³, much of it fueling U.S. jobs and industry, our Nation's economy and security are inextricably linked to the sea, our ports, and our waterways. The Committee on the MTS reports that waterborne cargo and associated activities contribute some \$650 billion annually to the U.S. gross domestic product, sustaining more than 13 million jobs. MTS activities contribute more than \$200 billion in annual port sector Federal, state, and local taxes. The MTS includes 100,000 miles of coastline and inland waterways, 3,700 marine terminals, and more than 360 significant maritime ports, from the largest mega-ports to the smallest fishing harbors and marinas.⁴ The MTS includes the system of interconnected inland rivers and the Intracoastal Waterway, which consists of over 25,000 miles of navigable waters connecting inland metropolitan areas, industrial complexes, and the agricultural heartland of the country. The MTS also includes the Great Lakes, 6,700 miles of U.S. coastline, and 1,500 miles of international maritime border with Canada that connect the industrial north and northern population centers of the Midwest through the St. Lawrence Seaway System to the Atlantic Ocean.⁵

³ International Maritime Organization. International Shipping Facts and Figures: Information Resources on Trade, Safety, Security, Environment." March 2012.

<http://www.imo.org/KnowledgeCentre/ShipsAndShippingFactsAndFigures/TheRoleandImportanceofInternationalShipping/Documents/International%20Shipping%20-%20Facts%20and%20Figures.pdf>

⁴ Committee on the Marine Transportation System. "MTS Fact Sheet."

http://www.cmts.gov/downloads/CMTS_MTS_Fact_Sheet_9.15.14_FINAL.pdf

⁵ Ibid.

The MTS is a dynamic environment that can change significantly from day-to-day as thousands of major vessels transit in and out of U.S. ports. The MTS is an open system that enables a broad community of operators to benefit from it at minimal cost. The openness of the system makes it very easy to use. However, while easy access promotes efficient use of the system, it also presents challenges to security. The sea, our ports, and our waterways serve as vectors for multiple growing threats to our Nation's safety and security, including terrorist threats; mass migration; smuggling of drugs, aliens and contraband; high-risk energy exploration; increasing Arctic development; increases in commercial maritime trade and global shipping; and hurricanes. This growth in activity and threat vectors brings a commensurate growth in demand for Coast Guard authorities, capabilities, competencies, capacity, resources and partnerships.

The Coast Guard's approach to maritime governance comprises three interconnecting parts: maritime regimes, MDA, and operational capabilities.⁶ The maritime governance strategy is implemented by projecting credible deterrence, providing layered security (both geographically and functionally), and employing risk-based decision making. These interconnecting activities require participation from federal, state, local, private, and international partners and demand unity of effort. A well-designed system of regimes, awareness, and operational capabilities creates overlapping domestic and international safety nets, layers of security, and effective stewardship.

PWCS relies upon the Coast Guard's broad authorities and long-standing partnerships with governmental, maritime industry, and international partners. PWCS activities are directed primarily by Coast Guard Sector Commanders and Marine Safety Unit Commanding Officers assigned as COTPs for over 360 U.S. maritime ports. The Coast Guard's systematic, maritime governance model for PWCS employs a triad consisting of domain awareness, maritime security regimes, and Maritime Security Response Operations (MSRO) carried out in a unified effort by international, governmental, and private stakeholders. MDA means the effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of the United States. Maritime security regimes comprise a system of rules that shape acceptable activities in the maritime domain. Regimes include domestic and international protocols and/or frameworks that coordinate partnerships, establish maritime security standards, collectively engage shared maritime security interests, and facilitate the sharing of information. Domestically, the Coast Guard-led AMSCs carry out much of the maritime security regimes effort. These committees, which are chaired by the cognizant COTP serving as the Federal Maritime Security Coordinator, are public-private entities that include law enforcement, security, and emergency management agencies from the Federal, state, tribal, territorial, and local levels, as well as representatives from the maritime industry.

The Coast Guard engages in maritime surveillance, reconnaissance, tracking, and interdiction of threats to the security of the United States, as well as responds to the consequences of such threats. Employing a variety of highly capable small boats, cutters, and aircraft, the Coast Guard maintains a persistent presence in the Atlantic, Pacific, and Caribbean. These multi-mission assets may be utilized to support the PWCS mission, providing additional MDA, command and control, and boarding/interdiction platforms capable of responding to maritime threats and/or intelligence cueing to provide deterrence to criminals/terrorists. The desired result is to reduce risk by deterring terrorists and enabling the investigation and/or interdiction of serious security threats at greater ranges from United States shores.

⁶ U.S. Coast Guard. *MSRO Manual* (COMDTINST M16600.6A; November 2012) [UNCLAS/FOUO].

Shore-based security operations likewise serve to protect the American people, to detect and deter maritime threats, provide MDA, and ensure compliance with applicable laws and regulations. Coast Guard personnel conduct inspections of foreign flag and U.S. vessels, and of U.S. waterfront facilities, to detect and deter security threats, and to ensure compliance with applicable laws and treaties. Coast Guard personnel also conduct foreign port assessments, with the cooperation of host governments, to assess their implementation of effective counterterrorism measures through compliance with the International Maritime Organization (IMO) International Ship and Port Facility Security (ISPS) Code.

Coast Guard COTPs have specific authorities and responsibilities to oversee the PWCS mission within their operational areas. Coast Guard COTPs are typically sector commanders responsible for the conduct of all Coast Guard missions within their assigned region. They also are typically the officer in charge of marine inspection, responsible for the inspection of vessels and port facilities, investigation of marine casualties, and the credentialing of merchant mariners. No other field officer in the Coast Guard possesses such a broad and complex range of authorities, responsibilities, and influence.

Ports, Waterways, and Coastal Security Trends

- *Cyber Threats and Vulnerabilities:* The proliferation of information technology and cyber systems has provided the MTS with great power and increased efficiencies, but also has introduced new vulnerabilities. With many port terminals' industrial control systems, and many ships' engineering, navigation, and communications systems operated by remotely-controlled cyber systems, a cyber breach, attack, or unintentional malfunction could have significant adverse effects on the MTS, much like a major vessel casualty or a natural disaster.
- *Increasing size, technology, and complexity across the MTS:* Nearly every aspect of the MTS is growing in size and complexity. The energy industry is seeking oil and natural gas further offshore, using increasingly sophisticated vessels and technology. Container ships are growing in response to the widening of the Panama and Suez Canals, and in response to general economic growth, and the need to capitalize on economies of scale. Cruise ships, coastal commercial passenger vessels including ferries, commercial fishing vessels, and nearly every other type of vessel are increasing in number, size, capacity, and in the use of technology to meet business needs. Accordingly, port facilities, which generally cannot expand their footprints, are under increasing pressure to maximize efficiency, adopt technology, and absorb increasing traffic within port areas. Additionally, higher volumes of people and goods moving through the supply chain will stress the MTS as well as the Coast Guard's current screening and detection capabilities and capacities.
- *Maritime Terrorism:* Growing instability in the Middle East and rising Islamic extremism has increased the risk of terrorism being exported to our Nation. Additionally, we face the threat of domestic-based "lone offenders" and those who are inspired by violent extremist ideologies to radicalize and commit acts of terrorism against Americans and the Nation. Regardless of the origin of terror based threats, the Coast Guard requires MDA and MSRO capacity to detect, disrupt, and interdict efforts to exploit the MTS to transfer people, weapons and/or materials via maritime means.

- *Liquefied Natural Gas (LNG)*: As domestic energy exploration and production activities continue to increase in off-shore, coastal, and inland zones, the Coast Guard must prepare to meet the increased mission demands associated with this national economic growth. The United States' natural gas market has seen remarkable changes. The development of new hydraulic fracturing (“fracking”) technologies has allowed for production of heretofore untapped natural gas resources which has led to supply outstripping demand in the domestic energy market. The result has been increased interest from the natural gas industry to apply for Department of Energy (DOE) export authorization to ship domestically produced natural gas overseas. The growth in LNG facilities may require additional security patrols from Coast Guard vessels and aircraft, increased facility and vessel inspections, and enhanced waterways/vessel traffic management capacity.

In the future, the Coast Guard may have to adapt its regulatory framework to account for new vessel designs; the use of natural gas and other low flashpoint fuels replacing marine diesel; waterfront facilities that are engaged in the export of LNG in bulk and bunkering of LNG-fueled vessels; increased vessel traffic on inland waterways engaged in the transportation of oil, LNG, and fracking water residuals; and increased requirements to inspect offshore and deep-water outer continental shelf activities including Mobile Offshore Drilling Units (MODU), floating offshore installations, and new generation Offshore Supply Vessels (OSV).

- *Unmanned Aerial Systems (UAS)*: Terrorists, environmental extremists, foreign intelligence, and criminal elements may use UASs or remote controlled aircraft for surveillance or an attack on government or private facilities or vessels. As UASs become more prevalent, even well-meaning members of the public could unintentionally disrupt or interfere with Coast Guard operations.
- *High Value Unit Escort Changes*: The Coast Guard anticipates providing fewer High Value Unit escorts as the U.S. Navy assumes a greater level of force protection responsibility for its own assets.
- *High-Capacity Passenger Vessels*: Construction of more cruise ships and cruise ship terminals may lead to increased PWCS vessel escorts and security patrols.

Ports, Waterways, and Coastal Security Stakeholders

In executing the PWCS mission, the Coast Guard closely coordinates with the boating public; AMSC; other Federal Government agencies; state, local, tribal, and international partners; waterfront facility owners and operators; Port Authorities, and DOD. A full list of PWCS stakeholders can be found in Appendix B.

Ports, Waterways, and Coastal Security Mission Elements

- *Maritime Security and Response Operations*: MSRO activities are a suite of armed activities conducted by the Coast Guard, often with other government agency assistance, that includes aerial, shore-side, and waterborne patrols. Examples include patrols supporting presidential security operations and National Special Security Events ; escorts of High Value Units and vessels carrying select certain dangerous cargo in bulk; escorts of High-Capacity Passenger Vessels; and security boardings of suspect vessels, high interest vessels, and small vessels.

When executed, MSRO activities project deterrence and prevent, disrupt, and/or interdict terrorist attacks.

- *Maritime Security Planning*: The Coast Guard manages the Port Readiness Program, including military outload contingency preparedness activities, oversight of port readiness committees in designated strategic commercial seaports, and the maritime security (antiterrorism) contingency preparedness program.
- *Maritime Force Protection*: The Coast Guard sponsors the Navy Ballistic Nuclear Submarines Transit Protection System and is the primary liaison with the Navy Nuclear Weapons Surety technical program sponsor.
- *Counterterrorism*: The Coast Guard develops and maintains policy, doctrine, and requirements to effectively counter surface and subsurface maritime terrorism threats, including chemical, biological, radiological, and nuclear (CBRN) WMD.⁷
- *National Security Vessel of Interest Program*: This DHS program protects the people and facilities of the United States by denying or otherwise restricting access to certain vessels to the internal waters and ports of the United States and, when appropriate, to the territorial seas of the United States.⁸
- *Maritime Domain Awareness*: The Coast Guard maintains awareness of the maritime domain, using layered capabilities to monitor maritime vessels, people, cargo, infrastructure, and environment.⁹
- *Vessel and Facility Inspections*: The Coast Guard inspects commercial vessels and port facilities to promote MDA, establish operational presence, and to assess commercial compliance with federal security regulations in 33 C.F.R. 101, 103, 104, 105, and 106. These activities aim to reduce the risk of deaths, injuries, property damage, environmental impacts, and disruptions to the MTS.
- *Foreign and Domestic Port Security Assessments*: The Coast Guard conducts security assessments at foreign ports to verify maintenance of effective counterterrorism measures through substantial compliance with the ISPS Code. Additionally, the Coast Guard conducts domestic port security assessments to meet the requirements of the MTSA, to support the work of AMSC, and to identify portwide vulnerabilities.

Ports, Waterways, and Coastal Security Goals and Objectives

The following objectives are derived from national and departmental policies and strategic direction:

- *Prevent and respond to terrorist/subversive attacks within the maritime domain*: The Coast Guard engages in maritime surveillance, reconnaissance, tracking, and interdiction of threats to

⁷ DHS. *DHS Strategic Plan Fiscal Years 2012-2016*.

⁸ U.S. Coast Guard. *Annex I: National Security Vessel of Interest Program*, Enclosure 1, p. 1 (October 2012).

⁹ U.S. Coast Guard. *Maritime Domain Awareness Concept of Operations (MDA CONOPS)*, Version 1.0 (May 31, 2010) [UNLAS/FOUO].

the security of the United States, as well as responds to the consequences of such threats.

- *Reduce America’s vulnerabilities to terrorist/subversive acts:* The PWCS mission denies the use and exploitation of the MTS by terrorists as a means for attacks on U.S. territory, population centers, vessels, critical infrastructure, and key resources.
- *Protect U.S. population centers, critical infrastructure (including but not limited to the MTS), maritime borders, ports, waterways, coastal approaches, offshore regions, and the boundaries and seams between them:* PWCS especially relies upon the Coast Guard’s broad authorities and long-standing partnerships with governmental, maritime industry, and international partners.
- *Minimize the damage to and expedite recovery from terrorists/subversive attacks that may occur within the maritime domain:* Coast Guard COTPs have specific authorities and responsibilities to oversee the PWCS mission within their operational areas. These authorities also help to expedite recovery operations to minimize damage and facilitate the efficient and secure movement of goods.

Ports, Waterways, and Coastal Security Government Performance and Results Act (GPRA)
Performance Measures

Performance Measure	Measure Type¹⁰
Security Compliance Rate for High-risk Maritime Facilities	Strategic
Annual MTSA facility compliance rate with Transportation Worker Identification Credential regulations	Management
Percent reduction of all maritime terrorism risk subject to Coast Guard influence	Management
Percent reduction of maritime security risk resulting from Coast Guard consequence management	Management
Percent reduction of maritime security risk resulting from U.S. Coast Guard efforts to prevent a terrorist entering the U.S. via maritime means	Management
Percent reduction of maritime security risk resulting from U.S. Coast Guard efforts to prevent a weapon of mass destruction from entering the United States via maritime means	Management

¹⁰ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, the Office of Management and Budget (OMB), Congress, etc., and may or may not be reported publicly.

2. Drug Interdiction

The United States conducts drug interdiction operations to prevent and mitigate the corrosive impact to national and regional security, as well as community health, stemming from our Nation's demand for and use of illicit drugs. Fighting drug smuggling requires a networked approach that includes education, treatment, domestic law enforcement, interdiction, and international cooperation. The *National Drug Control Strategy* (NDCS) is the President's comprehensive policy document addressing each of these elements.

As described by the President in the 2013 NDCS, illicit drug use in America contributed to an estimated \$193 billion in crime, health, and lost productivity costs in 2007, the year for which the most recent estimate is available.¹¹ There also have been more than 450,000 drug-induced deaths in the United States since 2001.¹²

As the only federal agency with both the authority and capability to enforce national and international law on the high seas, the Coast Guard is a vital part of the NDCS and the U.S. Strategy for Engagement in Central America. The Coast Guard DRUG mission supports national and international strategies to disrupt the market for illegal drugs, prevents transnational threats from reaching the United States, and promotes regional stability. Interagency cooperation and our partnerships with many international, state, and local governments are proven keys to our success.

While the interdiction of illicit drugs in bulk quantities is an important component of drug control, disrupting the TOC networks is the national priority. In the Western Hemisphere, TOC networks – fueled by profits from drug trafficking – weaken governments, thwart legitimate economic activity, and create instability driving illegal migration challenges along our southwest border. Between October 1, 1995, and September 30, 2014, the Coast Guard interdicted more than 1,000 vessels transporting shipments of cocaine from the Transit Zone and detained more than 4,800 suspected smugglers. Follow-on U.S. Immigration and Customs Enforcement (ICE)/Homeland Security Investigations and Department of Justice (DOJ) investigations, including custodial interviews of the smugglers and the examination of evidence collected by Coast Guard boarding teams, resulted in the identification and investigation of thousands of individuals involved in the coordination, transportation, or support of these shipments. In this way, U.S. criminal investigators and prosecutors worked their way up and across transnational criminal networks.

A successful interdiction continuum involving unity of effort among the IC and federal, state, local, tribal, and international law enforcement entities is well-established. Coast Guard seizures in the Transit Zone, with prompt investigations and prosecutions, produce new intelligence and advance investigations into major transnational criminal networks. This leads to more actionable information on future events, producing follow-on seizures and thus feeding a cycle of success. The Coast Guard continues to focus its intelligence-driven efforts on seizures, investigations, and effective prosecutions, which lead to eventual extraditions, to sustain the interdiction continuum. Breaking or badly distorting the interdiction continuum, either through degraded intelligence or diminished assets, will have chronic negative impacts on maritime interdiction mission performance.

¹¹ Office of National Drug Control Policy. *National Drug Control Strategy 2012*, page iii

¹² Centers for Disease Control and Prevention, *Faststats – Death and Mortality*, <http://www.cdc.gov/nchs/fastats/deaths.htm>

The Coast Guard's maritime law enforcement counterdrug program has evolved from simply interdicting drug shipments, where success was defined by stacks of contraband, to today, where interdictions result in the prosecution of smugglers, and intelligence gleaned from those suspects provides critical information for additional interdictions. Coast Guard at-sea interdictions provide key elements of intelligence that have enabled the indictment, arrest, and in some cases, extradition to the United States of several Consolidated Prioritized Operational Targets, or drug kingpins, operating ashore in Colombia and Central America.

Drug Interdiction Trends

- *TOC*: Nations and commodity markets continue to become more closely linked. They are connected primarily by water transportation, and like any other flow (licit or illicit), are subject to exploitation by transnational criminal organizations. TOC is defined as criminal activity that is coordinated across national borders, usually involving networks of individuals or groups working in multiple countries in an attempt to execute illegal business ventures. Methods of achieving profitable ventures usually involve corruption extortion, and violence. The most common examples of TOC activity in the Western Hemisphere include the trade of illegal drugs and weapons, human smuggling and trafficking, cyber-crime, and environmental crime. Recent academic analysis estimates the total value of the global black market at nearly \$2 trillion.¹³ As maritime trade and travel have grown, criminal organizations have taken to the sea, using complex operations and tactics to avoid detection while in transit. TOC networks seek to exploit established global trade routes and conveyances used for legitimate commerce. As a result, TOC has become a transnational issue that requires international cooperation and partnerships.
- *Transition to the Littorals*: TOC networks continually shift their tactics against perceived or actual law enforcement presence. They have transitioned from using go-fast vessels and fishing vessels operating far offshore, particularly in the Eastern Pacific, to primarily using go-fast vessels along the Central American littorals to move product. This shift allows smugglers to mitigate risk by distributing bulk loads among several smaller vessels rather than consolidating larger loads on a single vessel. It also enables smuggling organizations to mix decoy vessels with those having drugs aboard to further complicate the sorting process.

Operating closer to shore provides smuggling vessels the opportunity to mix with legitimate traffic, conceal themselves in the mangroves along the coast, and exploit the limited ability of Central American countries to police their territorial seas. Go-fast vessel crews have shown a pattern of jettisoning weighted bales once detected or while being pursued by law enforcement. They also will scuttle their vessel to send the load to the bottom of the ocean. The destruction of evidence by traffickers presents a challenge for law enforcement; when the contraband cannot be located, it is more difficult to link suspected smugglers to their illicit product, which complicates prosecutions.

Other tactics employed at various times include secreting narcotics within the hull or inside tanks, mixing cocaine with liquids, and towing submerged containers that can easily be released if law enforcement action is imminent. While the prior trend toward using self-propelled semi-

¹³ *Havocscope Global Black Market Information. (2013). The World Black Market.*
<http://www.havocscope.com/market-value/>

and fully-submersible vessels has reversed, this tactic remains a viable option for smugglers, especially if the submersible technology improves.

- *Intelligence-Driven Operations:* Interdiction success relies upon unity of effort and effective intelligence cueing. TOC networks will utilize new communication technologies to their advantage challenging future intelligence collection. Further, proper surveillance, intelligence collection and analysis, and interdiction within an expansive operating area will require better cueing and greater coordination in the future. Compared to the land domain, the maritime domain is often complicated by a lack of defined transit routes, pathways, or chokepoints, which increases the ability of drug traffickers to evade detection or interdiction. More than 90 percent of maritime interdictions are cued by intelligence rather than expending costly ship and aircraft hour on random patrols. At current asset allocation levels for the drug mission, Coast Guard targets approximately one third of actionable intelligence provided by Joint Interagency Task Force (JIATF) South. Looking to the future, the Coast Guard intends to better sort and discriminate targets for maximum effect against TOCs, prioritizing targets for maximum impact to the TOC network. The Coast Guard also intends to expand its Coast Guard Support to Interdiction and Prosecution program to support specific prosecution case requirements when a partner nation retains jurisdiction.

Drug Interdiction Stakeholders

In executing the DRUG mission, the Coast Guard works closely with other DHS components; DOD, the Department of State (DOS), and DOJ; the Interdiction Committee; JIATF-South; JIATF-West; International partners; and members of the IC. A full list of DRUG stakeholders can be found in Appendix B.

Drug Interdiction Mission Elements

- *Joint Interagency Task Force South:* JIATF-South has the statutory responsibility for the detection and monitoring of illicit drugs bound for the United States in support of law enforcement agencies.
- *Coast Guard Assets:* The Coast Guard contributes significant forces of aircraft, cutters, and personnel to JIATF-South for the detection and monitoring mission; leads the critical phases of maritime interdiction and apprehension of suspect vessels and their crews; and delivers suspects, contraband, and evidence to investigators and prosecutors in support of the NDCS goals.
- *Intelligence-Informed Operations:* Intelligence is all-source and comes from the national IC, including DOD, and domestic law enforcement agencies. Tactical intelligence is routinely shared by JIATF-S with allied and partner nations operating in the Western Hemisphere Transit Zone. Modern drug traffickers use an ever-changing combination of boats, low-profile vessels, ships, aircraft, and most recently semi- and fully-submersible craft to evade law enforcement efforts. Intelligence-driven operations are critical to fighting this evolving threat.
- *Strategic Concepts:* The counter-drug mission is characterized by continuously evolving interdiction capabilities, tactics, and authorities employed to disrupt and apprehend drug traffickers who are highly adaptive to changes in the external environment. A fundamental strategy of the counter-drug mission is to interdict primary cocaine flow at the most tactically

effective point. This means interdicting cocaine in bulk and in its purest state, closer to source nations, before it reaches transshipment points in Central America or Mexico where it is divided up into even smaller packages. Preventing drugs from reaching transshipment points also helps to reduce the destructive trail of violence, corruption, and instability caused by criminal networks operating within partner-country borders.

- *Bilateral Agreements:* The Coast Guard has more than 40 maritime counterdrug law enforcement agreements globally, including nearly every country in the primary Western Hemisphere drug transit zone. These agreements increase the operational reach of U.S. assets and enable partner nations to better respond to threats in their own waters.
- *Interdiction Cycle of Success:* Successful interdictions and subsequent prosecutions lead to actionable intelligence on future events, which produces follow-on seizures and additional intelligence, thus feeding a cycle of success. Suspects divulge information during prosecution and sentencing that is critical to indicting, extraditing, and convicting drug kingpins and dismantling criminal networks.
- *Coast Guard Western Hemisphere Strategy:* To help combat the unlawful activities of illicit networks, the Coast Guard has developed a strategy that focuses on understanding and identifying TOC networks, then targeting and interdicting those networks for prosecution.
- *DHS Joint Task Forces (JTF):* In November 2014, the Secretary of Homeland Security established three JTFs in support of the Department's Southern Border and Approaches Campaign Plan (SBACP). JTFs incorporate elements of the Coast Guard, U.S. Customs and Border Protection (CBP), ICE, and U.S. Citizenship and Immigration Services (USCIS), and integrate capabilities of the remaining components as needed. JTFs enhance departmental flexibility by enabling the shifting and massing of DHS assets as needed along the southern border. The DHS SBACP provides for unified operations across air, land, and maritime domains to better counter adversary operations in the drug source zone, along legal and illegal pathways, and through networks, to the United States.

Drug Interdiction Goals and Objectives

The Coast Guard's DRUG mission's primary goal is to prevent and mitigate the transshipment of illicit drugs to U.S. shores. Maritime drug flow is the product of TOC networks. These illicit actors undermine legitimate governmental institutions and create regional instability through the use of fear and violence. Interdicting illicit drug-related trafficking as close to the source as possible also helps to dismantle TOC networks that directly threaten the national security of the United States, exploit U.S. citizens, and destabilize our Western Hemisphere neighbors. This goal is accomplished through projection of an effective law enforcement presence, primarily in and over the six million square-mile drug transit zone of the Caribbean Sea, the Gulf of Mexico, and the Eastern Pacific Ocean. The following objectives are derived from National and Departmental policies and strategic direction:

- *Interdiction Presences:* Maintaining a strong interdiction presence to deny smugglers access to maritime routes and to deter trafficking activity.

- *Support to Source and Transit Zone Nations:* Strengthening ties and governance efforts with source and Transit Zone nations increases their willingness and ability to reduce the production and trafficking of illicit drugs within their sovereign boundaries, including territorial seas.
- *Support to Interagency and International Efforts:* Providing support for interagency and international efforts to combat drug smuggling through increased cooperation and coordination. Coast Guard operations align with the National Interdiction Command and Control Plan, which targets the flow of cocaine and other illicit products toward the United States.

Drug Interdiction GPRA Performance Measure

Performance Measure	Measure Type ¹⁴
Removal rate for cocaine from non-commercial vessels in maritime transit zone	Management

¹⁴ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

3. Alien Migrant Interdiction Operations

Coast Guard AMIO promote safe, legal, and orderly migration by enforcing U.S. immigration laws, upholding international conventions against human smuggling through at-sea interdictions, and repatriating undocumented migrants attempting to reach the United States. The Coast Guard accomplishes this mission with other federal, state, and local agencies, including USCIS, ICE, CBP, and DOS.

In support of this mission, the Coast Guard engages partner nations by supporting partners' own efforts to enhance their border control and maritime law enforcement capabilities. While executing this mission, Coast Guard prioritizes safety of life at sea, and upholding the human dignity of migrants interdicted at sea.

Illegal maritime migration during steady state conditions poses U.S. sovereignty and national security concerns, and presents a dangerous undertaking for the migrants themselves. Migrants often depart source countries in grossly overloaded or makeshift, unseaworthy vessels, in an attempt to reach the United States. The Coast Guard regularly rescues migrants from distress at sea, and provides them food, water, and shelter until a final disposition is determined. Other migrants depart source countries in go-fast vessels or pleasure craft in risky smuggling ventures. Detecting and stopping smuggling vessels, which blend with legitimate traffic or simply outrun law enforcement assets, challenges the Nation's ability to control its borders. Regardless of the means of transport they choose or can afford, migrants face many hazards in their journey, including unfavorable weather conditions, exposure to the elements, and even the smugglers themselves.

In addition to steady-state maritime migration, the Coast Guard responds to periodic surge and rarer mass migrations. A mass migration can involve tens of thousands of migrants from one or more nations. During steady state operations, Homeland Security Task Force – Southeast monitors indicators and warnings that are derived from a variety of political, economic, social, and historical factors that could cause spikes in migrant activity. Monitoring indicators and warnings, as well as other push and pull factors that may drive a surge in migration, is critical to deterring would-be migrants from taking to sea. During steady state and surge operations, but particularly during a mass migration, overt Coast Guard presence, aggressive public outreach, and rapid, direct repatriations are critical to stemming the flow of undocumented migrants at sea.

Alien Migrant Interdiction Operations trends

- *Mass Migrations:* Maritime mass migrations are affected by both push and pull factors. Some of the pushes that may cause a mass migration include the after-effects of natural disasters, continued poor socio-economic conditions, and perception of or actual policy change in a source country. For example, poor socio-economic conditions played a primary role in pushing more than 154,000 Cuban migrants to sea during the Mariel Boatlift in 1980 and Operation Able Vigil in 1994. The same factors drove more than 26,000 Haitian migrants to sea during Operation Able Manner in 1994 and Operation Able Sentry in 2004. Actual or perceived policy changes in the United States have proven to be an important driver for maritime migration. Haitian migrants were pulled to the sea following DHS's suspension of expedited removals of noncriminal Haitian migrants to Haiti after the 2008 earthquake, while Cubans were pulled to the sea in December 2014 because of the perception that the Cuban Adjustment Act would be repealed.

- *Cuban migrant flow:* As the United States and Cuba normalize relations, the dynamics of the push and pull factors affecting maritime migration flow will change significantly, which will likely result in short-term spikes but long-term reductions and stability. High levels of Cuban smuggling were observed from FY 2005 through FY 2007; however, this flow subsequently declined due to enhanced prosecution of smugglers and a family reunification program which removed many incentives supporting the Cuban smuggling business. The introduction of more effective tactics by the Coast Guard to stop noncompliant vessels made it increasingly difficult for migrant smugglers to successfully complete trips. Additionally, efforts of the U.S. Attorney to move smuggler trials out of Miami yielded more effective prosecutions that helped to dampen smuggling activity. Finally, with the family reunification program, relatives of Cuban migrants who lived in Florida could opt to bring their relatives to the United States as an alternative to using smugglers. Cuban migrant flow has steadily increased since FY 2012, mostly due to an improving U.S. economy, continued declining socio-economic conditions in Cuba, and rumors that the Cuban Adjustment Act will be repealed or modified.
- *Dominican Republic migrant flow:* Barring any significant economic or political changes in the Dominican Republic, illegal migration is expected to remain low. Three main issues likely resulted in the decreased flow of Dominican migrants. First were improvements to the U.S. Transportation Security Administration's (TSA) identification system requiring identification cards for flights out of Puerto Rico to the continental United States. Most Dominican migrants want to migrate to the continental United States, and in the past they could easily fly out of San Juan, Puerto Rico, because identification requirements were minimal inside the U.S. customs zone. With the current TSA restrictions, it is much harder for migrants to use false identification documents to fly to the continental United States. Secondly, DOS and Coast Guard authorities persuaded Dominican authorities and the Dominican Navy to more actively prevent illegal migration. Thirdly, the Coast Guard is using biometrics in the Mona Passage to identify and prosecute smugglers, fugitives, and recidivists.
- *Haitian migrant flow:* With continued poor prospects in Haiti for economic improvements, the expected departure of the United Nations security force in 2016, and an active diaspora, Haitian flow is expected to continue to rise steadily. Haitian flow spiked in FY 2009, likely because of rumors that there would be a favorable change in immigration policy following the election of President Obama. The Haiti earthquake of January 2010, however, changed many push and pull factors driving illegal maritime migration. The earthquake relief effort resulted in large sums of foreign money flowing into the country. As a result, many Haitians who might otherwise have considered emigration chose to remain in the country. From FY 2012 to FY 2014, however, Haitian flow in the Mona Passage increased dramatically, as smugglers exploited DHS's suspension of expedited removal of noncriminal Haitian migrants following the earthquake. In early FY 2015, DHS resumed expedited removal for Haitians who land in Puerto Rico, effectively cutting off the Mona Passage to these dangerous smuggling ventures. Overall known Haitian flow, a population driven from Haiti for economic reasons, continues to increase because of the ongoing U.S. immigration reform debate and socio-economic conditions in Haiti.

Alien Migrant Interdiction Operations Stakeholders

In executing the AMIO mission, the Coast Guard works closely with other DHS components; DOS; state, local, and international partners; industry; and members of the IC. A full list of AMIO stakeholders can be found in Appendix B.

Alien Migrant Interdiction Operations Mission Elements

The United States claims sovereignty over 4.5 million nautical square miles of maritime territory, including 100,000 miles of coastline and inland waterways.^{15,16} The immense size of this territory is further complicated by vast amounts of vessel traffic involved in commerce and recreation, and limited Coast Guard and partner capacities to monitor it. Hence, the Coast Guard employs an integrated and layered system to address maritime security threats, including the threat of illegal migration. The Coast Guard performs the AMIO mission in three layers.

- *Global Engagement with Partners:* Strategic engagement aligns Coast Guard efforts with international bodies and partner nations, while supporting their efforts to enhance their own border control and law enforcement capabilities. These efforts aid in deterrence of illegal migration.
- *Operations in Major Threat Vectors:* There is a particular Coast Guard focus on major threat vectors where maritime migrant flows are persistent. The Coast Guard conducts migrant interdiction operations as a deterrent to a mass maritime migration, to ensure the safety of lives at sea, and to promote safe and legal migration towards the United States.
- *Offshore Presence and Deterrence:* Presence along U.S. maritime borders and coastal operational areas helps deter illicit activity, including illegal migration. The most effective deterrence to maritime migration is the direct repatriation of migrants to their country of origin or departure following interdiction.
- *Bilateral Agreements:* The United States maintains bilateral agreements with the governments of the Commonwealth of the Bahamas, the Dominican Republic, Haiti, and Panama, which enable the Coast Guard to interdict and expeditiously repatriate migrants to the country from which they last departed, regardless of migrants' nationalities. These agreements allow for speedy disposition and repatriation of migrants, which is critical to deterrence and continued interdiction operations.
- *DHS Joint Task Forces:* In November 2014, the Secretary of Homeland Security established three JTFs in support of the Department's SBACP. JTFs incorporate elements of the Coast Guard, CBP, ICE, and USCIS, and integrate capabilities of the remaining components as needed. JTFs enhance departmental flexibility by enabling the shifting and massing of DHS assets as needed along the southern border. The DHS SBACP provides for unified operations across air, land, and maritime domains to better counter adversary operations in the migrant source zone, along legal and illegal pathways, and through networks, to the United States.

Alien Migrant Interdiction Operations Goals and Objectives

The Coast Guard's goals with AMIO are to deter a mass maritime migration, prevent the loss of life at sea, and to promote safe, legal migration toward the United States. The following objectives are derived from national and departmental policies and strategic direction:

¹⁵ National Ocean Service. <http://oceanservice.noaa.gov/facts/shorelength.html>

¹⁶ United States Maritime Administration. <http://www.marad.dot.gov/ports/marine-transportation-system-mts/>

- *Enforcement of U.S. Immigration Laws & Legal Migration:* The Coast Guard performs the AMIO mission to preserve the system of legal immigration. In the words of the DHS QHSR, “smart and effective enforcement and administration of our immigration laws remains a core homeland security mission.” As a federal law enforcement agency, the Coast Guard is uniquely authorized to, and has the capacity to, conduct law enforcement activities on the waters where it exercises jurisdiction. The success of legal immigration systems relies on enforcement actions against violators.
- *Homeland Security:* The Coast Guard performs the AMIO mission as an important part of broader efforts to protect U.S. maritime borders by deterring or interdicting threats before they reach U.S. shores. Within the context of the mission, these border security threats can take the form of attempts of illegal entry of terrorists or transnational criminals, or mass migration to the level of threatening homeland and national security.
- *Minimize loss of life or injury:* The Coast Guard performs the AMIO mission to prevent the loss of life at sea. Maritime migration is, historically, a very dangerous act with desperate migrants routinely attempting to cross broad stretches of hazardous ocean waters in grossly overloaded and unsafe craft. These migrant vessels could range from hundreds of migrants on a small wooden vessel to a single migrant on an inner tube. Whether operated as a collective venture, or by profit-driven migrant smugglers and TOCs, many migrant vessels have sunk or grounded and thousands of migrants have perished at sea. Given decades of Coast Guard migrant interdiction experience, a fundamental tenet is this: the best way to prevent the loss of life at sea is to prevent migrants from attempting maritime migration in the first place.
- *Regional and International Security:* The Coast Guard promotes international and regional security by deterring and interdicting migrants, supporting international conventions against human smuggling, and leading various international cooperative efforts. International and regional security is undermined when partner nations are unable to control illegal maritime migration. Indeed, the security forces of small nations can often be overwhelmed by only a few migrant boats, and undocumented migrants often strain civil systems. The Coast Guard aids partner nations by deterring and interdicting migrants who may land in waypoint nations with the intent of eventually reaching U.S. shores. Additionally, the Coast Guard fosters many international cooperative efforts to deter and interdict migrants, build partner nation capacity for interdiction, and enhance operational efficiency.

Alien Migrant Interdiction Operations GPRA Performance Measures

Performance Measure	Measure Type¹⁷
Migrant interdiction effectiveness in the maritime environment	Strategic
Number of undocumented migrants who attempt to enter the U.S. via maritime routes that are interdicted	Management

¹⁷ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

4. Defense Readiness

The Coast Guard is a member of the Armed Forces. Upon declaration of war, or when the President directs, the Coast Guard operates under the authority of the Department of the Navy. This requirement is foundational in the Coast Guard's uniformed, military character. From its diverse set of missions and capabilities, the Coast Guard sustains a unique set of specialized skills that the Navy has relied upon time and again in the Nation's wars. A recent example of the synergy between the Services is the Cooperative Strategy for 21st Century Seapower; this strategy reaffirms the importance of the maritime domain and the Coast Guard, Navy, and Marine Corps' role in supporting national, defense, and homeland security priorities across the globe.

The DR mission supports the national military strategy and DOD operations by ensuring that Coast Guard assets are capable and equipped to deploy and conduct joint operations in support of the most critical needs of the combatant commanders. Under 14 U.S.C. 1, the Coast Guard is "at all times an armed force of the United States." As part of the joint force, the Coast Guard maintains its readiness to carry out military operations in support of the policies and objectives of the U.S. Government.¹⁸ This includes the authority and capability for Coast Guard area commanders to act as task force commanders in direct support of DOD for homeland defense and other missions. The Coast Guard's DR operations are centered on protecting the maritime domain, including international waters, the maritime approaches to the United States, territorial seas, and other navigable waters, through an effective partnership with the U.S. Navy. The Coast Guard supports DOD maritime homeland defense operations through a joint command, control, and coordination structure using existing DOD and Coast Guard operations centers.

Coast Guard multi-mission forces must be able to integrate with DOD in the full range of maritime operations. Overseas deployments demonstrate to DOD, the joint forces, and combatant commanders that the Coast Guard possesses relevant competencies that can contribute to the successful accomplishment of naval warfare missions and Theater Security Cooperation (TSC) initiatives. For example, Coast Guard Port Security Units have been deployed almost continuously to strategic ports in Kuwait since 2002 for port security; island class patrol boats have conducted security for Iraqi oil platforms continuously since 2002, and in more recent years have been conducting TSC missions throughout the U.S. Central Command (USCENTCOM) Area of Responsibility (AOR). The Coast Guard receives funding for Navy-type/Navy-owned equipment, including combat systems that are vital to ensure interoperability with the Navy.

Participating in overseas deployments is an important demonstration of the Coast Guard's commitment to the national fleet policy. Coast Guard medium- and high-endurance cutters have made TSC and maritime interdiction operations deployments to USCENTCOM, U.S. Pacific Command, U.S. European Command, and U.S. Africa Command AORs in support of DOD missions numerous times over the past 20 years. For these and other missions, Coast Guard cutters and other assets act as a force multiplier for DOD, with DOD funding many of the defense and warfighting capabilities on the asset in order to use them in war and for other contingencies.

Defense Readiness Trends

¹⁸ U.S. Coast Guard. *Operations*, p. 5 (Coast Guard Publication 3-0; February 2012)

- *South China Sea/Rebalance to Asia:* Tensions are likely to grow in the South China Sea, where regional conflict is exacerbated by a host of overlapping resource claims and a tangled web of alliances. “China, Taiwan, Vietnam, Malaysia, Brunei, and the Philippines have competing territorial and jurisdictional claims, particularly over rights to exploit the region's possibly extensive reserves of oil and gas. Freedom of navigation in the region is also a contentious issue, especially between the United States and China over the right of U.S. military vessels to operate in China's two-hundred-mile EEZ. These tensions are shaping—and being shaped by—rising apprehensions about the growth of China's military power and its regional intentions.”¹⁹ The Coast Guard already plays a role in the region, participating in joint operations and training, conducting officer exchanges, leading port security inspections, and working with international stakeholders through the North Pacific Coast Guard Forum (China, Russia, Korea, Canada, and the United States). As the United States increases its presence in the region, the Coast Guard may be asked to play an expanding role given both its expertise in the maritime issues facing the Asian-Pacific nations (e.g. fisheries enforcement, jurisdictional claims) and its status as a non-DOD armed force.
- *Resource competition:* As economies and populations grow, there will be increased competition for natural resources such as food, water, minerals, and energy. Additionally, as the Arctic becomes more accessible, exploration and development may generate disputes over resources.
- *Non-state actors:* Continued threat from nonstate actors and organizations, such as terror or criminal organizations, will thrive where instability continues to exist on the edges of stable powers. These nontraditional threats require coordinated interagency responses to counter effectively. In the context of DR, the Coast Guard anticipates continued deployment of expeditionary Coast Guard forces overseas to assist combatant commanders with training, regional capacity building, and maritime security.

Defense Readiness Stakeholders

In executing the DR mission, the Coast Guard works closely with DOD, other government agencies, foreign naval and maritime forces, and members of the IC. A full list of DR stakeholders can be found in Appendix B.

Defense Readiness Mission Elements

- *Maritime Interception/Interdiction:* Maritime intercept operations are designed to stop, board, and search vessels attempting to enter or depart from a belligerent country. This allows the Coast Guard to enforce sanctions or embargoes of contraband or prohibited cargoes from reaching the enemies of the United States or the world. As part of these activities, the Coast Guard is the U.S. competent authority for eleven bilateral proliferation security initiative agreements. These agreements provide the Coast Guard with the authority to board and detain vessels at sea that are suspected of carrying WMD, their delivery systems, and related materials.

¹⁹ Glaser, Bonnie S. *Armed Clash in the South China Sea: Contingency Planning Memorandum No. 14*. Council on Foreign Relations, April 2012. <http://www.cfr.org/world/armed-clash-south-china-sea/p27883>.

- *Port Operations, Security, and Defense:* Port Operations, Security, and Defense operations provide security to the deployment of military resources during contingencies at seaports for both embarkation and debarkation.
- *Theater Security Cooperation:* TSC includes all military activities involving other nations intended to shape the security environment in peacetime. TSC serves to demonstrate our security commitment; develop partner nation capabilities; improve interoperability; reassure allies, friends, and coalition partners; influence targeted countries and terrorist groups; promote transparency; convey democratic ideals; deter aggression; and help to relieve sources of instability before they become military crises.
- *Coastal Sea Control:* Coastal sea control operations ensure the unimpeded use of designated offshore areas by the United States and friendly forces.
- *Rotary Wing Air Intercept (RWAI):* Responsibility for national air defense of the United States rests with the North American Aerospace Defense Command under Operation Noble Eagle. Air defense is a resource-intensive and relatively high-risk operation requiring specialized training and a sustained presence in the area of operations.
- *Combating Terrorism:* Geographic Combatant Commanders may request specific Coast Guard advance interdiction capabilities to supplement DOD forces to combat terrorism. Combating terrorism operations run the spectrum of low to high threat missions that require specialized training and a sustainable presence in the area of operations.
- *Maritime Operational Threat Response:* The Maritime Operational Threat Response Plan is the presidentially approved process to achieve a coordinated whole-of-government response to threats against the United States and its interests in the maritime domain. The Maritime Operational Threat Response Plan is used daily by the U.S. Coast Guard and supports Coast Guard mission execution by ensuring timely, coordinated, and decisive action to counter the spectrum of maritime threats.
- *Military Environmental Response:* The Coast Guard and the Navy have shared interests and complementary military environmental response capabilities in responding to incidents of marine pollution in and around the battle space. The ability to respond to significant marine pollution incidents during the security, stability, transition, and reconstruction phase of a campaign is instrumental in successful war termination and the restoration of critical infrastructures.
- *Freedom of the Seas:* The Coast Guard works with DOD, DOT, DOS, and the commercial shipping sectors to conduct freedom of navigation operations. The purpose of these operations is promote governance and the rule of law by exercising internationally recognized maritime rights – including transit passage through international straits– to ensure global mobility for military, government, and commercial shipping interests.

Defense Readiness Goals and Objectives

Coast Guard forces are uniquely positioned to assist combatant commanders with security cooperation and capacity building. The Commandant annually approves the Service's Global Force Management Allocation Plan apportionments, which typically include worldwide deployments of

cutters, aircraft, and deployable specialized forces. The following key general outcome measures are derived from national and departmental policies and strategic direction:

- *Provide Coast Guard forces to support combatant commander theater campaign plan end-states for steady state operations:* The Coast Guard has unique authorities and competencies to carry out homeland security and defense operations. These authorities and competencies may be harnessed by the combatant commanders to achieve theater campaign plan end-states or to ensure a defense in depth of the homeland.
- *Provide mission-matched Coast Guard capabilities to support DOD contingency plans:* Political and economic instability throughout the world requires the Coast Guard to support DOD and the Interagency in maintaining global persistent presence. Persistent presence activities range across the spectrum of mission elements from peace to conflict. These activities are necessary to maintain or restore an environment that facilitates peace and order, thus advancing United States interests.
- *Provide trained personnel with the requisite knowledge and experience to review contingency plans and to write Coast Guard supporting plans in support of the Joint Force Maritime Component Commander:* Embedded staff coordinates Coast Guard roles and responsibilities in military plans, operations, contingencies, and exercises. They assist in the preparation of orders, coordinate military courses of action, and review plans and strategic documents.
- *Provide effective and efficient Defense Readiness and Defense Operations performance management:* The DR mission and defense operations activities are based on agreed-upon forces. The intent is to provide effective and efficient outcome-oriented service to the combatant commanders.

Defense Readiness GPRA Performance Measures

There are currently no GPRA Strategic or Management level performance measures for this mission. The Coast Guard is working to develop an approved GPRA measure suite for this mission.

5. Other Law Enforcement

The Coast Guard OLE mission protects the U.S. EEZ from encroachments by Foreign Fishing Vessels (FFV) and enforces regulations and agreements to curtail Illegal, Unreported, and Unregulated (IUU) fishing. The United States has sovereign rights over all living and nonliving resources within its EEZ, which encompasses more than 4.5 million square miles of waters within 200 NM of the U.S. coastline.²⁰

IUU fishing activity is global in reach, and it adversely affects marine ecosystems by distorting competition and jeopardizing the economic survival of coastal communities whose livelihoods depend upon fisheries. Actors engaged in IUU fishing often exploit the gaps between governance structures and operate in areas where there is little or no effective enforcement presence. Coast Guard efforts to deter and combat IUU fishing span both domestic and international fisheries, and they bridge the Service's maritime security and maritime stewardship goals. These goals, outlined in the *U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship*²¹, are driven by national policy including *Presidential Decision Directive 36: Protecting the Ocean Environment*, legislation such as the *Magnuson-Stevens Fisheries Conservation and Management Act* (MSFCMA), and international ocean governance structures, such as United States membership within international Regional Fishery Management Organizations (RFMO).²²

As global fish stocks decline, financial incentives increase for foreign fishers to poach U.S. stocks. Although foreign encroachment can occur anywhere in the EEZ, it is most likely to occur in remote areas where high-value or high-quantity fisheries are found, such as in the Bering Sea along the U.S.-Russian Maritime Boundary Line, in the western and central Pacific around Hawaii and outlying U.S. territories, and in the Gulf of Mexico along the U.S.-Mexican maritime border. These incursions represent a theft of U.S. resources and a violation of American sovereignty.

The Coast Guard provides law enforcement presence in response to legislative and statutory mandates to provide security and stewardship of the U.S. EEZ. Enforcement is a joint responsibility of the National Oceanic and Atmospheric Administration (NOAA) and the Coast Guard. NOAA Fisheries is responsible for the stewardship of the Nation's ocean resources and habitat. They manage productive and sustainable fisheries, safe sources of seafood, the recovery and conservation of protected resources, and healthy ecosystems. The Coast Guard is the lead agency for at-sea enforcement of living marine resource laws and regulations. It is the only U.S. agency with both the infrastructure and authority to project a law enforcement presence throughout the U.S. EEZ and in key areas of the high seas.

The framework for the international management of living marine resource stocks resides within the United Nations Convention Law of the Sea. In 1995, the United Nations concluded the Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks by adopting a landmark agreement (United Nations Fish Stock Agreement, or UNFSA) outlining management of those types of

²⁰ U.S. Coast Guard. *Operations* (Coast Guard Publication 3-0; February 2012).

²¹ U.S. Coast Guard. *Safety Security and Stewardship* (2011).
http://www.uscg.mil/history/docs/dhs/dhs_cgwp_2011.pdf

²² U.S. Coast Guard. Written Testimony of Coast Guard Judge Advocate General and Chief Counsel Rear Admiral Frederick Kenney for a Senate Committee on Foreign Relations hearing titled "Fisheries Treaties and Port State Measures Agreements" (12 February 2014); <http://www.dhs.gov/news/2014/02/12/written-testimony-uscg-senate-committee-foreign-relations-hearing-titled-%E2%80%9Cfisheries>

fisheries, which entered into force on December 11, 2001. Under this agreement, the United States may board any UNFSA-party vessel on the high seas within a region managed by a fisheries agreement for straddling stocks or highly migratory species that the United States is party to, whether or not the flag state of the vessel is a member of the regional fisheries body enacted by the agreement. The purpose of such boardings is to ensure compliance with conservation and management measures for straddling stocks and highly migratory fish stocks established by the respective regional fisheries management organization.

Other Law Enforcement Trends

- *Global Impact:* According to the United Nations Food and Agriculture Organization, 85 percent of the world's major marine fish stocks are fully exploited, overexploited, or significantly depleted. Nearly 4.3 billion people depend on these stocks as a significant source of dietary protein.²³ As has been witnessed throughout the globe, instability and conflict can be exacerbated by the squandering of renewable resources. For example, the loss of accessible fisheries resources in Senegal preceded mass migration, rampant illegal fishing and environmental degradation in coastal waters contributed to the rise of organized piracy in Somalia, and sharp increases in food prices lead to riots in Mozambique.

Experience demonstrates, and the record shows, that these types of crises often can be prevented, or at least mitigated, to reduce indirect risk to domestic interests. The failure of highly migratory fish stocks shared by the United States, or the disappearance of subsistence stocks in the waters adjacent to less stable states, could have global implications. Recent studies put the total value of global economic loss to IUU fishing from \$10 billion to \$23.5 billion, representing between 11 and 26 million tons.²⁴ While IUU activity on the high seas contributes to this figure, the majority of the losses occur within the EEZs of foreign coastal states.

- *Climate Change Impacts:* Climate change may result in the need for new marine protected areas to ensure resiliency of living populations and natural systems in flux. Changes in fishing patterns could place additional demands on air and surface surveillance efforts, and may require new tactics to monitor fishing vessels that venture farther out to sea in search of shifting stocks. Alterations in the status of fish stocks and the health of marine protected resources (including protected areas) will result in increasingly restrictive management measures. Rising water temperatures will lead to additional ice-free areas in international waters. If these areas are opened to fishing/exploitation, seasonal allocation of assets, and geographic distribution of those assets may need to shift. Deteriorating conditions of living marine resource stocks may result in a public outcry and an expectation for government managers and enforcement agencies to take action both domestically and internationally. The collapse of naturally occurring biological ecosystems due to changing thermal, salinity, or acidity of the oceans may increase illicit activity, requiring greater surveillance and a higher contact rate in order to protect United States interests.

Other Law Enforcement Stakeholders

²³ United Nations Food and Agriculture Organization, Fisheries and Aquaculture Department, *The State of World Fisheries and Aquaculture 2012* (2012).

²⁴ National Marine Fisheries Service: *Illegal Fishing: Not in Our Ports*. Accessed 05 February 2014 via

In executing the OLE mission, the Coast Guard works closely with DOS, NOAA, the United Nations, international partners, and members of the IC. A full list of OLE stakeholders can be found in Appendix B.

Other Law Enforcement Mission Elements

OLE efforts strengthen the implementation of the U.S. National Plan of Action to Combat IUU Fishing and support national strategies, including the efforts under the Presidential Task Force on Combating Illegal, Unreported, and Unregulated Fishing and Seafood Fraud. By assisting other nations with global maritime governance, the Coast Guard has made significant progress in combating IUU fishing and ensuring sustainable use of LMR. Coast Guard resources deter IUU fishing and benefit the United States by conserving transboundary fish stocks, developing the enforcement capabilities of partner nations, and strengthening the rule of law in the maritime domain. Specific mission elements include:

- *Deterrence, Detection and Interdiction:* Deterrence, detection, and interdiction of illegal incursions into the U.S. EEZ and territorial waters by FFVs that threaten our Nation's renewable natural resources and territorial integrity. This includes patrols and enforcement by Coast Guard cutters and aircraft.
- *Compliance:* Ensuring compliance with international agreements for the management of LMR through enforcement of conservation and management measures created by RFMOs.
- *International Partnerships:* Coordinating operations to build organic capacity among partner nations to support sustainable resource management and commercial fishery regulations. This includes ship-rider and bilateral agreements to facilitate partner-nation enforcement. These partnerships serve as force multipliers, helping to monitor compliance with various international agreements and to deter IUU fishing activity.²⁵

Other Law Enforcement Goals and Objectives

The goal of the OLE mission is to detect, deter, and interdict FFV IUU fishing activity to prevent illegal encroachment by FFVs thereby protecting U.S. marine resources and ensuring the health of U.S. fisheries. The following objectives are derived from national and departmental policies and strategic direction:

- *Ensure the integrity of the U.S. EEZ maritime border.*
- *Deter illicit actors and IUU fishing from areas of U.S. jurisdiction.*
- *Support the elimination of illegal fishing practices on the high seas.*
- *Assist with the implementation of U.S. foreign policy through enforcement of international living marine resource regimes and international agreements.*

²⁵ U.S. Coast Guard. *Operations*, p. 8 (Publication 3-0; February 2012).

Other Law Enforcement GPRA Performance Measures

Performance Measure	Measure Type ²⁶
Number of detected incursions of foreign fishing vessels violating U.S. waters	Strategic

²⁶ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

6. Marine Safety

The MS mission's focus is to ensure the safety of life and the prevention of accidents in the maritime domain and to provide for the safe and secure flow of commerce through the MTS. With more than 90 percent of global trade by weight (62 percent by value) moving by sea²⁷, much of it fueling U. S. jobs and industry, our Nation's economy and security are inextricably linked to the sea, our ports, and our waterways. The Committee on the Marine Transportation System (CMTS) reports that waterborne cargo and associated activities contribute some \$650 billion annually to the U.S. gross domestic product, sustaining more than 13 million jobs. MTS activities provide more than \$200 billion in annual maritime sector federal, state and local taxes.²⁸

America's ports and waterways are a leading catalyst and engine for regional economic growth and prosperity.²⁹ The domestic MTS consists of some 25,320 miles of navigable waterways, including rivers, bays and channels and many thousands of additional miles on the Great Lakes and Saint Lawrence Seaway System. The United States has more than 3,200 marine terminals in over 360 ports, along with thousands of recreational marinas.³⁰ The health of the region and Nation's economy is therefore dependent upon the safety and security of America's ports and MTS.

Using its unique authorities as a regulatory, compliance, and enforcement agency, with broad domestic and international reach, the Coast Guard's Marine Safety program operates across a broad spectrum of activities, including establishing the safety and security standards for vessels, mariners and facilities; verifying compliance with those standards; and taking enforcement action against non-compliant actors. These actions define the prevention concept of operations (CONOPS) and safeguard the flow of commerce through the MTS.

The strategy of prevention effectively begins long before a vessel or mariner is allowed to operate in U.S. waters; it starts with the fundamental work to develop the rules and regulations by which the MTS operates. The Coast Guard is the primary federal agency for developing safety, security, and environmental protection standards in the maritime domain. With a skilled and educated workforce, and a solid understanding of causal factors and risk management principles, the Coast Guard promulgates regulations which establish the foundational rules for all elements of the MTS. The Coast Guard participates with industry partners (through *Federal Advisory Committee Act* bodies), and the public, in the development of sound domestic regulations. Additionally, recognizing that the overwhelming majority of international trade is carried on foreign flag ships, Coast Guard leaders also play an active role in the development of international standards at the IMO, an arm of the United Nations.

Building upon its relationships, the Coast Guard works with other standards and industry organizations to develop consensus on standards for incorporation into Coast Guard regulations. Typically, these standards address detailed design, fabrication, operational, or training issues which

²⁷ International Maritime Organization. *International Shipping Facts and Figures: Information Resources on Trade, Safety, Security, Environment.* March 2012.

²⁸ Committee on the Marine Transportation System. "MTS Fact Sheet."

http://www.cmts.gov/downloads/CMTS_MTS_Fact_Sheet_9.15.14_FINAL.pdf

²⁹ Craig Allen, "Future Ports Scenarios for 21st Century Port Strategic Planning," *Journal of Transportation Law, Logistics & Policy* 79:2 (May 2012): 89., available at <http://ssrn.com/abstract=1967856>.

³⁰ Committee on the Marine Transportation System, "Why the MTS Matters," available at <http://www.cmts.gov/Background/Index.aspx>.

require broad participation and regular review and update. Through the incorporation of third-party and industry standards, the Coast Guard builds relationships with stakeholders, leverages the expertise of industry partners, stays abreast of changes in technology, and increases the efficiency of the rulemaking process.

The Coast Guard's Marine Safety program systematically conducts inspections of United States and foreign vessels, marine facilities, and reviews plans for vessel construction, alteration, equipment, and salvage to ensure compliance with safety, security, and environmental protection standards. These inspections are comprehensive in nature, and often encompass lifesaving, firefighting, propulsion and auxiliary machinery, electrical equipment, piping, industrial safety, navigation, and pollution prevention systems. Coast Guard vessel, facility, and container inspectors rigorously execute periodic and unannounced inspections and examinations. In addition, specialty units within the compliance program carry out critical functions with regard to mariner certification and vessels documentation. The National Maritime Center is responsible for certifying that all of the more than 210,000 active U.S. mariners meet applicable experience, education, and health requirements, issuing approximately 60,000 mariner credentials every year. The Coast Guard also provides the methods for industry and port state officials to verify the qualification of each mariner, and approves the required mariner training courses and programs. This work ensures that ships sailing under the control of U.S. mariners are operated safely and securely in U.S. waters and around the globe.

The National Vessel Documentation Center (NVDC) aims to ensure vessels are properly registered and comply with applicable laws regarding construction and cargo carrying capacity. This function provides a register of vessels that can be made available in the time of war or emergency to defend and protect the United States of America.

The Coast Guard also provides grants to states to improve recreational boating safety and supports a variety of government and nongovernment boating safety efforts in partnership with other federal agencies, state and local governments, and marine industries and associations.³¹ Despite the proliferation of various boats and personal watercraft, recreational boating deaths are currently at record lows, in part due to Coast Guard, state, and local prevention efforts. However, they still account for the third-highest number of annual transportation fatalities at 610 deaths in 2014, behind 32,675 highway deaths and 781 rail deaths. Fishing vessels account for 27 percent of commercial mariner deaths and injuries, and vessel losses are disproportionately high. While cruise ships, chemical ships, and flammable gas carriers have a relatively safe record, the consequences of any single major casualty can be very significant, such as in the case of the MODU DEEPWATER HORIZON 2010 explosion, fire, sinking, and resultant pollution.

The number of vessels requiring Coast Guard inspection/examination continues to grow in large part due to new statutory requirements for inspections and regulations for towing vessels and fishing vessels, as well as the overall expansion of global maritime commerce. The statistics below provide a glimpse into the scope of responsibility and the reach of the Coast Guard's Marine Safety Program (2015 statistics):

³¹ U.S. Coast Guard. *Maritime Prevention Program Performance Plan Fiscal Years 2013-2018* (July 2012).

Total U.S. Flag Inspected Fleet requiring certificates of inspection	12,431
Inspected Barges (tank, freight, passenger)	4,606
Freight Ship:	256
Industrial Vessel:	155
MODU:	8
OSV:	855
Oil Recovery Vessel:	89
Passenger Vessel:	6,210
Public Vessel:	46
Research Vessel:	18
School Ship:	32
Inspected Recreational Vessel:	15
Tank Ship:	75
Inspected Towing Vessel:	47
Unclassified/Unspecified Vessel:	19
New Construction Project for Domestic Certificated Vessels:	780
Uninspected/Uncertificated Vessels requiring certification exams:	33,441
Commercial Fishing Vessel operating more than 3 mi from shore:	27,000
Uninspected Towing Vessels:	6,441
Total foreign commercial vessel port arrivals (2014):	84,569
Total Commercial Waterfront Facilities requiring inspection:	3,904
Bulk-Oil Facilities:	1,609
Chemical Facilities:	182
Freight Facilities:	938
Gas Facilities:	118
Mobile Facilities:	702
Passenger Facilities:	355
Credentialed Active Merchant Mariners:	210,000
NVDC Commercial/Recreational Vessel Documentations Issued (2014):	243,215

As the lead federal agency responsible for conducting maritime accident investigations, the Coast Guard performs more than 5,500 casualty investigations annually. The Coast Guard uses these investigations to make recommendations to improve overall maritime safety and prevent recurrence. The Coast Guard conducts approximately 3,500 pollution investigations, 7,000 civil penalty investigations, and carries out more than 900 administrative investigations of mariners who have been charged with wrongdoing, including substance abuse or acts of negligence, and refers criminal cases to DOJ. The Coast Guard also collects, compiles, and publicly disseminates critical casualty data and analysis products, administers the mariner drug and alcohol inspection program, and prosecutes certain marine environmental crimes (the Coast Guard's Marine Safety Laboratory is the sole federal laboratory tasked with oil spill source identification).

The illustration below depicts the major elements (set standards, ensure compliance and conduct investigations) of the Coast Guard’s Marine Safety program CONOPS.



These elements are set on a foundation of Partnerships, Prevention Workforce, Risk Management, and Knowledge Management. These foundational blocks cut across the full spectrum of the CONOPS:

- *Partnerships* –Interagency, international, nongovernmental organizations, scientific, academic, and industry partners contribute in significant ways to developing standards, ensuring compliance, and conducting investigations.
- *Coast Guard Workforce* – The Marine Safety mission relies heavily on human capital to fulfill the critical capabilities needed for mission success. Our workforce must have the right skills, education, training, and experience to set standards, ensure compliance, and conduct investigations.
- *Risk Management* – Standards, compliance activities, and investigations must be focused on higher risk areas, not only to optimize resources, but to ensure that the Coast Guard strikes the right balance between ensuring safety, security, and environmental protection while also minimizing adverse effects on the effectiveness, efficiency, and productivity of the MTS.
- *Knowledge Management* –The ability to effectively collect, analyze, and leverage knowledge and data about the MTS drives risk management, standard setting, compliance targeting, and investigation activity. Knowledge management provides the Marine Safety program with the decision advantage needed to effectively regulate this highly dynamic industry.

Marine Safety Trends

- *American Energy Renaissance*: The increase in domestic energy production is expected to accelerate growth in the maritime industry and put additional pressure on the entire MTS due to increases in oil, gas, and chemical transportation. The construction of up to eight to ten tank barges a week to transport these products increases the overall number of vessel inspections required by the Coast Guard and number of vessels navigating on U.S. waterways. The United States is exporting oil-based energy for the first time since the late 1970s and will become a global leader in oil exports by 2017. DOE has recently issued several LNG export permits and

intends to issue more. Additionally, an increase in the volume of petroleum products moving through the MTS also increases the need for facility inspectors to inspect bulk oil facilities. However, activity in these sectors is price sensitive and may fluctuate accordingly.

- *Industry Complexity and Facility Growth:* Shipping companies have recently increased investment in more complex and specialized ship types; specifically OSV, the heavy lifting industry, and transportation of chemicals, reflecting continued interest in oil and gas extraction along the Outer Continental Shelf (OCS). Currently, there are 4,000 facilities operating in the Gulf of Mexico with 30,000 workers and facilities are expanding to all OCS corners and export ports in the United States, including the Arctic. Drill and oil exploration supply vessels are the fastest growing vessels in the marine field. The complexity of these vessels demand more hours per regulated unit than any other type of marine vessel. A steady pipeline of marine inspectors with the in-house experience and training to address this task is needed to keep pace.
- *Increasing Volume of Shipping:* Evolving ship designs are linked to increased cargo capacity. Maersk Sealand estimates that the number of containers in operation is expected to double within the next 20 years.³² Over the last decade, the size and capacity of container ships have increased, and a vessel recently set a record for carrying over 19,000 shipping containers. The Panama Canal Expansion Project creates increased canal capacity for cargo over time, and will nearly triple the size of vessels able to transit the canal. The expanded canal will accommodate container vessels up to 12,600 TEU,³³ which are 40-percent longer (1200 feet), 64-percent wider (160 feet), and have a 27-percent deeper draft (50 feet) than the largest vessels currently able to transit the canal.³⁴ Economies of scale apply to shipping – for trade to be efficient and cost-effective, it needs to be large in scale and volume. Many of these containers enter the United States, through major ports on the east and west coasts, and are bound for the interior of the country. The Coast Guard is also the only federal agency that inspects intermodal containers within the United States MTS for compliance with structural and hazardous materials regulations.
- *Safety and Security:* Increased maritime trade passing through fixed and already congested port environments creates safety and security challenges. Collisions and other accidents are more probable, with cascading impacts across the energy and transportation sectors. Port recovery becomes more complex, and more important as an ever-growing community of stakeholders rely on safe, reliable, just-in-time maritime transportation services.
- *Expanding Regulatory Requirements:* Regulations, such as the Subchapter M – Towing Vessel Regulations, will add an estimated 5,500 vessels requiring Coast Guard compliance inspections to the U.S. inspected fleet, an approximately 50-percent increase. Additionally, the Coast Guard

³² Jack Jarmon, *The New Era in U.S. National Security: An Introduction to Emerging Threats and Challenges*, (Roman & Littlefield: 2014):78-79.

³³ A 20-foot equivalent unit (or TEU) is an inexact unit of cargo capacity used to describe the capacity of container ships. It is based on the volume of a 20-foot long shipping container, a standard-sized metal box that can be transferred easily between ships, trains, and trucks.

³³ US Army Corps of Engineers, Institute for Water Resources; http://www.iwr.usace.army.mil/Portals/70/docs/portswaterways/rpt/June_20_U.S._Port_and_Inland_Waterways_Preparing_for_Post_Panamax_Vessels.pdf; 20 Jun 2012; Preparing for Post-Panamax Vessels; p. 17.

³⁴ US Army Corps of Engineers, Institute for Water Resources; http://www.iwr.usace.army.mil/Portals/70/docs/portswaterways/rpt/June_20_U.S._Port_and_Inland_Waterways_Preparing_for_Post_Panamax_Vessels.pdf; 20 Jun 2012; Preparing for Post-Panamax Vessels; p. 17.

now requires up to 30,000 commercial fishing vessels to have dockside safety examinations since commercial fishing vessel exams became mandatory in October 2015.

- *Recreational Boating:* Over the last 10 years, the number of Americans participating in recreational boating activities, including the use of kayaks and paddleboards has continued to grow.^{35,36} As of 2013, there were more than 12 million registered recreational boats in the United States and approximately 89 million individuals participated in recreational boating at least once during that year.³⁷
- *Technological Advancements and the MTS:* The proliferation of information technology and cyber systems has provided the MTS with great power and increased efficiencies, but it has also created significant vulnerabilities. With many port terminals' industrial control systems, and most ships' engineering, navigation, and communications systems, operated by remotely-controlled cyber systems, a cyber breach, attack, or unintentional malfunction can have disastrous effects on the MTS, much like a major vessel casualty or a natural disaster. This cyber vulnerability, inherent to the MTS, requires the Coast Guard to refine existing cyber risk management standards for this industry, and to ensure compliance with those standards.
- *National Maritime Workforce:* The maritime transportation industry is challenged by the growing trend of drug liberalization laws throughout the United States. A growing number of states is permitting medical and recreational use of marijuana. The greater social acceptance of drug use has contributed to a greater number of failed drug tests by crewmembers serving aboard vessels regulated by Coast Guard. According to the DOT Management Information System, there is a multi-year uptrend in failed drug tests by crew members designated with safety-sensitive responsibilities aboard vessels regulated by Coast Guard.
- *Environmental Stewardship:* Over the past four decades, the environmental effects of the MTS have become a topic of increasing importance around the world. In recent years, United States and international regulations and standards addressing airborne and waterborne discharges from ships and pollution handling at waterfront facilities have sought to prevent environmental pollution. Coast Guard marine and facility inspectors monitor and enforce compliance with laws and regulations concerning pollution from recreational and commercial vessels, emanating from a variety of sources, including: gray water, bilge water, sewage, ballast water, anti-fouling paints (and their leachate), hazardous materials, and municipal and commercial garbage and other wastes such as fuel exhaust gases.

Marine Safety Stakeholders

In executing the MS mission, the Coast Guard works closely with the public; harbor safety committees (HSC) and AMSC; professional mariners; pilots associations; classification societies; other government agencies; international partners; and the United Nations. A full list of MS stakeholders can be found in Appendix B.

³⁵ National Marine Manufacturers' Association, *Recreational Boating is \$121 Billion Economic Driver for U.S.*, <http://www.nmma.org/press/article/18375>.

³⁶ The Coleman Company, Inc. *2015 Special Report on Paddlesports*.

http://c.ymcdn.com/sites/www.americancanoe.org/resource/resmgr/General-documents/OIF_PaddlesportsResearch_201.pdf

³⁷ National Marine Manufacturers' Association. *Boat Sales Ride a Rising Tide into 2015*. <http://www.nmma.org/press/article/19597>

Marine Safety Mission Elements

The Marine Safety mission's portfolio includes an array of safety, security, and environmental stewardship requirements, as each commits to protect the operational capabilities of the MTS within the United States and globally. The Coast Guard's strategy of prevention targets a regulated community of ship owners and operators. By reducing vulnerabilities, Coast Guard programs reduce casualties, damage and other harm, and minimize the need for emergency response. Marine Safety mission elements are captured in a collection of prevention subprograms.³⁸

- *Standards:* Prevention begins with the development and dissemination of regulations that govern every aspect of maritime operations in the country – from the establishment of boating safety standards to the requirements for commercial maritime transit and cargo transfer. The Coast Guard develops national and international regulations, standards, and policies for commercial vessels, facilities, operators, owners, and mariners to enhance maritime safety, security, and stewardship. Within the IMO framework, the Coast Guard works with its counterparts from around the globe to establish standards for safe, secure, and environmentally responsible international shipping. By enforcing the international standards that all ships and mariners must meet, irrespective of their country of origin, the Coast Guard ensures the safety of U.S. ports and waters. Nationally, the Coast Guard promulgates safety equipment carriage requirements for recreational boats. Federal advisory committees provide advice and counsel to the MS program on the development of standards, compliance policy, doctrine development, and enforcement, in way of safety, security, and environmental operating concerns for their industry. In addition to professionals from the industry, these committees include members of the public. Authorized Coast Guard advisory committees include the Chemical Transportation Advisory Committee, Commercial Fishing Safety Advisory Committee, Merchant Marine Personnel Advisory Committee, Merchant Mariner Medical Advisory Committee, National Boating Safety Advisory Council, National Maritime Security Advisory Committee, National Offshore Safety Advisory Committee, and Towing Safety Advisory Committee. Federally recognized entities that provide cooperative engagement activities include HSCs, Area Committees for Environmental Response, and AMSC.
- *Compliance:* The Coast Guard systematically conducts compliance inspections and examinations of United States and foreign vessels; waterfront facilities; containerized cargo and hazardous materials; recreational boats and survival equipment; and supervises the handling of packaged explosive materials. In addition to inspections operations in the field, the Coast Guard reviews and approves plans for vessel construction or alterations to ships, equipment, or systems, and when needed, salvage operations. This includes review of plans for waterfront facility security, incident response, and operations to ensure safety, security, and environmental protection standards are being met.

These inspections and examinations are intended to verify compliance with standards for vessels, facilities, and cargo systems. For commercial vessels, the standards are comprehensive in nature and encompass machinery, electrical, piping, industrial, lifesaving, firefighting, navigation, and pollution prevention systems. The Coast Guard's Port State Control program addresses risks associated with foreign-flagged ships arriving in our ports, via risk-based targeting and rigorous

³⁸ Ibid

examinations. It is recognized globally as the premier foreign vessel management strategy for reducing the threat of unsafe ships operating in sovereign waters.

In partnership with state and local enforcement agencies, the Coast Guard ensures that nearly 1.6 million recreational vessels are boarded each year for compliance with safety standards. The Coast Guard Auxiliary and U.S. Power Squadrons provide more than 130,000 additional free vessel safety checks and inspections each year. Coast Guard efforts to improve boating safety rely heavily on state recreational boating safety programs, and Coast Guard recreational boating safety efforts include administering grant money, through the State Boating Grant Program, to help state governments educate boaters and enforce safety standards.

Marine safety personnel assigned to the National Vessel Documentation Center enforce federal laws requiring that all vessels five net tons or more engaged in fishing on the navigable waters of the United States or in the EEZ must have a certificate of documentation bearing a valid endorsement appropriate for the activity in which engaged. The Coast Guard leverages partnerships across federal, state, local, territorial, and tribal governments to complement its regulatory compliance operations. In conducting the MS mission, it engages externally with international authorities, private industry, port operators, and professional mariners. These partnerships facilitate robust interaction that helps maintain a strong foundation for ensuring safe and secure practices on the Nation's waters.

- *Investigations:* The Coast Guard conducts approximately 14,000 investigations each year of reportable marine casualties involving vessels, oil and hazardous materials spills, and maritime personnel actions. The Coast Guard's analyses, conclusions, and recommendations from these investigations are made available to the public and other governmental entities and are used to identify the cause of a casualty, identify wrongdoing by any involved person, apportion civil penalties, identify and refer criminal acts for prosecution, and develop or revise laws or regulations with the aim of preventing recurrence. When warranted, the Coast Guard releases safety alerts and advisories to communicate significant issues to both the Coast Guard and the maritime industry. Investigations and the analysis of the data derived from investigations are also the primary prevention program feedback mechanism used to measure program effectiveness and are the catalyst for program improvements.

Marine Safety Goals and Objectives

The following objectives are derived from national and departmental policies and strategic direction:

- *Provide for the safety of life in the maritime domain:*
 - Reduce towing vessel casualties and fatalities. The tugboat, towboat, and barge industry is a significant segment of the U.S. commercial vessel fleet, second only to commercial fishing vessels in number. Reducing fatalities, injuries, vessel casualties, and pollution incidents in this industry will increase safety on U.S. waters involving commercial vessel operations. To effect these reductions, the Coast Guard seeks to:
 - Institute and maintain a robust, risk-based safety compliance program;
 - Increase outreach and strengthen partnership efforts;
 - Promote risk reduction, and improve risk management practices; and
 - Focus on prevention through people initiatives to reduce casualties.
 - Reduce commercial fishing vessel casualties and fatalities. Loss of fishing vessels remains a significant risk factor within the industry. The Coast Guard seeks to:

- Increase enforcement of safety regulations through risk-based operations;
 - Improve industry risk management practices; and
 - Partner with fisheries resource managers to reduce risk.
- Improve recreational boating safety. Each year, approximately 700 recreational boaters are killed and thousands more are injured. The Coast Guard strives to reduce these numbers by emphasizing the following areas:
 - Increase awareness of safe boating practices;
 - Improve life jacket wear rates;
 - Implement measures to reduce alcohol use while boating, implement field sobriety tests for use in the marine environment, and continue to develop and produce hard-hitting public service announcements for distribution to appropriate markets; and
 - Improve and expand boater education requirements.
- *Promote the safe and efficient movement of people and goods within the MTS:*
 - Improve screening and vetting of vessels arriving to U.S. ports. Each year, approximately 20,000 foreign-flagged and domestic commercial vessels arrive in U.S. ports. Ninety-six hours prior to their arrival in the U.S., each vessel must submit a notice of arrival and request for port entry, listing ownership and operating documentation and information about the vessel, its compliance history, its cargo, and crew. The Coast Guard, in conjunction with other DHS partners, screens this information for indicators that suggest further screening, vessel or cargo inspection, or law enforcement boarding is required.
 - Improve safety within ports and at waterfront facilities. The Coast Guard regulates and inspects more than 3,200 commercial waterfront facilities. Coast Guard safety and environmental programs reduce risks associated with cargo operations, bunkering, containerized and bulk liquid hazardous materials, liquefied gases, and explosives. The Coast Guard seeks to prevent fires, explosions, pollution, and other incidents that put personnel, individual vessels and facilities, and the port as a whole, at risk. The Coast Guard strives to:
 - Develop a more thorough understanding of high-risk industries;
 - Leverage partnerships with high risk industries to reduce the likelihood of catastrophic events; and
 - Enhance the all-hazards preparedness and resilience of the MTS.
 - Minimize disruption of legitimate trade by ensuring MS operations and processes align with commercial needs. The Coast Guard aims to:
 - Engage with industry standards development organizations and incorporate accepted industry standards in lieu of detailed regulations;
 - Align operational capacity by ensuring the marine inspector and investigator workforce are adequately allocated and trained to meet the demands of regulated vessels, cargo, and facilities within the MTS;
 - Enhance operational capability by focusing training and education resources on emerging subject matter areas, including outer continental shelf exploration and production, Arctic operations, alternative energy for ships, and global climate change issues.
- *Improve customer service to mariners, industry, and the public: mariners, maritime employers, owners, and operators deserve respect and reasonable service from their government.*

The Coast Guard strives to:

- Employ smart and cost-effective risk-based strategies that are in strict adherence to the rule of law;
 - Assure that mariner credentialing processing time remains responsive to the needs of mariners, and continue to improve the application process;
 - Improve access and clarity of policy, streamline issuance procedures, and increase service to merchant mariners and stakeholders; and
 - Assure that the vessel documentation processing time for both commercial and recreational vessels are responsive to vessel owners/operators.
- *Improve accountability:* The Coast Guard relies on data-fed measurement tools to allocate resources, make risk-based decisions, and assess the effectiveness and efficiency of its MS program. The Coast Guard strives to:
 - Improve metrics and develop smart assessment tools to measure the effectiveness of various aspects of the MS program; and
 - Assure that the Coast Guard’s MS regime, operations, and personnel are accountable to the American public for implementing and executing efficient and effective programs to manage marine safety risks, while minimizing disruption to the efficient movement of people and commerce.
- *Strengthen partnerships in the maritime community:* The Coast Guard relies on industry and allied agency partnerships to achieve results, and many Coast Guard performance initiatives depend on coordinated effort with external stakeholders. The Coast Guard strives to:
 - Improve and enhance cooperative relationships with the maritime community;
 - Strengthen relationships with local, state, national, and international partners to enhance safety and regulatory compliance;
 - Achieve the proper balance in safety and security concerns in partnerships with industry;
 - When appropriate, serve as the advocate of mariners and the maritime industry.
 - Expand the Coast Guard’s leadership role with local, state, national, and international partners to promote the safety of mariners, boaters, and shipping, and improved environmental compliance;
 - Leverage the capabilities of other agencies and organizations that have common mission objectives and ensure that the Coast Guard reciprocates where appropriate.

Marine Safety GPRA Performance Measures

Performance Measure	Measure Type³⁹
3-year average number of serious marine incidents	Strategic
3-year average number of commercial passenger deaths and significant injuries	Management
3-year average number of commercial mariner deaths and significant injuries	Management
5-year average number of recreational boating deaths and injuries	Management

³⁹ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

7. Search and Rescue

The Coast Guard strives to prevent death or injury to persons and loss of or damage to property in the marine environment by rendering timely and effective aid to those in distress. The Coast Guard SAR program pursues these objectives through resource readiness, distress monitoring and communication, search planning, rescue operations, and cultivation of effective domestic and international partnerships. The SAR program endeavors to continuously improve the Search and Rescue system, both domestically and internationally, to further reduce loss of life and property in the maritime environment and promote safety of life at sea.⁴⁰

The Coast Guard SAR regions encompass both domestic and international waters covering the Atlantic, Pacific, and Arctic Ocean, the Great Lakes, inland rivers, and the Gulf of Mexico. The Coast Guard employs a system of assets with varying capabilities to perform the surveillance, detection, classification, identification, prosecution, and command and control functions needed for SAR mission success, as well as reduce both false and hoax SAR events.

The Coast Guard also supports DHS responsibilities under the National Response Framework (NRF); a guide to how the Nation responds to all types of disasters and emergencies. Emergency support function 9 of the NRF provides an SAR framework for these high-impact, low-probability incidents. This includes natural disasters that result in unusually high levels of mass casualties, damage, or disruptions with severe impacts on all or portions of the Nation. An example includes SAR operations conducted by the Coast Guard after hurricanes Katrina and Rita.

SAR Trends

SAR Trends: Coast Guard SAR cases have declined over the past 10 fiscal years. Total Coast Guard SAR cases have trended downward from 32,418 cases in 2004 to 17,508 cases in 2014; representing a 46-percent decline in annual case load. The number of cases in which the Coast Guard dispatches resources may be declining for a variety of reasons including: improving technology, commercial towing services that can respond in benign weather conditions, better weather forecasting, and Coast Guard regulatory prevention efforts. Although the cumulative effect of these factors has reduced SAR mission demand in recent years (in terms of annual case numbers), it is extremely difficult to predict future mission demand.

Notification of distress to the Coast Guard has increasingly been made by phone, radio and satellite. The availability of dedicated systems for distress (e.g. Rescue-21, Digital Select Calling, and the SAR Satellite-Aided Tracking system) facilitates direct and expeditious communication with mariners. Likewise, domain awareness tools, such as the Automated-Mutual-Assistance Vessel Rescue system and Automatic Identification System (AIS), provide awareness of commercial and recreational vessels that can render assistance, in both distress and nondistress situations. Additionally, the Rescue-21 VHF radio system has greatly improved the Coast Guard's ability to identify hoax distress calls and prosecute those responsible.

Convenient communication methods, such as cellular phones and text messaging, have also enhanced the use of alternate resources for SAR response. Many commercial assistance providers, for example, now offer "smart phone" applications that allow mariners to accurately determine their

⁴⁰ U.S. Coast Guard. *Maritime Response Program Performance Plan Fiscal Years 2014-2019* (August 2013).

location and arrange commercial assistance when necessary. The availability of improved weather forecasting is also a factor. Mariners now have a greater ability to plan their voyages to avoid adverse weather, which in turn diminishes weather-induced distress incidents.

Reduced SAR mission demand can also be attributed to Coast Guard regulatory prevention efforts in both the commercial and recreational maritime communities, including mariner education. Additionally, a significant change in the management of commercial fisheries (i.e., individual fishing quotas) have deterred the ‘race for fish’ and enabled commercial fishermen to pursue their catch in better weather conditions.

While the Coast Guard expects SAR trends to remain favorable in the near term, long-term trends are uncertain. The full impact of urbanization in coastal areas, the growing numbers of waterway users, the opening Arctic, rising sea levels, and the increasing frequency and severity of weather events related to climate change are unknown factors.

Search and Rescue Stakeholders

In executing the SAR mission, the Coast Guard works closely with other DHS components; the Departments of Commerce (DOC) and Interior (DOI); DOD; DOT; the National Aeronautics and Space Administration; the public; other government agencies; members of the IC; and international partners. A full list of SAR stakeholders can be found in Appendix B.

Search and Rescue Mission Elements

- *Search and Rescue Prevention:* Working with international partners, federal agencies, state governments, commercial industry, and recreational boating interests to develop regulations, establish policy standards, and improve coordination for the purpose of improving the safety of the maritime transportation and civil aviation systems.
- *Search and Rescue Response:* Minimizing loss of life, injury, and property damage or loss at sea by finding and rendering aid to those in distress.
 - *Distress Monitoring and Communications:* A system of hardware, software, infrastructure and policy to enable mariners to notify the Coast Guard of a distress situation. The system also enables SAR responders and coordinators to communicate with those in distress and with each other. A number of domestic agency agreements and international partnerships provide the Coast Guard with space-based satellite coverage for search and rescue notification. Continued operability of such a system is critical to identifying and locating vessels in distress and reducing search time for effective rescue operations.
 - *Search Planning and Preparations:* The process of planning and risk assessment to identify appropriate response SAR units taking into account environmental conditions and factors related to the distress. Risk to response personnel is weighed against likelihood of a successful rescue to make determinations regarding dispatch of assets.
 - *Search and Rescue Coordination:* Coordination among Coast Guard resources, as well as other search and rescue response agencies. Effective communications and execution of established processes by trained, proficient command and control is critical to efficient and successful SAR responses.

- *Search and Rescue Operations*: Execution of SAR response with resources in an effort to meet SAR goals and objectives.

Search and Rescue Goals and Objectives

The following objectives are derived from National and Departmental policies and strategic direction:

- *Minimize loss of life, injury, and property loss and damage in the maritime environment*: The Coast Guard's SAR mission centers on safety of life at sea and the effective, efficient response to maritime distress. The service strives to prevent loss of life, injury, and property loss by rendering timely and effective assistance to those in distress in the maritime environment and elsewhere when Coast Guard resources, capabilities, and expertise can favorably influence the outcome of life-threatening incidents.
- *Minimize crew risk during Search and Rescue missions*: Safety of life at sea and the timely and effective prosecution of maritime distress incidents often rest on the competence and proficiency of the people who comprise the SAR system. Although field units continue to deliver superior mission performance, vulnerabilities persist. Decision makers at all levels of an operation, from SAR coordinator to crew member, must continue to rely on sound operational risk management to safely conduct the SAR mission. Efforts are ongoing to enhance SAR knowledge and training among all personnel involved with search and rescue planning and execution.
- *Optimize use of resources in conducting Search and Rescue*: The American public relies on the Coast Guard to save lives and property regardless of the location or the state of Coast Guard resources. Frequently, time is of the essence in a SAR case. The Office of Search and Rescue pursues a process of continual renewal to introduce promising new technologies and capabilities and to enhance existing ones, and thereby improves Coast Guard SAR response readiness and enhances the safety of life at sea.
- *Maintain a world leadership position in maritime Search and Rescue*:⁴¹ The Coast Guard must be able to coordinate distress response effectively in a timely manner throughout vast U.S. maritime SAR regions. The ability to effectively coordinate search and rescue response, and conserve organic resources, is heavily dependent upon domestic and international SAR partners. The Service's ability to harmonize international SAR policies and procedures requires effective partnerships, which in turn demands continual cultivation of cooperative relationships through consultations and collaboration as well as joint operations and exercises.
- *Search and Rescue Hoax*: Reduce false alarms and hoax SAR calls through coordination of intelligence and investigatory capabilities.

Search and Rescue GPRA Performance Measures

⁴¹ U.S. Coast Guard. *Maritime Response Program Performance Plan Fiscal Years 2014-2019* (August 2013).

Performance Measure	Measure Type ⁴²
Percent of people in imminent danger saved in the maritime environment	Strategic
Percent of time rescue assets are on-scene within 2 hours	Management

⁴² Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

8. Aids to Navigation and MTS Management

America's waterways are an economic engine that drives national prosperity. The Coast Guard plays a critical role in managing the MTS through Vessel Traffic Services (VTS), providing the national maritime ATON system, deploying maritime situational awareness tools, facilitating analysis for vessel routing and risk mitigation, and coordinating restoration of the MTS after extreme natural or manmade events. The Coast Guard works in concert with other federal agencies, tribal, state and local governments, the marine industry, maritime associations, and the international community to optimize the safe and effective use of, the Nation's MTS.

A safe, secure and efficient MTS requires both active system management and the provisioning of reliable and resilient navigational aids. System management is provided through the integrated efforts of operational ATON units (afloat and ashore), VTS, COTP, Great Lakes Pilotage, and bridge administration. Navigational aids include MS information products; AIS; Position, Navigation, and Timing (PNT) (both nationwide differential and civil Global Positioning System (GPS) interface); and a harmonized system of physical and electronic ATON. This system of aids and oversight increases MTS efficiency and mitigates navigational risk for military, commercial, and recreational waterway users.

The national MTS consists of inland, intracoastal, and coastal approach zones that provide navigation schemes for vessels transitioning to, through and from U.S. ports, terminals, and intermodal connections. The coastal approach manages those vessels exiting and entering the MTS to and from offshore or international waters, while the intercoastal zone manages those vessels transiting along U.S. shores. The inland zone provides a system of management for those vessels transiting within the inshore navigable waterways of the MTS. Each zone has unique MTS user requirements and traffic patterns dictated by the different vessel and industry types that frequent those areas.

ATON and MTS Management Trends

- *Growth in Shipping:* The expansion of the Panama Canal, the U.S. energy renaissance, and an increase in commercial maritime routes through the Arctic Ocean will collectively increase the number of vessels in the MTS, the size and capacity of these vessels, and the amount of commerce arriving at/departing from U.S. ports and waterways. These influxes in commercial shipping, coupled with an increased use of U.S. waterways for renewable energy (e.g., wind farms, tidal electricity) and aquaculture farming, will cause congestion throughout the MTS and increase transit risk. Further, the U.S. domestic energy sector is projecting supply growth. Midstream transshipment within the U.S. river system is vital to industry as they move energy resources around the United States.

Since 2012, the U.S. inland river barge fleet has grown 20 percent as hydrocarbons are shipped from North Dakota's Bakken fields and other locations to coastal refineries. Additionally, the inland rivers continue to be subject to extreme variations in water levels both in flooding and drought conditions. These environments pose difficult navigation situations, whether through low-water hazards such as rocks and obstructions or high-water hazards such as heavy currents and debris.

- *Navigational Advancements:* The development of navigational technology and its acceptance by the maritime community is driving the future of MTS management. Through development of new data-driven waterway analysis tools, increased availability of marine safety information through immediately accessible electronic methods, and the continued use of physical ATON, the Coast Guard will be able to promote the safety of future maritime transportation and commerce on U.S. navigable waters. However, a growing reliance on electronic navigation and advanced technology may leave vessels operating in the MTS vulnerable to cyber-attack or system failure. Vessel and facility operators use computers and cyber-dependent technologies for navigation, communications, engineering, cargo, ballast, safety, environmental control, and many other purposes. While these cyber systems create benefits, they also introduce risk. Exploitation, misuse, or failure of cyber systems could cause injury or death, harm the marine environment, or disrupt vital trade activity. To address these risks, the Coast Guard, the marine industry, and other stakeholders must work together to incorporate appropriate cyber standards into commercial vessel and facility safety and security plans.
- *Next Generation Waterways:* The Coast Guard seeks to develop and implement the next-generation of waterway system management and design. To achieve this, the Coast Guard is exploring ways to optimize the ATON mix through the use of both physical and electronic aids. The benefits of such optimization could include increased workforce productivity and improved port resiliency. This long-term effort focuses on revised waterway marking design standards, based on established levels of service, and transmission of enhanced marine safety information through immediately accessible electronic methods. Working with federal partners and maritime stakeholders on all levels, the Coast Guard will ensure the end product meets navigational safety requirements within existing federal resources.
- *Bridges:* Bridges are a vital part of our domestic intermodal transportation system and the Coast Guard Bridge Program plays a significant role in effective waterways management. Governmentwide efforts are underway to promote efficiencies in environmental reviews and permitting processes associated with recapitalization of the Nation's infrastructure, including bridges that cross waterways. The number of permit applications being received by the Coast Guard has doubled since 2010 and is projected to remain this high for the foreseeable future. Timely workflow is a key driver of Bridge Program stakeholder satisfaction. This requires modernizing policies and processes, and ensuring sufficient staff capability and capacity.

ATON AND MTS Management Stakeholders

In executing the ATON and MTS management mission, the Coast Guard works closely with DOD and DOT; the public; HSCs; the U.S. Army Corps of Engineers; the National Geospatial-Intelligence Agency; NOAA; and CMMS. A full list of ATON and MTS management stakeholders can be found in Appendix B.

ATON and MTS Management Mission Elements

- *Aids to Navigation:* The earliest aid to navigation in American waters was Boston Light, established on Little Brewster Island in 1716. The United States Lighthouse Service was established by the ninth law passed by the Congress of the United States on August 7, 1789. The Lighthouses Act provided that "...the necessary support, maintenance and repairs of all lighthouses, beacons, buoys...shall be defrayed out of the Treasury of the United States." The Lighthouse Service eventually was absorbed into the United States Coast Guard in 1939.

Today, the Coast Guard is responsible for developing and implementing policy for establishing, operating, and maintaining the federal ATON System consisting of more than 48,000 federal buoys, beacons, ranges, sound signals, and electronic ATON. The Coast Guard is the administrative authority for more than 44,000 Private Aids to Navigation.

- *Marine Safety Information:* The Coast Guard disseminates marine information concerning ATON status, hazards, marine events, and other safety information affecting the MTS through notices to mariners. The *Local Notice to Mariners* is published and issued weekly by each Coast Guard district, while more time-sensitive *Broadcast Notices to Mariners* are transmitted via marine radio. As the agency responsible for compilation and dissemination of local and coastal marine information for broadcast from sources within the United States and its possessions, the Coast Guard serves as the *National Coordinator* for the Worldwide Navigational Warning Service. The 2014 Federal Radionavigation Plan signed by the Secretary of Defense, the Secretary of Transportation, and the Secretary of Homeland Security, identifies the Coast Guard as the U.S. Government dissemination point to civil users of GPS operation and status information, and is the primary point of contact for all civil non-aviation GPS user inquiries, problem and outage reports.
- *Position Navigation and Timing:* The Coast Guard operates the Nationwide Differential GPS system to support safe navigation for the harbor and harbor approach phase set forth in the 2014 Federal Radionavigation Plan. Additionally, the Coast Guard supports the Secretary of the DHS with several PNT responsibilities identified within the U.S. Space-Based Positioning, Navigation, and Timing Policy (National Security Presidential Directive-39, December 2004).
- *Bridges:* The Coast Guard monitors and ensures that approximately 20,000 bridges crossing navigable waters of the United States are not unreasonable obstructions to navigation by issuing permits; monitoring rehabilitation, repair, maintenance and construction activities; approving drawbridge schedules; investigating bridges that may be unreasonably obstructive; managing design, construction, and funding for Truman Hobbs projects; and establishing bridge marking requirements.
- *Vessel Traffic Services:* The purpose of VTS is to conduct active monitoring of maritime traffic and provide navigation information, traffic organization, and navigation assistance services to vessels in particularly confined or busy waterways. A VTS employs radar, AIS, closed-circuit television cameras to monitor vessel traffic movement, and VHF-FM radio for communications with VTS participants. VTS encompasses a wide range of procedures and capabilities aimed at reducing the risk of vessel collisions, allusions, rammings, and groundings in harbors, harbor approaches, and inland waterways. By providing navigation safety information to mariners, VTS is able to expedite ship movements, increase transportation system efficiency, and improve all-weather operating capability. The Coast Guard operates 12 Vessel Traffic Centers: Prince William Sound, Puget Sound, San Francisco, Los Angeles/Long Beach, Houston-Galveston, New Orleans, Berwick Bay, Louisville, Saint Mary's River, Port Arthur, Tampa, and New York. Vessel Traffic Centers in Los Angeles/Long Beach and Tampa are operated in partnership with local port entities.
- *Waterways Management:* The Nation's waterways are a critical component of the MTS. The MTS is a highly integrated system that includes more than 1,000 harbor channels and 25,000 miles of commercially navigable channels. The MTS connects more than 152,000 miles of railroad, 45,000 miles of interstate highway, and 460,000 miles of pipeline to more than 360

deep and shallow draft ports. Coast Guard waterways management is a complex endeavor essential to the Nation’s MTS. Its purpose is to support access to navigable waterways for mariners; facilitate the safe movement of commerce through ports and waterways; and ensure compliance with all applicable environmental laws (e.g., the *National Environmental Policy Act*, the *Endangered Species Act* (ESA), and the *Coastal Zone Management Act*).

ATON and MTS Management Goals and Objectives

- *Aids to Navigation:* The primary objective of the U.S. ATON system is to mitigate transit risks to promote the safe movement of military, commercial, and other vessels by assisting navigators with determining their position, a safe course, and warning them of dangers and obstructions. The Coast Guard seeks to provide the most cost effective waterway design to meet user needs by incorporating electronic and modern physical ATON within the MTS, improving the waterway analysis process, and developing effective levels of service.
- *Marine Safety Information:* The Coast Guard seeks to advise mariners of new hydrographic discoveries, changes in channels and navigational aids, and information concerning the safety of navigation by improving marine safety information delivery via modern, electronic means.
- *Bridges:* The Coast Guard Bridge Program ensures reasonably free, safe, and unobstructed passage for waterborne traffic while considering the needs of land transportation. To support these goals, the Coast Guard is actively modernizing policies and processes to ensure capability and capacity to meet stakeholder needs.
- *Vessel Traffic Services:* The goals of the VTS Program are to establish and maintain vessel traffic services in ports and waterways where there is a validated need for VTS, including congested waterways or waterways of particular hazard.
- *Waterways Management:* The Coast Guard Waterways Management Program executes a variety of regulatory authorities by developing policies, overseeing efforts, and conducting waterways management activities that facilitate safe vessel movement; communicate waterway and environmental conditions; and support understanding of ocean and waterway environments through marine science and observation. The Coast Guard is actively engaged with external stakeholders to ensure that all Coast Guard personnel responsible for waterways management receive the most current information, and training pertaining to environmental laws and policies.

ATON and MTS Management GPRA Performance Measures

Performance Measure	Measure Type ⁴³
Availability of maritime navigation aids	Strategic
Average number of navigational accidents	Management

⁴³ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

9. Living Marine Resources

The Coast Guard is responsible for enforcing LMR regulations on domestic commercial, recreational, and charter fishing vessels in support of the MSFCMA. While the regulatory requirements on the commercial fishing industry are typically more stringent than those on recreational and charter fishermen, this does not diminish the Coast Guard's obligation to ensure appropriate enforcement of LMR regulations across all components of a given fishery. Actions typically include assessing and enforcing compliance with domestic regulations regarding catch limitations, gear restrictions, permits, closed areas, regulated seasons, and other management measures promulgated by NOAA fisheries.⁴⁴

The LMR mission is conducted to support conservation and management of living marine resources and their environment, including protected species, protected areas, and critical habitats. The Coast Guard helps to sustain and recover healthy populations of protected species and marine habitats by enforcing laws and regulations implementing the ESA, *Marine Mammal Protection Act* (MMPA), *National Marine Sanctuaries Act* (NMSA), and other authorities. LMR mission activities include boarding of commercial fishing vessels and other enforcement of LMR laws and regulations in the inland, coastal, and offshore operational areas.⁴⁵

The Coast Guard works with federal partners including NOAA's National Marine Fisheries Service (NMFS), NOAA's National Ocean Service, the U.S. Fish and Wildlife Service (FWS), and state and local agencies to ensure that LMR enforcement activities are meeting the Service's goals by providing protection of the marine environment and supporting conservation of marine protected species and their habitats.⁴⁶ The ESA establishes a national program for the conservation of endangered and threatened species and the ecosystems upon which they depend. To implement the ESA, numerous regulations are promulgated in Title 50 C.F.R.⁴⁷ The ESA is explicit in charging the "Department in which the Coast Guard is operating" with enforcement of any regulations or permits issued pursuant to the ESA.

The NMSA designates discrete areas of the marine environment as national marine sanctuaries. Federal marine sanctuaries established under NMSA provide comprehensive management of the unique ecological, historical, recreational, and aesthetic resources of the area. Each marine sanctuary is managed and regulated with regard to its location and the specific nature of, and threats to, its resources. In order to implement the NMSA, each sanctuary has its own separate set of regulations promulgated in Title 15 C.F.R.⁴⁸ Enforcement of these regulations is nuanced, depending on whether the site is established to protect marine species, to preserve cultural resources such as sunken military vessels, or to sustain regional ecosystems.

The Coast Guard also helps to protect coral reef ecosystems through the performance of duties such as servicing ATON, regulating anchorages, and conducting fisheries law enforcement, spill response, and search and rescue. Conservation of coral reef ecosystems is consistent with the Coast

⁴⁴ U.S. Coast Guard. *Marine Transportation System Management Performance Plan FY 2012-2017* (September 2011).

⁴⁵ U.S. Coast Guard. *Operations* (Coast Guard Publication 3-0; February 2012).

⁴⁶ U.S. Coast Guard. *Coast Guard Maritime Law Enforcement Manual*, p. 8-3 (COMDTINST M16247.1 (series)) [FOUO].

⁴⁷ *Ibid.*

⁴⁸ *Ibid.*

Guard's Ocean Steward framework and is addressed in the Coast Guard's Coral Reef Protection Implementation Plan.⁴⁹

Living Marine Resources Trends

- *Economic Impact:* The U.S. commercial, charter, and recreational fishing industries are important sectors of the U.S. economy. In 2012, the combined industries supported approximately 1.7 million full and part-time jobs and generated \$199 billion in sales impacts, \$57 billion in income impacts, and \$89 billion in value-added impacts.⁵⁰ The fishing industry's contribution to the economy could be even greater if all fish stock populations were at their highest productivity levels—estimates place the additional economic value of fully rebuilt fish stocks at \$2.2 billion in dockside revenue - an increase of 54 percent of dockside returns in the study year. According to the latest available data, more than a quarter of U.S. fish stocks is overfished or is close to being overfished.⁵¹ To allow fish stocks to recover to their most productive levels, more numerous, complex, and stringent regulations have been applied to U.S. fisheries, including decreases in allowable catches, and numerous areas have been closed to fishing. These conditions increase the demands for enforcement coverage, heighten the time and effort required for enforcement planning and execution, and amplify financial incentives for noncompliance. As such, the Coast Guard's role as the primary at-sea fisheries enforcement agency contributes to sustainability of the fishing industry.
- *Emerging Arctic:* The Arctic Ocean has the potential to support the biomass for commercial fisheries, but currently lacks adequate control measures to prevent overexploitation. The North Pacific Fisheries Management Council has imposed a moratorium on commercial fishing in the Arctic, and the Coast Guard continues to monitor the EEZ for any indications of illicit fishing activity. Currently, there are no existing international agreements to manage fishing on the high seas of the Arctic Ocean. Congress adopted a joint resolution, Public Law 110-243, calling on the United States to initiate discussions with other relevant governments to address this situation. The Coast Guard is tasked within the National Arctic Implementation Plan to support the efforts of the DOS in establishment of a treaty to prevent fishing on the high seas of the Arctic until adequate protection measures are in place.

Living Marine Resources Stakeholders

In executing the LMR mission, the Coast Guard works closely with DOC and its NOAA and NMFS; FWS; industry; regional fisheries management organizations; state and local governments; and members of the IC. A full list of LMR stakeholders can be found in Appendix B.

Living Marine Resources Mission Elements

- *Enforcement:* Enforce national fisheries and marine protected resource laws and regulations.

⁴⁹ U.S. Coast Guard. *The Coast Guard Coral Reef Protection Implementation Plan* (COMDTINST 16000.2; April 2002).

⁵⁰ National Marine Fisheries Service. 2014. Fisheries Economics of the United States 2012 – Economics and Sociocultural Status and Trends Series. U.S. Dept. Commerce, NOAA Tech. Memo. NMFS-F/SPO-137. Available at: <http://www.st.nmfs.noaa.gov/Assets/economics/documents/feus/2012/FEUS2012.pdf>.

⁵¹ National Oceanic and Atmospheric Administration. *Status of Stocks 2013: NOAA Fisheries Status of U.S. Fisheries 2013. April 2014.*

- *Compliance:* Assess and enforce compliance with domestic LMR laws and regulations by U.S. fishermen.
- *Protection:* Safeguard U.S. living marine resources and their environment, to include endangered species, protected species, protected areas, marine sanctuaries, and critical habitats, from unlawful acts and environmental degradation.⁵²
- *Oversight:* Provide oversight of the Marine Mammal Health and Stranding Response Program.⁵³

Living Marine Resources Goals and Objectives

Protecting the U.S. EEZ, listed species, federal marine protected areas, and key areas of the high seas is an important mission for the Coast Guard. The Coast Guard enforces fisheries laws at sea, as tasked by the MSFCMA. The following LMR objectives are derived from national and departmental policies and strategic direction:

- *Enforcing domestic fisheries law:* U.S. domestic fisheries support a \$42 billion dollar industry. Fisheries Management Plans (FMP) ensure that the sustainability of these fisheries is developed by regional fisheries management councils, each of which has a nonvoting Coast Guard member. The Coast Guard is responsible for enforcing these FMPs at sea, in conjunction with NOAA fisheries enforcement ashore.
- *Enforcing and Protecting Marine Protected Resources and Species:* The Coast Guard uses authorities, capabilities, competencies and partnerships to protect and recover marine protected species and enforce federal marine protected area regulations. The Coast Guard does this by: (1) enforcing marine protected resource laws and regulations; (2) leveraging the expertise and capabilities of partner agencies to craft sound, enforceable regulations; and (3) supporting at-sea conservation activities and maintaining best practices to avoid adverse impacts to protected resources.

Living Marine Resources GPRA Performance Measure

Performance Measure	Measure Type ⁵⁴
Fishing regulation compliance rate	Strategic ⁵⁵

⁵² U.S. Coast Guard. *Operations*, p. 7 (Publication 3-0; February 2012).

⁵³ U.S. Coast Guard. *U.S. Coast Guard Maritime Law Enforcement Manual*, pp. 8-13 (COMDTINST M16247.1 (series)) [FOUO].

⁵⁴ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

⁵⁵ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

10. Marine Environmental Protection

The MEP mission is conducted to reduce the risk of harm to the maritime environment by developing and enforcing regulations to prevent and respond to oil spills and hazardous substance discharges, prevent the introduction of invasive species into the marine environment, prevent unauthorized ocean dumping, and reduce air emissions in the North American Emissions Control Area (ECA) from ships. The *Clean Water Act (CWA)* and *Comprehensive Environmental Response, Compensation, and Liability Act* call for the Coast Guard to manage the response to oil and hazardous substance incidents along 100,000 miles of coastline and inland waterways, in designated inland ports and waterways, and up to 200 miles offshore of the United States and its territories. Under a memorandum of agreement with the Environmental Protection Agency (EPA), this is expanded to include all navigable inland waterways.

The Coast Guard's MEP mission promotes excellence in marine environmental response operations by focusing on preparedness through people, processes, and partnerships. Since 1989, following the vessel casualty and resultant major oil spill from the T/V EXXON VALDEZ and the 2010 DEEPWATER HORIZON spill, marine environmental response has been characterized by ever-increasing engagement between the Coast Guard and stakeholders in the public and private sectors and international community. Federal, state, local, and tribal governments and the private and nonprofit sectors all share common goals, responsibilities, and accountability for shared response.

To ensure that the Nation is prepared, the National Response System (NRS) formalizes relationships in approved plans. The National Incident Management System (NIMS) recognizes that stakeholders have different authorities, jurisdictions, and capabilities, and provides a mechanism to unify efforts. The MEP program ensures the health of these agreements and coordinates with 15 federal agencies, 13 regional response teams, 40 area committees, and hundreds of state and local agencies. The major maritime communities affected by marine pollution regulations are deep-draft vessels, towing vessels, the commercial fishing industry, recreational vessels, and regulated waterfront facilities.

Pursuant to the *Act to Prevent Pollution from Ships*, the Coast Guard also enforces provisions of Annex VI of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL). MARPOL Annex VI contains regulations for the prevention of air pollution from ships, and has been initially implemented by the *Act to Prevent Pollution from Ships* and EPA regulations. The Coast Guard enforces the MARPOL Annex VI regulations on U.S.-flag vessels wherever the vessels are located, and on foreign-flag vessels operating either on U.S. navigable waters or in the U.S. EEZ.

Annex VI entered into force on July 1, 2010, and included amendments that established significant and progressive limits for sulfur oxide and nitrogen oxide emissions from marine engines and for the first time addressed emissions of particulate matter. These provisions, along with the recent establishment of the North American ECA and U.S. Caribbean Sea ECA, placed aggressive restrictions on the sulfur content in marine fuels that must now be enforced. Such comprehensive global and regional air emissions regimes have only begun to mature over the course of the past 5 years. These new regimes will increase required levels of Coast Guard pollution prevention and response oversight for the foreseeable future, and also necessitate greater cooperation and collaboration with both foreign flag states and the EPA.

The Coast Guard requires owners or operators of tank vessels and nontank vessels to prepare and submit oil spill vessel response plans. The vessel response plans must address, among other issues, the requirement to plan for responding to a worst case discharge and a substantial threat of such a discharge. Vessel owners and operators are also required to submit their vessel response plan control number as part of already required notice of arrival information. Tank vessels are vessels that are constructed or adapted to carry, or that carry, oil or hazardous material in bulk as cargo or cargo residue, that are vessels of the United States; operate on the navigable waters of the United States; or transfer oil or hazardous material in a port or place subject to the jurisdiction of the United States. Since 1990, the Coast Guard has implemented a phased requirement for tank vessels to be double hulled. Nontank vessels are self-propelled vessels of 400 gross tons or greater that operate on the navigable waters of the United States, carry oil of any kind as fuel for main propulsion, and are not tank vessels.

Regarding control of invasive species generally concentrating on ship's ballast water, the *Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990*, as amended by the *National Invasive Species Act of 1996*, requires the Secretary of Homeland Security to ensure to the maximum extent practicable that aquatic nuisance species are not discharged into waters of the United States from vessels. The statutes further stipulate that the Secretary may approve the use of certain alternative ballast water management methods if the Secretary determines that those alternative methods are at least as effective as ballast water exchange in preventing and controlling infestations of aquatic nuisance species. The Secretary is further required to direct vessels to carry out management practices necessary to reduce the probability of unintentional discharges resulting from ship operations other than ballast water discharge. The *National Invasive Species Act of 1996* also requires the Secretary to assess and, if dictated by that assessment, to revise the Department's ballast water management regulations not less than every 3 years based on the best scientific information available at the time of that review, and potentially to the exclusion of some of the ballast water management methods listed at 16 U.S.C. 4711(c)(2)(D) and 16 U.S.C. 4711(e). The Commandant of the Coast Guard carries out these functions and authorities for the Secretary pursuant to a delegation of authority charging the Coast Guard with establishing and enforcing regulations to prevent the introduction and spread of aquatic nuisance species in the waters of the United States through the ballast water of vessels.

Despite the best prevention programs, oil spills and hazardous substance discharges may occur as a result of natural disasters, accidents, or terrorism. Risks and consequences continue to increase as new chemicals and oils are shipped, larger vessels are used for maritime transportation, additional offshore resources are explored, and transits through remote locations such as the Arctic increase. Spills and releases in the maritime environment can threaten human health, destroy fragile ecosystems, and disrupt regional and global economies for years. Under the rubric of the *Oil Pollution Act* (OPA), the polluter is responsible for response and cleanup of any releases; however, when responsible parties (the owner or operator of a vessel, facility, port, pipeline, or abandoned asset) are not known or may not fulfill their response obligations; Coast Guard manages or oversees the response.

Marine Environmental Protection Trends

- *National Growth:* America's energy renaissance will continue to influence MEP mission demands. An increase in domestic oil and gas production (including new sources such as shale oil crudes and Canadian oil sands), new transport routes, aging oil and gas infrastructure, and increased inland river transport are dynamic drivers that may add to the

complexity of mitigating risks and preparing for and responding to pollution incidents. Increased exploration and offshore drilling in Mexico, the Caribbean, and the Arctic will require enhanced bilateral and multilateral partnerships to develop and implement prevention and response strategies to potential marine pollution incidents through research, training, exercises and international agreements. Likewise, improvements in water quality have raised public expectations for faster response times and decreased tolerance of disruptions of recreational and commercial use of the MTS. Scrutiny of preparedness efforts, plans, and alternative countermeasures such as dispersants has increased.

- *Heavy Oil and Shale Oil Spill Response:* Following recent improvements in shale fracturing technology and production of heavy oils like bitumen, increased crude oil production has facilitated an increase in shipments of bitumen products and shale crude oils via rail, truck, and barge. The increase in the domestic transportation of oil, particularly bitumen products, Bakken, and other shale crude oils in the United States, has drawn the attention of the Coast Guard and interagency stakeholders. These products, for the most part, both rely on the same basic technologies and strategies that are used to respond to spills of other types of oil. They do, however, present new challenges for the spill response community. For example, both products may necessitate increased air monitoring and personal protective equipment due to the volatilization of benzene and other volatile organic carbons. An additional challenge for heavy oils and bitumen products stems from scientific uncertainty related to how these products will behave in the aquatic environment. They contain Group 5 (heavy) oil components that present unique challenges due to oil characteristics (a tendency to sink in high sediment environments or intense surf). Nonfloating oil recovery technology is not advanced and specialized capabilities and equipment to address spills of these heavier components are not readily available. Some of these response challenges were apparent during the Enbridge Oil Pipeline incident on the Kalamazoo River in 2010. There is an increase in public concern over potential human and environmental impacts from increases in the shipment of these crude oil products, some of which present different characteristics from traditional crude oil, via the Great Lakes and major hubs such as St. Louis, Missouri; Albany, New York; and Anacortes, Washington.
- *Crude-By-Rail Initiatives:* Many rail systems run alongside navigable rivers and waterways. According to the Association of American Railroads, crude oil shipments have increased 443 percent since 2005. For the last 3 fiscal years, the Coast Guard has provided strategic planning direction to field units to assess new oil sources, including rail, and to incorporate these risks in Area Contingency Plans. Through our sustained engagements in HSCs, AMSC, and area committee meetings, we have conducted several Bakken and shale oil awareness training seminars, a national crude by rail webinar, and have coordinated outreach efforts with interagency partners like DOT and EPA to establish and disseminate vital first response training programs, including an online orientation for on-scene coordinators assembled by the National Response Team. The Coast Guard is conducting the first Consensus Ecological Risk Assessment involving rail as a source this summer, a tool previously used to compare tradeoff impacts of offshore response countermeasures. Moreover, the National Strike Force has responded to several Bakken and shale oil-related rail incidents and, working with NOAA's scientific support coordinators, has recorded critical information on the characteristics and fate of Bakken and shale oil discharges in the inland and coastal environments. The Coast Guard is supporting DOT, in coordination with EPA, the Federal Emergency Management Agency (FEMA) and its U.S. Fire Administration, the Association of American Railroads, and the American Petroleum

Institute in creating an in-depth training program with videos and scenario animations for local, state, and federal response personnel. This training program covers the relationship between local and state emergency response plans and the National Oil and Hazardous Material Contingency Plan. The training program further addresses the types of response infrastructure available to first responders, crisis management (NIMS Incident Command System) expectations, resources provided by the railroad industry and applicable federal special teams from the National Response Team. Based partially on the emergence of this issue relative to new oil-by-rail corridors, the Coast Guard initiated and is leading an interagency subcommittee of the National Response Team to improve the process of meeting environmental consultation and compliance requirements of federal statutes, such as the ESA, as they apply to oil and hazardous substance response and preparedness activities.

- *Gulf Research Program (GRP)/Gulf of Mexico Research Initiative:* The recent investment of \$1 billion in the National Academy of Sciences GRP and Gulf of Mexico Research Initiative is leading to better understanding of the impacts of the oil, dispersed oil, and dispersants on Gulf of Mexico ecosystems. The Initiative's program is providing valuable knowledge of ecosystem effects, which is improving understanding of how dispersant use in the Gulf of Mexico can be best used. The Initiative's effort will expire in the next 5 years while the GRP investment will ramp up for its 30-year life. The Coast Guard involvement in the GRP effort involves working through the Interagency Coordinating Committee on Oil Pollution Research to provide advice on the programs' investments to improve an understanding of oil system safety and human health issues. The GRP will provide information with more general applicability to all response efforts.
- *Liquefied Natural Gas (LNG) as Fuel:* LNG as a marine fuel is becoming a more common and relatively inexpensive option for outfitted ships to meet environmental emissions regulations. As vessels seek locations to take on LNG fuel, increasing numbers of facilities will try to meet that demand. LNG transfer operations are regulated under 33 C.F.R. 127, and require a number of safety and security measures of the vessel and the facility.

Marine Environmental Protection Stakeholders

In executing the MEP mission, the Coast Guard works closely with DOS and DOC; EPA; National Response System member agencies; state, local, tribal, and international governments; and members of the IC. A full list of MEP stakeholders can be found in Appendix B.

Marine Environmental Protection Mission Elements

- *National Response System:* The NRS is the government's mechanism for emergency response to discharges of oil into the navigable waters and hazardous substances into the environment of the United States and its territories. Coast Guard preparedness and response operations occur under the auspices of the NRS, which functions through a network of interagency and intergovernmental relationships formally established in the *National Oil and Hazardous Substances Pollution Contingency Plan* (NCP; 40 C.F.R. 300). The regulated industries involved in oil exploration, production and transportation must also plan, train, equip and exercise consistent with NRS. The NCP describes three levels of governmental components – Federal On-Scene Coordinators, the National Response Team, and Regional Response Teams – and supporting special teams to respond to oil and chemical discharge incidents. Two of the special teams of the NRS include Coast Guard units – the National

Strike Force (NSF) and Public Information Assist Team.

- *NSF*: The NSF provides highly trained, experienced personnel and specialized equipment to the Coast Guard and other federal agencies to facilitate preparedness for and response to oil and hazardous substance pollution incidents, including CBRN incidents, in order to protect public health and the environment. The NSF includes the NSF Coordination Center, the Atlantic Strike Team, the Gulf Strike Team, and the Pacific Strike Team.
- *Incident Management Assistance Team*: The Coast Guard Incident Management Assistance Team (CG-IMAT) supports the operational commander in complex incident/crisis management for all-hazard, all-threat incidents and events. The CG-IMAT is a rapidly deployable, scalable resource that addresses capability gaps within an incident management organization wherever required. CG-IMAT is designed to support response operations across the full spectrum of Coast Guard contingencies.
- *National Pollution Funds Center (NPFC)*: In 1991, the Coast Guard created the NPFC to implement Title I of the OPA, administer the Oil Spill Liability Trust Fund delegated to the Coast Guard by Executive Order, and ensure effective response and recovery. The NPFC provides adequate funds for a rapid and effective federal response to a discharge; implements a compensation mechanism to pay those damaged by discharges when the liable responsible party does not pay; establishes a liability and compensation regime that serves as a deterrent to potential responsible parties for oil spills; and establishes a certificate of financial responsibility to ensure owners and operators of certain vessels have funds to pay for oil spill removal and damages up to prescribed limits.
- *Inspections to Ensure Compliance with U.S. and International Environmental Standards*: MS personnel conduct inspections and examinations of U.S. and foreign flag oil and chemical tankers, cargo ships, cruise ships, and other commercial vessels to ensure they are in compliance with U.S. and international environmental standards as well as safety standards. Coast Guard personnel inspect and examine ships, port facilities, and terminals that handle oil, gas, hazardous materials, and other dangerous cargoes.
- *Environmental Crimes Detection and Investigations in support of DOJ*: Illegal discharge causing marine pollution is a DOJ criminal enforcement priority and has resulted in criminal convictions and substantial industry fines, and reinforces the United States' commitment to the good tenets of environmental protection. The Coast Guard's MS Laboratory has been vital in support of these efforts and continues to be the preeminent federal laboratory used in oil spill source identification and the prosecution of responsible parties.
- *Pollution Response Exercises*: The Coast Guard conducts and participates in drills and exercises at the local, regional, national, and international levels. Exercises for oil and hazardous material contingencies are addressed in the National Preparedness for Response Exercise Program which was established to meet the federal exercise requirements of the OPA. Exercises include a spectrum of type and complexity. This includes "classroom" settings (seminars, workshops, tabletop), focused operational drills, and larger scale exercises involving significant multi-agency response operations. An example of a large-scale event is the Spill of National Significance exercise. A Spill of National Significance is a spill that due to its severity, size, location, or impact, requires extraordinary coordination to contain or clean up the discharge. In recent years, the Coast Guard has shifted the Spill of National

Significance exercise program toward annual training and seminar events that include the opportunity to discuss complex and politically sensitive response issues among other DHS components, the Coast Guard, and the 15 National Response Team agencies.

Marine Environmental Protection Goals and Objectives

The MEP program prevents personnel casualties and property losses, minimizes security risks, and protects the marine environment by developing and enforcing federal marine safety, security, and environmental regulations. The Maritime Response program mitigates the consequences of marine casualties and disastrous events. Derived from national and departmental policies and strategic direction, the *Maritime Prevention Program Performance Plan FY 2014-2019* and *Maritime Response Program Performance Plan 2014-2019* have identified strategic goals and performance initiatives for this mission area:

- *Ensure marine environmental protection from vessels and marine facilities:* With respect to environmental damage, the Coast Guard will establish and enforce regulations and standards that reduce and mitigate risks that could lead to these types of events.
- *Cultivate international partnerships:* To support the Coast Guard's maritime interest, international efforts are focused on improving integrated preparedness and response planning with all partners to include foreign governments, nongovernmental agencies, academia, and the private sector. This engagement within international organizations will enable the Coast Guard to forge global solutions to the challenges in the maritime environmental preparedness and response domain worldwide.
- *Regulate hazardous material discharge:* Regulating the discharge of oil, hazardous substances, and other shipboard wastes into U.S. and international waterways; stopping unauthorized ocean dumping; and averting the introduction of invasive species.
- *Inspect waterfront facilities:* Inspect waterfront facilities for environmental compliance, including scheduled annual inspections and random spot checks.
- *Monitor transfer activity:* Monitoring material transfer activities to ensure that vessels and facilities engaged in the movement of oil and hazardous materials have implemented required safeguards, monitoring, and communication protocols.
- *Conduct container inspections:* Examining containers used in the transport of hazardous materials to ensure that structural integrity is sufficient to withstand the stresses of global transport and that hazardous materials are packaged, labeled, and declared properly. General cargo containers are also inspected to ensure that structural integrity is sufficient and that undeclared hazardous materials are not present.⁵⁶

Marine Environmental Protection GPRAs Performance Measures

⁵⁶ U.S. Coast Guard (CG-771/ CG-926). *United States Coast Guard Integrated Deepwater System Modeled Concept of Operations for Coast Guard Deepwater Assets* (6 June 2012).

Performance Measure	Measure Type ⁵⁷
Average number of oil spills in the maritime environment	Management
Average number of chemical discharge incidents in the maritime environment	Management

⁵⁷ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

11. Ice Operations

Coast Guard icebreaking provides access through ice-impacted domestic and international waters. The mission is essential to specific maritime activities in the Polar Regions, the Great Lakes, and along northeastern and mid-Atlantic regions of the U.S. coast.

Domestic

Domestic ice operations aid communities in emergency situations and facilitate safe commercial navigation through ice-laden waters of the Nation's MTS. Domestic icebreaking activity allows for the transport of goods vital to U.S. manufacturing and electricity generation, including coal, salt, home heating oil, petrochemicals, and bulk cargo. The Coast Guard also provides to isolated island communities the ability to obtain vital goods and services, such as food and medical care, and prevents ice-related flooding in shoreline and riverside communities. The MTS and commercial industry directly benefit from the icebreaking mission with the movement of dry and liquid cargoes during the winter months. Having access to a year-round supply of raw materials keeps factories and refineries in production and is vital to the U.S. economy. In 2014, Ice Operations facilitated the navigation of 20 billion barrels of petroleum products and petrochemicals and 3.3 million tons of cargo, with an estimated economic impact of \$7.8 billion to the Nation's economy.

International

Coast Guard international ice operations support science activities in both Polar Regions and a range of Coast Guard missions in the Arctic. The Coast Guard operates the only U.S.-flagged heavy icebreaker capable of providing year-round access to both Polar Regions, which is vital to exercising national sovereignty in the Arctic and supporting the resupply and treaty enforcement requirements of the U.S. Antarctic Program. The Coast Guard also ensures safe maritime navigation in the North Atlantic through the International Ice Patrol (IIP) by tracking icebergs and providing notices of hazards to all mariners.

In the Arctic, the continental shelf holds many resources and vital habitats for marine life. Coast Guard's icebreakers support scientific expeditions that help define the extent of the U.S. Extended Continental Shelf and improve our understanding of the resources within. Icebreakers, along with other Coast Guard air and vessel assets, patrol the region to protect U.S. resources and provide response and law enforcement capabilities in support of several missions.

In the Antarctic, the Coast Guard's heavy icebreaker provides access for vessels that deliver fuel and dry cargo goods to the McMurdo Research Station and supports U.S. Antarctic Treaty compliance inspections.

The International Ice Patrol monitors iceberg danger off the Grand Banks of Newfoundland in the North Atlantic and provides the iceberg limit to mariners transiting the area. This service is required by 46 U.S.C. 80302 in support of the U.S. Government treaty obligations under the Safety of Life at Sea (SOLAS) Convention. The IIP monitors the iceberg danger areas by patrolling with aircraft, the use of satellite imagery, and using reports from commercial vessels. Recently, the USCG cutter HEALY, in cooperation with Canadian counterparts, conducted nine cruises in support of electronic chart system data collection efforts. The Coast Guard anticipates supporting additional electronic chart system data collection efforts in the future.

Ice Operations Trends

- *Arctic:* The Arctic environment continues to change dramatically with 14 of the warmest years in history being recorded in the past 15 years. The Arctic Ocean's ice cap experienced a historic low for the satellite era (i.e., 1979 – present) in September 2012. Specifically, the extent of the ice cover was 1.32 million square miles below the average September ice cover from 1979 to 2000. Moreover, Alaska has warmed more than twice as rapidly as the rest of the United States over the past 60 years, with the statewide average annual air temperature increasing by three degrees Fahrenheit and the winter temperature by six degrees Fahrenheit. This warming involves more extreme hot days and fewer extreme cold days. The decrease in the age of sea ice is also an important environmental trend. Older, multi-year ice tends to be harder, thicker, and more dangerous to ships than first-year ice. At the climatologically maximum ice month of March, older ice (e.g., 4 years and older) has decreased from 26 percent of the ice cover in 1988 to seven percent in 2012. In March 1988, 58 percent of the ice pack was composed of first-year ice (i.e., ice that had not survived a melt season). In March 2012, first-year ice dominated the pack (i.e., 75 percent.). The receding and thinning trend of sea ice makes the Arctic more accessible to shipping and prolongs the open water season.

Economic development in the form of resource extraction, adventure tourism, and trans-Arctic shipping will drive much of the change in Coast Guard's future maritime presence in the Arctic region. These activities, in addition to near-term exploratory offshore oil drilling, are expected to increase the amount of human activity in the region over the next decade and a commensurate increase in the request for Coast Guard icebreaking services is anticipated. Increased activity combined with the geographic remoteness and lack of response resources in the region will make icebreakers, and the access they provide, a valuable asset for the execution of Coast Guard missions such as SAR, fisheries enforcement, and pollution response. The Coast Guard will continue to monitor, evaluate, and respond to the changes in human activity.

- *Antarctic:* The United States has important foreign policy and national security interests in Antarctica (Presidential Decision Directive/NSC-26). The Coast Guard icebreakers have been an integral part of the U.S. Antarctic Program by providing access for fuel and other supplies into Antarctica. This resupply capability is critical to maintaining a strategic U.S. leadership presence on the continent. With the exception of few years in the 2000s, the Coast Guard has performed the mission since 1965.
- *Domestic Icebreaking:* Over the past two winters (2013-2014, 2014-2015), cold Arctic weather systems have dipped further south over the Great Lakes and the Northeast, resulting in unseasonably cold temperatures and significant ice accumulation. These extreme temperatures caused early and significant ice to form, impeding vessel traffic in the Great Lakes. During this period, the Great Lakes experienced more than 90 percent ice coverage by mid-March. During the 2013-2014 Great Lakes season, icebreakers facilitated the movement of 1,130 commercial vessel transits, up from 1,099 in 2012. The increased demand for icebreaker escorts to keep critical cargoes moving throughout the entire season strained the Coast Guard's 30+ year-old, 140-foot icebreaking tug fleet. The fleet is currently undergoing a Service Life Extension Program that will extend the life of these assets by approximately 15 years. In addition to U.S. Coast Guard icebreakers, the Canadian Coast Guard also provides icebreakers in the Great Lakes to help ensure movement of both U.S. and Canadian commercial vessel transits. Since 1980, the U.S. and Canada have had an agreement that provides for coordination of icebreaking operations on the Great Lakes that is governed through diplomatic arrangement.

The Domestic Icebreaking program continues to monitor increased vessel traffic tied to fuel trends and just in time delivery business models, especially in the Northeast region. Fuel movements up and down the Hudson River continue during the icebreaking season, with more demand for escorts by Coast Guard vessels during the 2014-2015 winter than has occurred in more than a decade.

- *IIP*: Global market trade from Europe has increased, with destination ports along the east coast of Canada and the United States. Trans-Atlantic shipping routes are moving further north, taking advantage of the more economical great circle route and the Labrador Current. The confidence level in the ice warning products allows vessels to transit further north to take advantage of this cost savings, thus increasing the amount of transits. The IIP primarily utilizes aircraft to detect icebergs that cause a significant danger to vessel navigation. With advances in satellite imagery, there is a probability that in the future the Coast Guard may be able to reduce its reliance on aircraft for iceberg recognizance.

Ice Operations Stakeholders

In executing the Ice Operations mission, the Coast Guard works closely with the National Science Foundation; DOS, DOE, DOD, DOC, DOI, and DOT; the Arctic Research Commission; the public; the National Ice Center; the U.S. Army Corps of Engineers; and international partners. A full list of Ice Operations stakeholders can be found in Appendix B.

Ice Operations Mission Elements

- *Domestic Icebreaking*:⁵⁸ Supporting transit of critical cargoes along waterways in winter and preventing/responding to ice that causes flooding are essential to the safety of waterside communities on the Great Lakes, in New England, on the Hudson River, and in mid-Atlantic ports. The Domestic Icebreaking mission is greatly assisted by the U.S./Canadian Great Lakes Icebreaking Agreement signed in December of 1980, between the U.S. and Canadian governments. The agreement outlines “coordination between United States and Canadian Coast Guards will lead to increased efficiency in the utilization of ice operations forces in the Great Lakes and St. Lawrence Seaway System thereby increasing our capability to maintain open routes for maritime commerce to the mutual advantage of both the United States of America and Canada.” The initial agreement was for 10 years and since has been renewed (via letters) every 5 years.
- *Polar Icebreaking*: The Coast Guard operates the Nation’s only polar-class icebreakers. In the Arctic, the polar icebreaking program carries out the Coast Guard’s overarching missions of maritime safety, security, and stewardship on behalf of the American people and mariners transiting the high seas and U.S. waters in the region. Polar icebreaking supports U.S. security, economic, and scientific interests by providing the operational capabilities required to safely and reliably navigate and operate year-round in the extreme cold and ice of the Polar Regions. As a world leader in the international search and rescue community, the Coast Guard can also assist ships as a vessel of opportunity when operating in the Antarctic region.

⁵⁸ U.S. Coast Guard. *Marine Transportation System Management Performance Plan Fiscal Years 2012-2017* (September 2011).

- *IIP*: The IIP facilitates safe transit of vessels in ice-laden waters by reducing the risk of collision between ships and icebergs. The IIP monitors the iceberg danger near the Grand Banks of Newfoundland and provides the Limit of All Known Ice to the maritime community traversing the great circle trade routes between Europe and major U.S. and Canadian east coast ports. The IIP works closely with the National Ice Center, which is a multi-agency operations center operated by the U.S. Navy, NOAA, and the Coast Guard, and which provides relevant snow and ice information products to meet the strategic, operational, and tactical requirements of U.S. interests in the Polar, Great Lakes, and Northeast regions.

Ice Operations Goals and Objectives

- *Prioritize service to meet critical needs*: The Coast Guard prioritizes domestic ice operations under a tiered system. Tier One (most critical) are those connecting waterways deemed highest-priority due to geographical location and importance of cargo. Tier Two are those navigable waterways through which cargo of significant economic importance to the region moves. Tier Three are federally maintained waterways within a port, or connecting waterways between Tier Two and Tier Four waterways. Tier Four are those wholly private, nonfederally maintained waterways, piers, and private docks. During ice season, the Coast Guard measures the amount of time that high-priority waterways are open to vessel traffic. The objective of this metric is to gauge effectiveness in keeping critical waterways open for commercial navigation when ice is present, and gauge the Coast Guard’s performance in conducting the mission.
- *Ensure federal access to the Polar Regions*: The Coast Guard’s objectives for the Polar Regions include assisting the resupply of McMurdo Research Station in Antarctica as required and ensuring year-round federal access in the Arctic. As part of the federal research fleet, supporting science requests for icebreaking capabilities continues to be the mission focus. The Coast Guard’s goal is to have the availability, capacity, capability, and access to respond to the increase in human activity in both Polar Regions.
- *Improve effectiveness of iceberg warning products*: The Coast Guard continues to work with the National Ice Center to explore more cost-effective means to produce iceberg warning products for the maritime community. The IIP is exploring the use of satellite imagery, and ways to implement alternatives to improve efficiency, reduce costs, and harness new technologies as they become available. The Service’s ability to validate satellite imagery with actual observations, and effectively produce products, requires integration with a multitude of interagency partners.

Ice Operations GPRA Performance Measures

Performance Measure	Measure Type ⁵⁹
Percent of time high-priority waterways in Great Lakes and along eastern seaboard are open during ice season	Management

⁵⁹ Strategic Measures may be released to the public as part of the DHS Annual Performance Report. Management Measures are measures reported internally to DHS, OMB, Congress, etc., and may or may not be reported publicly.

VII. Mission Needs

The below section provides an overarching view of the enduring, high-level capabilities required by the Coast Guard in order to execute its statutory missions. An in-depth breakdown of capability requirements is provided in Appendix A.

- *Surveillance*: Surveillance is the ability to conduct continuous and systematic observation (overt and/or covert) of all environments (aerospace, surface, subsurface, cyber) within the AOR. Surveillance is conducted to provide MDA of vessels, aircraft, and maritime activities within the AOR and to deter, detect, and monitor known or suspected illicit activities or other activities of interest.
 - *Strategic Surveillance*: Observation of large areas within an AOR for the purpose of enhancing MDA and understanding of the operational concerns within the entire AOR.
 - *Tactical Surveillance*: Observation of small geographic areas within an AOR for the purpose of enhancing MDA and understanding of the operational concerns within that AOR.
 - *Persistent Surveillance*: Extended duration surveillance on scene within the AOR that may be strategic or tactical.
 - *Patrol*: Activities involving pre-positioning of resources for surveillance activities and/or moving about an assigned area for the purposes of observation, inspection, security, and/or enforcement.
- *Detection*: Detection is the ability to locate and track (overtly or covertly) vessels (surface & subsurface), aircraft, and activities within the AOR (aerospace, surface, subsurface, cyber), in all weather conditions, day or night. Detection occurs during surveillance and is dependent on sensor capabilities (visual, electronic, aural, etc.).
 - *Wide-area detection*: Locating and tracking the specific position, course, and/or altitude of multiple aircraft, vessels, or other activities within large geographic units of the AOR.
 - *Short-range detection*: Locating and tracking the specific position, course, and/or altitude of multiple aircraft, vessels or other activities within small geographic units of the AOR and/or locating and tracking a specified aircraft, vessel, or activity.
- *Classification*: Classification is the ability to sort targets into groups or categories to which they may belong (e.g., fishing vessel, merchant vessel). Detected targets are evaluated, differentiated from legitimate maritime traffic, and prioritized as targets based on their characteristics and operational mission criteria.
 - *Sorting*: The act of categorizing multiple detected vessels according to their location, profile, or characteristics.
 - *Correlating*: The act of correlating certain detected vessels and aircraft to licit or potentially illicit activity based on MDA, known illicit profiles and threat vectors, and/or specific intelligence.
- *Identification*: Identification is the ability to determine if a vessel, aircraft, or activity is a target of interest (TOI) based on its unique characteristics or activities. Identification differentiates a particular vessel, aircraft, or activities from others in the same classification category.
- *Prosecution*: Prosecution is the ability to intercept or close the distance to TOIs, events, or incidents in order to deliver prosecution capability that is mission- and situation-specific. Delivering prosecution capability may include, but is not limited to, hoisting people to a

helicopter, delivering pumps, launching a boat, conducting a boarding, engaging in towing, collecting fisheries violation evidence, enforcing safety regulations, or responding to an oil spill.

- *Intercept*: Closure of the distance between Coast Guard asset(s) and a TOI.
 - *Stop*: Compelling a TOI, using minimum force necessary, to cease movement, slow, or adjust its course or speed to facilitate further law enforcement action. Includes use of force, both surface and air.
 - *Transport*: Carry and/or move personnel, equipment, or material to conduct or as a results of missions. Includes conducting medical evacuations and delivering survivors to a suitable facility.
 - *Examine*:
 - *Board*: Placing a boarding team safely aboard a vessel to conduct an investigation that may include actions to detect and/or suppress violations of the law.
 - *Inspect*: Critical examination and appraisal of a person, place, or thing.
 - *Investigate*: A systematic or formal inquiry to discover and examine the facts (of an incident, allegation, etc.) so as to establish the truth.
 - *Remove/Mitigate*: Contain and/or remove materials or articles from the maritime environment. Includes removing, destroying, or arranging for the recovery of property posing a hazard to navigation.
 - *Arrest/Detain/Seize*: Arrest or detain, in lieu of arrest, for further transfer to another law enforcement agency of persons suspected of violations of law. Taking into official custody any contraband, vessels, and other evidence until transfer to another agency, partner, or final disposition.
 - *Prevent/Protect*: Provide prevention services (functions that avoid, prevent, or stop a threatened or actual incident or event) and protection services (functions that secure the homeland against acts of terrorism and man-made or natural disasters) to personnel and property to deter unsafe and illicit activities or other activities of interest.
 - *Escort*: Accompany to ensure security, safety, or compliance.
 - *Enforce*: Compel observance of or compliance with a law, rule, or regulation.
 - *Assist*: Provide medical, repair, rescue, and other services to personnel and property during and/or following incidents or events:
 - *Emergency Care*: Providing shelter and first aid to injured persons during or after rescue, and during transit, until delivery to a suitable facility.
 - *Repair*: Providing emergency services to aid mariners in distress (e.g., firefighting, dewatering).
 - *Rescue*: Saving persons in distress.
 - *Marine Information*: Providing information to support proper decision making for mariners (e.g., weather and navigation).
 - *Warfighting*: Contribute to and/or operate as a component of the “uniformed services” in time of war, national emergency, or as otherwise directed by proper authority.
- *Command & Control*: The planning, coordination, management, and employment of multiple Coast Guard capabilities assigned, attached, and/or made available for operations within an AOR. Command and control maximizes the effectiveness of capabilities, spanning all phases of operations.
 - *Plan*: Develop and promulgate doctrine, policy, and plans to facilitate mission execution.
 - *Coordinate/Direct*: Organizing, directing, or controlling resources, assets, and elements in the conduct of operations; includes apportioning, allocating, and assigning.
 - *Regulate*: To establish control or direct by a rule, principle, method, etc.
 - *Engagement*: Establishment and maintenance of agreements between parties, to include

foreign militaries and law enforcement agencies, in order to expand jurisdictional reach to carry out Surveillance, Detection, Classification, Identification, and Prosecution (SDCIP) activities and facilitate partnership activities.

- *Readiness*: Support the full range of exercise and/or training activities with partners.
 - *Information Management*: Collecting, sorting, storing, and assessing information from disparate sources and/or methods to support and/or facilitate decision making.
 - *Information Exchange*: Sharing of SDCIP data and other relevant information in real or near-real time, in all modes (voice, data, video, etc.) – secure with Coast Guard resources and all appropriate partners.
- *Intelligence (Intel)*: Intelligence is the collection, processing, integration, evaluation, analysis, and interpretation of all available information concerning local, regional, and national activities and trends. This includes a robust intelligence and law enforcement monitoring capability to detect, identify, monitor, and screen cargo, people, identified areas of interest, vessels, and other craft operating in the global maritime environment.
 - *Task*: Development and promulgation of doctrine, policy, and plans to facilitate tasking of operational assets for intelligence gathering.
 - *Collect*: Operational assets apply available sources and methods to gather intelligence information; includes inputs from intelligence gathering disciplines.
 - *Process*: Conversion of raw collected data into forms that can be readily used by analysts/consumers. Preferably an automated function.
 - *Exploit*: Human analysis of processed data to derive intelligence and create intelligence products.
 - *Disseminate*: Distribution of processed data and/or products to answer information and/or intelligence needs.
 - *Partnerships*: Partnerships serve as a valuable force multiplier. To conduct its missions effectively, the Coast Guard must work with partners across the Federal Government; in foreign governments; at the state, local, tribal, and territorial levels; and in the private sector. At the federal level, the Coast Guard must align capabilities and coordinate operations with the rest of DHS to ensure optimal unity of effort.
 - *Mission Support*: Mission Support is the provision of operational logistics and personnel services to acquire, prepare, and sustain Coast Guard capabilities including cutters, boats, aircraft, infrastructure, and systems. Mission Support includes functions necessary to protect and preserve operational capabilities, including security measures to protect Coast Guard personnel and facilities, information systems, communications, and operations. Common subfunctions of Mission Support include the provision of logistics, parts, fuel and supplies, operating bases, force protection, training, and legal support.
 - *Trained, Proficient, and Professional Workforce*: Supports and enables the execution of all of the Coast Guard’s statutory missions. The Coast Guard workforce must have sufficient capability, proficiency, and capacity to properly exercise Coast Guard authorities and execute Coast Guard missions. Likewise, the Coast Guard Reserve workforce must be sufficiently staffed to meet surge and contingency needs. Parity with DOD compensation and benefits for active and reserve personnel is essential for maintaining a high-quality and professional workforce.
 - *Information Technology & Cyber Resilience*. Supports and enables capabilities essential to

performing mission-essential tasks. IT infrastructure should be secure, resilient, continuously sustained, and tailored for mission needs. The technology that underpins these mission capabilities must provide support for intelligence-informed operations through an integrated information sharing environment with various federal, state, local, tribal, territorial, international, and industry port partners. Coast Guard cyberspace consists of IT systems and networks that are essential to the Service's overall mission success. Threats to these systems and networks have been growing in number and complexity, and will continue to do so for the foreseeable future. To ensure that the Coast Guard is fully capable of performing its essential missions for the Nation, the Coast Guard must be able to defend its cyberspace by identifying and hardening systems and networks, understanding and countering cyber threats, and increasing operational cyber resilience.

VIII. Conclusion

As outlined in this MNS, geostrategic trends and global threats are rapidly changing. In an increasingly complex world, interdependent global economies thrive on a reliable and efficient MTS. Maritime activities in regions such as the Western Hemisphere and Arctic rely heavily upon cyber technologies to fuse information and promote MDA. TOC networks, technological advances in maritime industries, domestic energy production, cyber risks, effects of climate change, shifting human migration patterns away from poverty and violence, and weakening sovereign nation states affect the current and future maritime operating environment.

Addressing any one of these challenges requires continued investment in Coast Guard people and assets to assure the appropriate level of readiness for major incidents, as well as the daily execution of our missions. Taken together, the convergence of these trends will draw heavily upon the capabilities developed by the Coast Guard to meet its 11 statutory missions. The Coast Guard's broad authorities and unique portfolio of capabilities reside within one agency and are distinctively suited to meet our Nation's evolving maritime interests.

To safely and effectively execute its broad portfolio of missions, the Coast Guard must have the enduring capabilities of surveillance, detection, classification, identification, and prosecution. Likewise, the Coast Guard must also be capable of exercising robust command and control functions; collecting, processing, integrating, evaluating, and interpreting intelligence; growing and maintaining partnerships – both domestically and internationally– building and maintaining a proficient and professional workforce; maintaining secure and resilient information technology systems; and providing comprehensive mission support functions. These capabilities will ensure that the Coast Guard remains *Semper Paratus* –Always Ready– to carry out its service successfully and efficiently to the Nation in the decades ahead.

Appendix A: Capability Requirements by Mission

The below table contains a general overview of the capabilities that Coast Guard has assessed as necessary to execute its statutory missions. However, due to the dynamic nature of emerging global trends, this overview does not constitute a definitive list of the Service's future mission needs and capability requirements.

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Surveillance	The ability to conduct continuous and systematic observation (overt and/or covert) of all environments (aerospace, surface, subsurface) within the area of responsibility (AOR) to provide maritime domain awareness (MDA), including vessels, aircraft, and activities within the AOR, and to look for and monitor known or suspected illicit activities or other activities of interest.											
Monitor offshore activities	The ability to observe or check offshore areas (>50nm).	X	X	X	X	X	X	X	X	X	X	X
Monitor coastal activities	The ability to observe or check coastal areas (<50nm offshore).	X	X	X	X	X	X	X	X	X	X	X
Monitor inland and port activities	The ability to observe or check inland and port areas.	X	X		X		X	X	X	X	X	X
Monitor navigation aids & hazards	The ability to verify the status of primary and secondary aids to navigation (ATON), and/or ascertain the status of navigational hazards (ice, obstructions, etc.).								X			X
Conduct tactical surveillance	The ability to observe small geographic areas within an AOR for the purpose of enhancing MDA and understanding of the operational concerns with that AOR. Includes providing cueing and targeting information to forces.	X	X	X	X	X	X	X	X	X	X	X
Perform persistent surveillance	The ability to conduct extended duration surveillance on-scene within the AOR that may be targeted to specific areas, activities, and/or targets.	X	X	X	X	X	X	X	X	X	X	X
Pre-position or allocate resources	The ability to pre-position (position in advance of or in preparation for) or allocate (distribute for a particular purpose or as planned) resources (something of value, with utility, and of limited in availability; examples include money, materials, staff, supplies, and equipment) across all Coast Guard operational areas (Inland, Coastal, and Offshore).	X	X	X	X	X	X	X	X	X	X	X
Conduct patrol	The ability to maintain water, land, and air patrols for the purpose of executing the duties and functions of the Coast Guard across all Coast Guard operational areas (Inland, Coastal, and Offshore).	X	X	X	X	X	X	X	X	X	X	X
Maintain station	The ability to remain on assigned station during operations.	X	X	X	X	X	X	X	X	X	X	X
Search air	The ability to observe or check aerospace areas and activities.	X			X							
Search surface	The ability to observe or check surface areas and activities.	X	X	X	X	X	X	X	X	X	X	X
Search subsurface	The ability to observe or check subsurface areas and activities.	X	X		X		X		X			

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Launch/recover aircraft	The ability to dispatch and recover aircraft to the scene of the event or incident or for proactive patrolling.	X	X	X	X	X	X	X	X	X	X	X
Launch/recover boats	The ability to dispatch and recover boats to the scene of the event or incident or for proactive patrolling.	X	X	X	X	X	X	X	X	X	X	X
Detection	The ability to overtly or covertly, in all weather conditions, day or night, locate and track vessels (surface & subsurface), aircraft, and activities within the AOR (aerospace, surface, subsurface); includes marine incidents, anomalies and distress events. Detection is dependent on sensor capabilities (visual, electronic, aural, etc.).											
Conduct wide-area detection	The ability to detect aircraft, vessels, suspicious activity, garbage, and hazardous materials (both passively and actively), day or night, in all weather conditions, within the large geographic unit of AOR.	X	X	X	X	X	X	X	X	X	X	X
Conduct short-range detection	The ability to detect aircraft, vessels, suspicious activity, garbage, and hazardous materials (both passively and actively), day or night, in all weather conditions, within small geographic units of AOR and/or locating and tracking a specified aircraft, vessel, event/incident, or activity.	X	X	X	X	X	X	X	X	X	X	X
Determine position	The ability to detect and identify search objects, search and rescue (SAR) incident objects, and selected vessels in a predetermined area on, over, or under the water or the adjacent shoreline.	X	X	X	X	X	X	X	X	X	X	X
Classification	The ability to sort and correlate maritime incidents, activities, and targets into groups or categories to which they may belong (collision/allusion, SAR event, oil spill, fishing vessel, merchant vessel, etc.). Detected activities and targets are evaluated, differentiated from legitimate maritime activity and traffic, and prioritized based on their characteristics and operational mission criteria.											
Sort conveyances, items and activities	The ability to sort detected aircraft, vessels, suspicious activity, garbage, and hazardous materials (both passively and actively), day or night, in all weather conditions.	X	X	X	X	X	X	X	X	X	X	X
Correlate conveyances, items and activities	The ability to evaluate, differentiate from legitimate maritime traffic, and prioritize targets based on their characteristics and operational mission criteria.	X	X	X	X	X	X	X	X	X	X	X
Identification	The ability to determine if a vessel, aircraft, or an activity is of interest based on its unique characteristics or activities. Identification differentiates a particular vessel, aircraft, or activity from others in the same classification category.											
Identify conveyances, items and activities	The ability to visually and/ or electronically identify aircraft, vessels, suspicious activity, garbage, and hazardous materials – including intent of operators and/or crew – day or night, in all weather conditions.	X	X	X	X	X	X	X	X	X	X	X
Prosecution	The ability to intercept or close the distance to targets of interest, events, or incidents in order to deliver prosecution capability that is mission and situation specific. Delivering prosecution capability may include hoisting people to a helicopter, delivering pumps, launching a boat, conducting a boarding, engaging in towing, or collecting fisheries violation evidence.											
Intercept vessel	The ability to rendezvous with vessels or arrive on the scene of operational activity anywhere in the Coast Guard's operational areas to provide prompt service delivery in a wide range of environmental and geographic conditions. Includes intercepting target vessels to conduct law enforcement, antiterrorism, and counterterrorism activities.	X	X	X	X	X	X	X	X	X	X	X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Perform Rotary Wing Air Intercept (RWAI)	The ability to execute Homeland Security and Defense missions using armed Coast Guard personnel and aircraft to regularly conduct alert, intercept, communication, surveillance, and escort activities. The Coast Guard provides RWAI expertise and capabilities in support of National Special Security Events and National Capital Region airspace protection.	X			X							
Incapacitate conveyances, people, or hazards	The ability to disable (with airborne or surface use of force) or destroy hostile or evasive targets or hazards: – Aircraft and vessels. – People and vehicles. – Floating hazards to navigation.	X	X	X	X	X			X	X		X
Position unit	The ability to transit or transport Coast Guard and non-Coast Guard response assets into the desired location.	X	X	X	X	X	X	X	X	X	X	X
Transport boarding team	The ability to carry boarding team to an operational scene to conduct a mission.	X	X	X	X	X	X	X		X	X	
Transport equipment	The ability to carry equipment to an operational scene to conduct a mission.	X	X	X	X	X	X	X	X	X	X	X
Vertically lift personnel/equipment	The ability to perform helicopter operations including rescue of distress victims and providing SAR equipment to distress vessels.	X	X	X	X	X	X	X	X	X	X	X
Board vessels	The ability to go on board and/or underneath any vessel at any authorized place to examine the manifest and other documents and papers; and to ascertain the vessel's status and activity.	X	X	X	X	X	X	X		X	X	
Perform inspections	The ability to inspect or appraise vessels, buildings, structures, and/or utility systems, or land at designated waterfront facilities to assess and enforce compliance with applicable laws and regulations. Includes subsurface inspection of facilities and/or vessels.	X			X		X				X	
Screening and Vetting	Screen and vet commercial vessels arriving in the United States. This includes asserting authority, when needed, over foreign and U.S. vessels to ensure safe, secure, and environmentally compliant operations.						X				X	
Perform investigations and report on casualties	The ability to investigate and report on a casualty to promote safety, protect the environment, and prevent future accidents.						X				X	
Clear obstructions	The ability to remove or clear, for the protection and restoration of navigation, any sunken vessel or other obstruction (including ice jams) existing on the navigable waters or waters above the continental shelf of the United States.						X		X		X	X
Perform domestic icebreaking	The ability to break ice in ports and waterways to ensure the safety of life and property and meet the reasonable demands of commerce.						X	X	X			X
Perform international icebreaking	The ability to break ice to ensure safe passage in polar regions.							X				X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Contain and remove HAZMAT	The ability to contain and remove hazardous substances or hazards to navigation from the water or shoreline.						X		X		X	
Contain and repair damage	The ability to repair/contain damage to property primarily to save lives and secondarily to stabilize the situation until the property can be taken or delivered to a safe haven.						X	X	X		X	
Detain vessel	The ability to take control of vessels of all sizes, either through presence or seizure. Includes maintaining control of the vessel until properly transferred to a cognizant authority.	X	X	X	X	X	X	X		X	X	
Perform an arrest	The ability to make inquiries, examinations, and arrests upon the high seas and waters over which the United States has jurisdiction, for the prevention, detection, and suppression of violations of laws of the United States. Personnel shall be trained in law enforcement and have powers of the Coast Guard under title 14 U.S.C.	X	X	X		X	X			X	X	
Stow and manage contraband & evidence	The ability to stow, manage, provide security for, and maintain chain of custody for contraband (illegal drugs, weapons, fisheries catch) or evidence to support legal proceedings and provide custody crews for security over seized vessels/crews.	X	X	X	X	X	X			X	X	
Enforce marine protection	The ability to prevent pollution by enforcing federal standards for oil and hazardous material handling, assuring U.S. vessel compliance with U.S. and international standards, and controlling vessel and facility operations in U.S. ports and waterways.						X				X	
Establish and enforce security and safety zones	The ability to enforce the conditions of established moving and fixed security and safety zones.	X			X		X				X	
Maintain deterrent presence	The ability to establish and maintain a random and unpredictable presence to deter and disrupt terrorist, criminal, and illegal operations or activities.	X	X	X	X	X	X			X	X	
Evaluate mariner's ability	The ability to conduct testing and licensing of operators for demonstration of proficiency. The potential exists for future fishing vessel master licensing and mandatory fishing vessel inspections.						X		X			
Enforce bridge permitting and operations	The ability to administer process for permitting bridges over navigable waterways.								X			
Administer Boating Safety Program	The ability to implement, monitor, administer, and enforce a boating safety program.						X					
Enforce laws/treaties	The ability to protect living marine resources (LMR), prevent/interdict illegal drug trafficking, interdict illegal migrants at sea, and ensure the safety and protection of waterways. Includes the ability to ensure compliance with vessel security and safety laws, and support other Federal, state, or local law enforcement officials.	X	X	X	X	X	X	X	X	X	X	X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Provide mariners with navigation information	The ability to provide timely, relevant, and accurate (routine and urgent) information that is efficient to support proper decision making for mariners. Includes weather, navigational, and vessel traffic information services (e.g., Broadcast Notice to Mariners, Safety Broadcast, or an Urgent Marine Information Broadcast over accepted marine frequencies) to alert mariners to hazards, prevent waterway congestion, and promote optimal use of maritime resources.						X	X	X		X	X
Ensure safe passage	The ability to provide safe passage for a vessel through an area of known or possible harm.	X			X			X				X
Escort vessels	The ability to escort a vessel to a desired location and control the movement of the vessel. The escort may be to location determined by the Coast Guard or in the best interest of the vessel owner.	X	X	X	X	X		X	X	X		X
Maintain positive control measures	The ability to maintain positive control of a vessel through the stationing of armed boarding team members at key locations onboard a vessel, ensuring that the vessel remains under control of appropriate authorities during its transit of key port areas in order to prevent its use as a kinetic weapon.	X	X	X	X	X				X		
Move, repair, or replace (ATON) and data buoys	The ability to promote the safety of maritime transportation and commerce on U.S. navigable waters by moving, repairing, or replacing visual and sound signals to mark safe water or warn of dangers (including weather monitoring station positioning).								X			X
Fight fire	The ability to suppress fires sufficiently to rescue persons and adequately stabilize vessels.							X				
Stabilize vessel flooding	The ability to provide assistance to stabilize vessel flooding.							X				
Provide aid on scene	The ability to provide medical assistance to stabilize victims (including mass casualty scenarios) until they can be delivered to higher level medical service providers or until they no longer need assistance.			X				X				
Tow a vessel	The ability to tow a vessel or object from its current location to another to take into custody, prevent from further damage, and keep waterways safely marked or clear of obstructions.		X	X		X		X	X	X		X
Provide rapid contingency response	The ability to rapidly deploy forces (single or multi-unit) to leverage the Coast Guard's unique authorities to support Federal, state, local, and tribal agencies, both domestically and overseas, in all environmental conditions (to include chemical, biological, radiological, nuclear, or CBRN), day or night.	X	X	X	X	X	X	X	X	X	X	X
Provide disaster and pollution response	The ability to deploy forces to conduct pollution and disaster response operations to support the incident commanders under the National Contingency Plan (NCP) and National Response Framework (NRF) in all environmental conditions (to include CBRN), day or night.	X			X		X	X	X		X	X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Repatriate alien suspects and migrants	The ability to care for and return alien suspects and migrants to their home country		X	X		X					X	
Provide assistance to migrant/SAR survivors	The ability to remove, hold, and provide security/care for migrants and SAR survivors.			X				X				
Perform dive operations	The ability to conduct military diving operations.	X			X				X			X
Conduct warfighting activities	The ability to operate in U.S. territorial waters or in foreign waters under direction of a Coast Guard or Combatant Command in time of war, national emergency, or as otherwise directed by proper authority.	X			X							
Rescue persons in distress	The ability to rescue persons in distress and provide initial care.			X				X				X
Command & Control	The ability to plan, coordinate, manage, and employ multiple Coast Guard capabilities assigned, attached, and/or made available for operations within an AOR. Command and control maximizes the effectiveness of capabilities, spanning all phases of the SDCIP continuum.											
Maintain High Readiness Standby	The ability to respond rapidly to operational tasking from port/ home station or diversion from other operational tasking (Patrol).	X	X	X	X	X	X	X	X	X	X	X
Maintain Mission Standby	The ability to respond to operational tasking from port/ home station.	X	X	X	X	X	X	X	X	X	X	X
Track vessels	The ability to effectively monitor vessel traffic in and around port areas to maintain the good order and safety of the waterway; and in the Coastal and Offshore operational areas to identify and take appropriate actions in response to reported events.	X	X	X	X	X	X	X	X	X	X	X
Assess information and data	The ability to assess (collect, analyze, understand, track, compare, and evaluate) information (documented – written, printed, or electronic – and/or processed data, facts, communications, historical records, archives, instructions, directives, plans, results, and knowledge) and data.	X	X	X	X	X	X	X	X	X	X	X
Maintain Common Operational Picture	The ability to evaluate all operational information to determine its nature, accuracy, and priority, and the status and capabilities of the resources the Service might use to respond. Includes maintaining a display of a comprehensive tactical picture of Coast Guard and non-Coast Guard assets' availability and capability.	X	X	X	X	X	X	X	X	X	X	X
Analyze information	The ability to examine facts and data from all sources and provide a basis for effective decisions regarding the performance of operational missions.	X	X	X	X	X	X	X	X	X	X	X
Maintain MDA	The ability to maintain (establish and continue at an effective, sufficient, and necessary level) MDA (an effective understanding of anything in the marine environment that could adversely affect America's security, safety, economy, or environment).	X	X	X	X	X	X	X	X	X	X	X
Monitor communications	The ability to observe or check continuous short-range distress, safety, and command and control communications in maritime activity areas where the Coast Guard has search and rescue responsibilities.	X	X	X	X	X	X	X	X	X	X	X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Establish/maintain a security posture	The ability to establish and maintain a security posture, including the ability to conduct inspections of U.S. waterfront facilities and vessels to review plans for operations, security, and incident response.	X			X		X		X			
Intelligence	Intelligence is the collection, processing, integration, evaluation, analysis, and interpretation of all available information concerning local, regional and national activities and trends. This includes a robust intelligence and law enforcement monitoring capability to detect, identify, monitor and screen cargo, people, identified areas of interest, vessels, and other craft in the operating in the global maritime environment.											
Develop and maintain intelligence plans, policy, and doctrine	The ability to develop and promulgate doctrine, policy and plans to facilitate tasking of operational assets for intelligence gathering.	X	X	X	X	X	X		X	X	X	X
Manage and maintain intelligence collection and reporting	The ability of operational assets to apply available sources and methods to gather intelligence information; includes inputs from intelligence gathering disciplines (signals intelligence, electronic intelligence, human intelligence, etc.).	X	X	X	X	X	X		X	X	X	X
Process information for analysis	The ability to convert raw collected data into forms that can be readily used by analysts/consumers. Preferably an automated function.	X	X	X	X	X	X	X	X	X	X	X
Exploit information to produce intelligence products	The ability to conduct human analysis of processed data to derive intelligence and create intelligence products.	X	X	X	X	X	X		X	X	X	X
Share intelligence	The ability to distribute processed data and/or products to answer information and/or intelligence needs.	X	X	X	X	X	X		X	X	X	X
Advance warning	Provide timely all-source indications and warnings, and fused analysis that identifies adversaries, threats, and vulnerabilities presenting risks to Coast Guard operations.	X	X	X	X	X	X	X	X	X	X	X
Partnerships	Partnerships serve as a valuable force multiplier. To effectively conduct its missions, the Coast Guard must work with partners across the Federal Government; in foreign governments; at the state, local, tribal, and territorial levels; and in the private sector. At the federal level, the Coast Guard must align capabilities and coordinate operations with the DHS to ensure optimal unity of effort.											
Integrate with partners	The ability to interoperate between Coast Guard and other partner organizations with adequate Command and control infrastructure. Integrate with other agency plans, procedures, and capabilities.	X	X	X	X	X	X	X	X	X	X	X
Foster domestic stakeholder partnerships	The ability to foster (encourage, promote, or work toward the development of) domestic stakeholder (U.S. entities with an interest or concern in the Coast Guard, its outputs, or intended outcomes) partnerships (mutually beneficial associations).	X	X	X	X	X	X	X	X	X	X	X
Foster international partnerships and agreements	The ability to foster (encourage, promote, or work toward the development of) international partnerships (mutually beneficial associations between the Coast Guard and one or more non-U.S. entities) and agreements (negotiated and typically binding arrangements between the Coast Guard and one or more non-U.S. entities).	X	X	X	X	X	X	X	X	X	X	X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Foster partnerships with industry and non-governmental organizations	The ability to foster (encourage, promote, or work toward the development of) industry (economic interests with a concern in the processing of raw materials or manufacturing) and nongovernmental organization partnerships (mutually beneficial associations). Includes support for science and other research-related activities.	X	X	X	X	X	X	X	X	X	X	X
Foster partnerships with other federal agencies	The ability to foster (encourage, promote, or work toward the development of) partnerships (mutually beneficial associations) with other federal (U.S. government) agencies. Includes support for science and other research-related activities.	X	X	X	X	X	X	X	X	X	X	X
Reach out to the International Maritime Organization (IMO) & United Nations	The ability to reach out (connect or communicate with; influence; offer or request assistance, information, support, or resources to or from; and become involved with) the IMO and United Nations.				X	X	X	X	X	X	X	X
Establish standards and regulations	The ability to establish U.S. and international maritime standards and regulations.	X	X	X	X	X	X	X	X	X	X	X
Share information	The ability to share communication or representation of knowledge with other agencies or partners.	X	X	X	X	X	X	X	X	X	X	X
Possess language skills	The ability to communicate with foreign language speakers during operations.	X	X	X	X	X	X	X	X	X	X	X
Perform major exercises	The ability to perform (carry out, accomplish, or fulfill) major (significant, requiring extensive planning, resource intensive, longer duration, publicly visible, international, and/or high-cost) exercises (practice, training, testing, drilling, or enactment).	X	X	X	X	X	X	X	X	X	X	X
Perform disaster and pollution preparedness	The ability to execute environmental (to include CBRN) and disaster response preparedness activities to support the NCP and NRF.	X		X	X		X	X	X		X	X
Mission Support	Mission Support is the provision of operational logistics and personnel services to acquire, prepare, and sustain Coast Guard capabilities including cutters, boats, aircraft, infrastructure, and systems. Mission Support includes functions necessary to protect and preserve operational capabilities, including security measures to protect Coast Guard personnel and facilities, information systems, communications, and operations. Common sub-functions of Mission Support include the provision of logistics, parts, fuel and supplies, operating bases, force protection, training, and legal support.											
Acquire capabilities and associated systems	Acquire (conceptualize, initiate, contract for, design, develop, test, refine, manufacture & produce, deploy/field, and later upgrade/replace) capabilities/systems (and their logistics support) that satisfy approved mission needs.	X	X	X	X	X	X	X	X	X	X	X
Distribute and receive goods	The ability to distribute (deal out – allocate, share, transport, and deliver) and receive (accept, take delivery of, or pick up) goods (a product or service whose consumption increases the utility of the consumer either directly or indirectly).	X	X	X	X	X	X	X	X	X	X	X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Provide equipment and supplies	The ability to provide (organize, account for, transport, and deliver) needed equipment (articles, implements, or physical resources – e.g., tools and electronics – necessary for a particular operation) and supplies (materials that will be used up) to Coast Guard operational and support units, including those underway and on scene.	X	X	X	X	X	X	X	X	X	X	X
Conduct damage control and prevention	The ability to prevent and control damage to own unit.	X	X	X	X	X	X	X	X	X	X	X
Provide personnel medical aid	The ability to provide triage and aid to own-unit personnel.	X	X	X	X	X	X	X	X	X	X	X
Dispose of assets	The ability to dispose (eliminate, get rid of, or throw away in an acceptable and environmentally sound manner) of assets (useful or valuable things – goods or property) belonging to the Coast Guard.	X	X	X	X	X	X	X	X	X	X	X
Develop new technologies	The ability to develop (create, innovate, invent, design, produce, introduce, and operationalize) new technologies (material objects of use to humanity, such as machines, hardware, or utensils; but can also encompass broader themes, including systems, methods of organization, and techniques).	X	X	X	X	X	X	X	X	X	X	X
Maintain equipment	The ability to maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) Coast Guard equipment (articles, implements, or physical resources (e.g., tools and electronics) necessary for a particular operation).	X	X	X	X	X	X	X	X	X	X	X
Maintain fixed- /rotary-wing aircraft	The ability to assure airworthiness and maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) Coast Guard fixed- (planes) and/or rotary-wing (helicopters) aircraft.	X	X	X	X	X	X	X	X	X	X	X
Maintain cutters	The ability to maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) major Coast Guard Cutters (vessels greater than 65 feet in length that have a permanently assigned crew and accommodations for the extended support of that crew).	X	X	X	X	X		X	X	X	X	X
Maintain shore facilities	The ability to maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) Coast Guard shore facilities (establishments, buildings, installations, contrivances, or sites set up to fulfill a particular function or provide a particular service).	X	X	X	X	X	X	X	X	X	X	X
Maintain shoreside operational infrastructure	The ability to maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) Coast Guard shoreside operational infrastructure (physical and organizational structures and facilities – piers, boat basins, roads, power supplies, etc. – needed for Coast Guard operations).	X	X	X	X	X	X	X	X	X	X	X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Maintain boats	The ability to maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) Coast Guard boats (vessels less than 65 feet in length that do not have a permanently assigned crew).	X	X	X	X	X	X	X	X	X	X	X
Manage and provide logistics reports	The ability to manage (develop, organize, coordinate, oversee activities associated with, file, secure, and update) and provide (make available for use or supply) logistics reports (structured, detailed accounts of the organization and coordination of moving [transporting], housing, storing, and supplying personnel and equipment).	X	X	X	X	X	X	X	X	X	X	X
Manage Maritime Transportation System (MTS) and ATON infrastructure	The ability to maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) the MTS and ATON infrastructure (physical and electronic ATON).						X		X		X	X
Workforce	Supports and enables the execution of all of the Coast Guard's statutory missions. The Coast Guard workforce must have sufficient capability, proficiency, and capacity to properly exercise Coast Guard authorities and execute Coast Guard missions.											
Manage workforce requirements and plans	The ability to manage (identify, develop, assess, organize, direct activities associated with, measure, and improve) workforce (labor or employee) requirements (needs, expectations, and wants) and plans (intentions or preconceived decisions).	X	X	X	X	X	X	X	X	X	X	X
Provide employee safety programs	The ability to provide (manage – plan, develop, oversee, coordinate, direct, implement, offer, measure, evaluate, and improve) employee safety programs (organizational initiatives and organized/managed efforts designed to limit employee risk and protect them from the consequences of failure, damage, exposure, error, accidents, harm, or any other event that could be considered undesirable while on the job).	X	X	X	X	X	X	X	X	X	X	X
Provide health services	The ability to provide (manage – plan, develop, oversee, coordinate, direct, implement, offer, measure, evaluate, and improve) health services (Coast Guard-sponsored and/or funded help or assistance aimed at improving member's mental or physical condition).	X	X	X	X	X	X	X	X	X	X	X
Provide legal services	The ability to provide (manage – plan, develop, oversee, coordinate, direct, implement, offer, measure, evaluate, and improve) legal services (assistance and help provided by the Coast Guard concerning or based on common or statutory law (U.S. and international)).	X	X	X	X	X	X	X	X	X	X	X
Provide environmental management/compliance support services	The ability to provide (manage – plan, oversee, coordinate, assist, measure, evaluate, and improve) environmental planning and compliance based on DHS and Coast Guard -wide environmental planning and compliance policy.	X	X	X	X	X	X	X	X	X	X	X
Train and qualify personnel	The ability to train (teach a particular skill or type of behavior through practice and instruction) and qualify (officially recognize as entitled, eligible, or capable) personnel.	X	X	X	X	X	X	X	X	X	X	X

Capabilities	Description	PWCS	CD	AMIO	DR	OLE	MS	SAR	ATON/MT	LMR	MEP	ICE
Information Technology & Cyber Resilience	Supports and enables capabilities essential to performing mission essential tasks. IT infrastructure should be secure, resilient, continuously sustained, and tailored for mission needs. The technology that underpins these mission capabilities must provide support for intelligence-driven operations through an integrated information sharing environment with various federal, state, local, tribal, territorial, international, and industry port partners. Coast Guard cyberspace consists of IT systems and networks that are essential to the Service's overall mission success. Threats to these systems and networks have been growing in number and complexity, and will continue to do so for the foreseeable future. To ensure that the Coast Guard is fully capable of performing its essential missions for the Nation, the Coast Guard must be able to defend its cyberspace by identifying and hardening systems and networks, understanding and countering cyber threats, and increasing operational cyber resilience.											
Maintain Command, Control, Communications, Computers, and Information Technology (C4IT) infrastructure	The ability to maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) Coast Guard C4IT infrastructure (facilities, networks, cables, conduits, and equipment).	X	X	X	X	X	X	X	X	X	X	X
Maintain C4IT systems	The ability to maintain (keep in good operational condition or working order by checking, attending to, protecting, and repairing regularly) C4IT systems (interrelated facilities, processes, mechanisms (e.g., equipment), resources (supplies), and controls (e.g., policies and set procedures).	X	X	X	X	X	X	X	X	X	X	X
Maintain IT system configuration documents	The ability to maintain (keep organized, accessible, searchable, protected, secured, updated, and accurate) Coast Guard IT system configuration (hardware device setup; parameter, process, and event settings; and resource allocation) documents.	X	X	X	X	X	X	X	X	X	X	X
Manage information	The ability to manage (organize, control, protect, secure, and store) information (documented – written, printed, or electronic – and/or processed data, facts, communications, historical records, archives, instructions, directives, plans, results, and knowledge).	X	X	X	X	X	X	X	X	X	X	X
Defend C4IT infrastructure & systems	Conduct effective cybersecurity investigations and forensics analysis to determine the methods and paths of malicious activity; determine the impact to infrastructure; provide evidence for prosecution; inform the development of countermeasures; inform defensive operations.	X	X	X	X	X	X	X	X	X	X	X
Protect C4IT infrastructure & systems	Identify IT systems, networks, and data that are critical to Coast Guard missions and understand vulnerabilities, critical dependencies, and the potential for cascading disruptions on critical infrastructure.	X	X	X	X	X	X	X	X	X	X	X
Secure C4IT infrastructure & systems	Allocate cyberspace defense resources dynamically as needed to sustain operations while addressing cyber incidents.	X	X	X	X	X	X	X	X	X	X	X

Appendix B: Stakeholders

Ports, Waterways, and Coastal Security

- *Public:* The Coast Guard coordinates with the public for advice and direction to ensure proper standards development for security concerns for port operation, growth, and change.
- *Area Maritime Security Committees (AMSC):* AMSCs are led and managed by the Coast Guard Captain of the Port (COTP) to ensure the security, safety, and coordinated operation of the port and waterways, and involvement of stakeholders' interests in the ports and waterways for federal and in coordination with state and local governments.
- *Other Government Agencies – Federal:* Following the terrorist attacks on September 11, 2001, the Coast Guard established Maritime Intelligence Fusion Centers and joined with agencies such as the Central Intelligence Agency, the National Security Agency, and the Office of Naval Intelligence as a member of the national intelligence community (IC). The Coast Guard has memoranda of agreement and understanding with other federal agencies. The Coast Guard also coordinates closely with partner DHS agencies. COTPs work closely with U.S. Customs and Border Protection (CBP) port directors to leverage each other's authorities, and field units exercise joint operations with CBP, U.S. Immigration and Customs Enforcement (ICE), and the Transportation Security Administration. Additionally, field units work closely with Federal Bureau of Investigation field offices for counterterrorism training and operations.
- *Waterfront Facility Owners & Operators, Ports Authorities:* The Coast Guard coordinates with port authorities and management operators of individual terminals in ports and as part of Harbor Safety Committee (HSC)s/AMSCs. The Coast Guard approves facility safety, security, and pollution response plans for natural and man-made incidents.
- *State and Local Governments:* The Coast Guard partners with state and local law enforcement agencies in the execution of the Ports, Waterways, and Coastal Security (PWCS) mission.
- *Recreational Boaters:* Recreational boaters are considered partners in the port and waterways; advisors to HSC/AMSC on local concerns and knowledge regarding environmental affects; oversight of permits for on water event planning.
- *Vessel Agents:* Vessel agents coordinate with Coast Guard as HSC members, notice of arrival managers for arriving ships, and as managers representing vessels during operations in the port. They coordinate Coast Guard compliance inspections and investigations with vessels.
- *Harbormasters/Marinas:* Partners in the port and waterways; advisors to AMSC on local concerns and knowledge regarding security concerns, and on water event planning coordination.
- *Department of Defense (DOD):* The Coast Guard partners with DOD as it plans and executes activities in support of the PWCS mission.
- *International Partners:* The Coast Guard has bilateral agreements with interagency and bilateral international partners, as well as extensive relationships with international organizations to support the PWCS mission.

Drug Interdiction

- *Office of National Drug Control Policy:* Coast Guard drug interdiction efforts support the President's National Drug Control Strategy (NDCS) and supplemental regional strategies.
 - *The Interdiction Committee:* The Interdiction Committee is comprised of drug control representatives serving as an advisory body to the U.S. Interdiction Coordinator and the Director of the Office of National Drug Control Policy on international counterdrug activities in the Western Hemisphere.
- *DOD:* The Coast Guard is the most significant force provider of assets to DOD-led detection and monitoring efforts and leads the follow-on phases of maritime interdiction and apprehension in support of NDCS goals.
- *Joint Interagency Task Force (JIATF)-South and JIATF-West:* JIATF-South and JIATF-West have the statutory responsibility for the detection and monitoring of illicit drugs bound for the United States.
- *Department of State (DOS):* If smugglers are interdicted and apprehended, Coast Guard districts coordinate through Coast Guard Headquarters and DOS, Bureau of International Narcotics and Law Enforcement Affairs, regarding the disposition of vessels, cargo, drugs, and detained persons.
- *Department of Homeland Security (DHS):* The Coast Guard shares the lead for drug interdiction in customs waters with CBP.
- *Department of Justice (DOJ):* If smugglers are interdicted and apprehended, districts coordinate through Coast Guard Headquarters and DOJ, Federal Bureau of Investigation, Drug Enforcement Administration, U.S. Marshals Service, Bureau of Justice Statistics, and Bureau of Alcohol, Tobacco and Firearms regarding the disposition of vessels, cargo, drugs, and detained persons.
- *Interagency and international partners:* The Coast Guard partners with interagency and international partners to enforce bilateral agreements regarding disposition of vessels, cargo, drugs, and detained persons.
- *IC:* The Coast Guard, as an integral member of the IC, provides unique maritime access, expertise, and emphasis that meets national and departmental intelligence requirements and strengthens intelligence support in identifying, disrupting, and dismantling transnational organized criminals' capabilities.

Alien Migrant Interdiction Operations

- *DOS:* The Coast Guard conducts patrols and coordinates with DOS (Bureau of Population, Refugees, and Migration) and the Bureau of Citizenship and Immigration Services, Office of Cuban Affairs, U.S. Interest Section, Havana, International Information Programs – Caribbean, and Bureau of Diplomatic Security.

- *DHS*: Strong partnerships and information sharing with other DHS agencies, such as CBP, U.S. Citizenship and Immigration Services, and ICE are critical to mission success. While the Coast Guard leads the interdiction mission on the high seas, partnerships with CBP and ICE are critical for successful interdiction operations within the contiguous zone and apprehensions ashore.
- *Foreign Governments*: The Coast Guard partners with foreign countries to interdict undocumented migrants at sea, denying them entry via maritime routes to the United States, its territories, and possessions.
- *State and Local Governments*: Strong partnerships and information sharing with relevant state and local agencies are critical to mission success. While the Coast Guard leads the interdiction mission on the high seas, partnerships with state and local agencies are critical for successful interdiction operations within the contiguous zone and apprehensions ashore.
- *IC*: The Coast Guard, as an integral member of the IC, provides unique maritime access, expertise, and emphasis that meets national and departmental intelligence requirements and strengthens intelligence support in managing the indications and warning problem sets that may trigger an event, and identifying special interest aliens prior to reaching United States shore.
- *Industry*: Under U.S. and International Law (46 USC 2304, United Nations Convention Law of the Sea Art 98, SOLAS), mariners are required to render assistance to those in distress at sea. Commercial ships and cruise vessels routinely pick-up and transfer migrants to the Coast Guard.

Defense Readiness

- *IC*: IC mission partners provide intelligence support to the Coast Guard. The Coast Guard produces and provides unique intelligence back to the IC as result of its unique roles in the maritime domain.
- *DOD*: The Coast Guard partners with all the U.S. Armed Forces, to include the Navy, Marine Corps, Army, and Air Force.
- *Other Government Agencies*: The Coast Guard partners with the Secret Service, the Federal Aviation Administration, and the Capitol Police, in addition to DOD elements (North American Aerospace Defense Command) in order to provide Rotary-Wing Air Intercept capabilities within the National Capitol Region.
- *Foreign Naval and Maritime Forces*: The Coast Guard assists foreign naval and maritime forces through training and joint operations. Many of the world's maritime nations have forces that operate principally in the littoral seas and conduct missions similar to those of the Coast Guard. Because of its longtime experience and multi-mission capability, the Coast Guard is a powerful role model to other nations that is in ever-increasing demand. The Service's close working relations with these nations not only improve mutual cooperation as a joint force but also support U.S. diplomatic efforts in general – promoting democracy, economic prosperity, and trust between nations.

Other Law Enforcement

- *IC*: The intelligence community partners provide capabilities to aid in identification of illegal,

unreported, and unregulated (IUU) fishing activities.

- *DOS*: The Coast Guard works closely with DOS to develop and enforce international fisheries agreements. Most notably, the Coast Guard enforces the United Nations High Seas Drift Net Moratorium in the North Pacific, where illegal drift netters may catch U.S.-origin salmon.
- *United Nations*: The United Nations Fish Stock Agreement authorizes the Coast Guard to board any Agreement party vessel on the high seas within a region managed by a fisheries agreement for straddling stocks or highly migratory species that the United States is party to, whether or not the flag state of the vessel is a member of the regional fisheries body enacted by the Agreement. A Coast Guard action plan was developed based on the recommendations in the U.S. National Plan of Action to prevent, deter and eliminate IUU fishing. The U.S. National Plan of Action is organized along the lines of the United Nations Food and Agriculture Organization International Plan of Action to prevent, deter, and eliminate IUU fishing.
- *International Partners*: The Coast Guard partners with foreign fisheries enforcement agencies to enforce multiple international conventions including the Convention for the Conservation of Atlantic Tunas; the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries; the Convention for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea; the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean; the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea; the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean; the Convention for the Conservation of Antarctic Marine Living Resources; and the United Nations Moratorium on High Seas Drift Net Fishing.
- *National Oceanic and Atmospheric Administration (NOAA)*: NOAA's international affairs office works with partner nations and Regional Fishery Management Organizations (RFMO) to combat IUU fishing. The Coast Guard cooperates with NOAA for enforcement and policy-making functions, facilitating a global effort to combat IUU and enforce shared marine resource protection regulations.

Marine Safety

- *Public*: The Coast Guard seeks advice and input to ensure proper standards development for economic, safety, security, and environmental concerns for port operation, growth, and change.
- *Professional Mariners (U.S. certificated and foreign)*: The Coast Guard issues and ensures compliance for credentials and medical certifications with U.S. unions, merchant mariners, state and federal maritime academies, and commercial mariner training organizations in concert with the International Labor Organization and international conventions. The Coast Guard also coordinates with Department of Labor and Occupational Safety and Health Administration on worker safety. These actions aid standards development, collaboration with compliance inspections/exams, and facilitation of casualty investigations.
- *Commercial Vessel Owners and Operators*: The Coast Guard coordinates with operators of small passenger vessels (both inspected and uninspected), tugs, towing vessels, fishing vessels, cruise ships, chemical/oil/certain dangerous cargo tankers and barges, container ships, and offshore oil exploration drilling units and supply/support vessels, including memoranda of

understanding with individual commercial vessel operator associations. These groups also participate in the 12 federal advisory committees led by the Coast Guard. These actions aid standards development, collaboration with compliance inspections/exams, and facilitation of casualty investigations.

- *Waterfront Facility Owners and Operators, Ports Authorities:* The Coast Guard coordinates with Occupational Safety and Health Administration and American Association Port Authorities, as well as state port authorities and management operators of individual terminals in port and as part of HSCs/AMSCs. The Coast Guard approves facility safety, security, and pollution response plans for natural and man-made incidents. These actions aid standards development, collaboration with compliance inspections/exams, and facilitation of casualty investigations.
- *Recreational Boaters:* Recreational boaters are considered partners in the port and waterways, and advisors to HSCs/AMSCs on local concerns.
- *HSCs/AMSCs:* HSCs are local committees that address issues including the safety, security, mobility, and environmental protection of a port or waterway. AMSCs identify critical port infrastructure and operations, determine mitigation strategies, and develop processes to continually evaluate overall port security.
- *Pilots Associations:* Pilots associations coordinate with as HSC/AMSC members as advisors, partners in port MTS operations, waterways management, and incident response for vessel movement. These actions aid standards development, collaboration with compliance inspections/exams, and facilitation of casualty investigations.
- *Classification Societies:* Classification societies are authorized third-party organizations to act on behalf of United States when recognized and complete examinations and foreign country management of vessels when concerns on compliance or incident mitigation requires. They aid in the establishment of domestic and international standards, recommend compliance regimes, and help to interpret and analyze the results of marine casualty investigations to help prevent future incidents.
- *Flag States:* Coast Guard is considered a flag state for oversight of U.S. vessels and works with flag states of other countries for flag and port state engagement regarding marine casualty investigations, standards development and mutual marine capacity building. Coordinates in establishing international standards, recommending compliance regimes, and interpreting and analyzing the results of marine casualty investigations to help prevent future incidents.
- *Vessel Agents:* Vessel agents coordinate with Coast Guard as HSC members, notice-of-arrival managers, and as managers representing vessels during operations in the port. Agents help to coordinate compliance inspections and investigations with vessels.
- *Harbormasters/Marinas:* Harbormasters/Marinas are partners in the port and waterways; advisors to HSC/AMSC on local concerns and knowledge regarding environmental effects; and on-water event planning coordination. They contribute to standards development and collaborate with compliance inspections/exams.
- *Other Government Agencies:* Other government agencies assist with interagency operational

compliance and investigations through coordination such as through the NRF, Incident Command System, and Maritime Operational Threat Response plan and protocols, National Transportation Safety Board, DOJ, the Department of Transportation (DOT), the Bureau of Safety and Environmental Enforcement, etc., and associations with industry.

- *United Nations International Maritime Organization (IMO)*: In its role as leader of the U.S. delegation to the IMO (a specialized agency of the United Nations), the Coast Guard is partly responsible for the safety and security of shipping, and the prevention of pollution by ships.⁶⁰ Coordinates in establishing international standards, recommending compliance regimes, and interpreting and analyzing the results of marine casualty investigations to help prevent future incidents.

Search and Rescue

- *DOD/Office of the Secretary of Defense*: As the United States' inland and Alaska Search and Rescue (SAR) Coordinator, and a member of the National Search and Rescue Committee (NSARC), the Air Force Rescue Coordination Center and the Alaska Rescue Coordination Center are Coast Guard partners in coordinating and responding to persons in distress.
- *IC*: Members of the IC have unique capabilities that can be brought to bear to support SAR. The National Geospatial-Intelligence Agency and National Security Agency are able to provide capabilities that assist in locating vessels, aircraft, or personnel across the gambit of SAR scenarios to reduce risks and optimize resource utilization.
- *Department of Commerce (DOC)*: As a member of the NSARC, NOAA Search and Rescue Satellite-Aided Tracking (SARSAT) provides support for the SARSAT System to detect and locate mariners, aviators, and recreational enthusiasts in distress almost anywhere in the world at any time and in almost any conditions. NOAA also provides oceanographic and meteorological models for sea surface and surface wind currents, which are integrated in the Coast Guard's Search and Rescue Optimal Planning System.
- *DOT*: As a member of the NSARC, the Federal Aviation Administration provides emergency service to aircraft in distress, assuring that search and rescue procedures will be initiated if an aircraft becomes overdue or unreported, and cooperating in the physical search by making all possible facilities available for use by the searching agencies.
- *Department of Interior (DOI)*: As members of the NSARC, the National Park Service and U.S. Geological Survey coordinate with the Coast Guard in support of civil search and rescue.
- *DHS*: DHS ensures effective emergency response to maritime distress and natural and man-made disasters by supporting state, local, regional, tribal, and territorial governments while working closely with nongovernmental organizations and the private sector to help leverage additional resources. As part of the NRF, the Coast Guard supports FEMA's Emergency Support Function #9 (Search and Rescue).

• ⁶⁰ U.S. Coast Guard and NOAA. *Cooperative Maritime Strategy*, p. 15 (February 2013)

- *Federal Communications Commission (FCC):* As a member of the NSARC, the FCC supports the Coast Guard and the SAR program. FCC regulates nonfederal use of the frequency spectrum, and the FCC's 24-hour operations center works with other federal agencies on matters such as preventing or mitigating jamming attempts against critical infrastructure. FCC supports SAR via support of FEMA's Emergency Support Function #2 (Communications).
- *National Aeronautics and Space Administration (NASA):* As a member of NSARC, NASA supports SAR objectives through research and development or application of technology to search, rescue, survival, and recovery systems and equipment to locate aircraft, ships, spacecraft, or individuals in potential or actual distress.
- *State/Local Governments:* State and local government agencies work very closely with the Coast Guard during the planning and execution of SAR, are critical to effective SAR collaboration, and are members of SAR councils at the local level.
- *Civil Air Patrol:* Civil Air Patrol supports Coast Guard SAR as a force multiplier.
- *Public:* The Coast Guard is supported by good Samaritans from the public sector who voluntarily assist with search and rescue or respond to distress hails.
- *International Organizations:* As worldwide leaders in SAR, the Coast Guard is a strong proponent of improving the global SAR system as provided in IMO's Maritime Search and Rescue Convention and International Civil Aviation Organization's Convention on International Civil Aviation, and is regularly sought out for SAR expertise. As part of the global SAR system, rescue coordination centers work together in the conduct of SAR operations in the U.S. aeronautical and maritime SAR regions globally.

Aids to Navigation (ATON) and MTS Management

- *Public:* The efficacy and efficiency of America's waterways has a direct impact on the economic well-being of every American.
- *Waterway Users:* Multiple waterway users have direct contact with the MTS on a daily basis.
- *DOD:* With respect to Position, Navigation, and Timing, DOD acquires, operates, and maintains the basic GPS nationwide while maintaining a Standard Position Service that is available on a continuous, worldwide basis.
- *DOT:* DOT serves as the lead agency within the U.S. Government for all federal civil GPS matters. DOT is often the lead federal agency on bridge-permitting projects.
- *HSCs:* The Coast Guard works with 84 HSCs, and many others, to coordinate support to the U.S. MTS, evaluate risk, and determine appropriate mitigation.
- *U.S. Army Corps of Engineers (USACE):* The Coast Guard partners with USACE on many facets of maritime safety, including clearing hazards to navigation, post-incident/storm port reactivation, electronic navigation product development, and sharing up-to-date hydrographic and navigation information/data from both the Coast Guard and USACE.

- *National Geospatial-Intelligence Agency*: The Coast Guard works closely with the National Geospatial-Intelligence Agency in the development and dissemination of Local Notices to Mariners (LNM). The National Geospatial-Intelligence Agency uses the LNM information to compile the weekly notice to mariners. As a military service, the Coast Guard works closely with the National Geospatial-Intelligence Agency to ensure that aeronautical, nautical, and intelligence needs are met with the proper maps and charts required for mission execution.
- *Committee on the Marine Transportation System (CMTS)*: The Coast Guard is one of 25+ active federal agencies coming together as the CMTS, a partnership of federal departments and agencies with responsibility for the MTS. The purpose of the CMTS is to develop and implement national MTS policies that are consistent with national needs and to report to the President its views and recommendations for improving the MTS.
- *NOAA*: The Coast Guard provides NOAA with baseline information regarding the federal and private ATON system. This data enables NOAA to publish/correct navigational charts and publications used by the maritime sector. Also, the Coast Guard consults with NOAA on ATON environmental impacts.

Living Marine Resources

- *IC*: Provides abilities to model conditions to identify areas where regulated and protected species will be and to confirm where fishing activities are occurring within those areas. These capabilities enable more effective planning and allocation of Coast Guard resources.
- *DOC*: Coast Guard objectives include cooperation with DOC agencies, including NOAA, to assist in preventing the decline of marine protected species populations, promoting the recovery of marine protected species and their habitats, partnering with other agencies and organizations to enhance stewardship of marine ecosystems and ensuring both external and internal compliance with appropriate legislation, regulations, and management practices.⁶¹
- *NOAA*: The National Marine Fisheries Service (NMFS) is responsible for carrying out the goals of NOAA through cooperative partnerships between federal, state, and local agencies; educational and research institutions; and nongovernmental organizations. The Coast Guard contributes to this effort through waterways management responsibilities, marine environmental protection activities, and the enforcement of sanctuary regulations as a part of its law enforcement activities.⁶²
- *NMFS*: The Coast Guard carries out at sea enforcement of fisheries regulations established by NMFS. The Coast Guard Marine Protected Species Program efforts support the NMFS goal to recover protected species through take reduction and reduction of marine mammal conflicts with human activities.
- *U.S. Fish and Wildlife Service (FWS)*: The goal of the Coast Guard's Marine Protected Species Program is to assist the FWS in the development and enforcement of those regulations necessary to help recover and maintain the country's marine protected species and their marine ecosystems.

⁶¹ U.S. Coast Guard. *Fisheries Enforcement Strategic Plan: Ocean Guardian* (February 2014).

⁶² U.S. Coast Guard. *Coast Guard Participation in the Marine Sanctuary Program* (COMDTINST 16004.3A; October 2003).

- *RFMO*: The United States is party to eight RFMOs that are of direct interest to the Coast Guard. Each regional organization manages a unique set of Living Marine Resources in set geographic areas for states that are party to their agreement.
- *State and Local Governments*: Through Joint Enforcement Agreements, participation in state fisheries management council activities, and direct communication with state, local, and tribal fisheries enforcement counterparts, the Coast Guard actively pursues opportunities to advance Coast Guard Living Marine Enforcement objectives.

Marine Environmental Protection

- *IC*: The National Geospatial-Intelligence Agency assists with development and use of space-based capabilities to detect and locate oil and other marine pollutants.
- *DOS*: The Coast Guard and NOAA are working with DOS, other federal agencies, and stakeholders to help shape key national themes and objectives for the U.S. Chairmanship of the Arctic Council.⁶³
- *Environmental Protection Agency (EPA)*: EPA is a cooperating agency with the Coast Guard for enforcing and responding to marine pollution. The agencies utilize a memorandum of understanding for delineation of geographic areas for enforcement and response. The EPA typically responds to inland marine pollution incidents unaffected by tidal influences, and the Coast Guard typically responds to coastal waters. The EPA also shares in enforcement of the North American Emissions Control Area for air emissions from ships.
- *DOC*: The Coast Guard and NOAA provide expert advice on marine issues through participating on, or leading, the U.S. delegations to various working groups and task forces of the Arctic Council.⁶⁴
- *National Response System (NRS) member agencies*: To ensure that the Nation is prepared, the NRS formalizes relationships in approved plans. The MEP program ensures the health of these agreements and coordinates with 15 federal agencies, 13 Regional Response Teams, 40 area committees, and hundreds of state and local agencies.
- *State, Local, Tribal, and International Governments, and Private Sector*: The Coast Guard partners with federal, state, local, tribal, international, and private-sector stakeholders to gain knowledge and advance U.S. interests; includes environmental stewardship.⁶⁵
- *International Organizations*: The Coast Guard conducts pollution response exercises with Canada, Mexico, Russia, Panama, and countries in the Caribbean. Through these exercises, the Coast Guard improves international partnerships and expands the worldwide capacity to respond to an oil or hazardous substance incident. Annually, the Coast Guard works with the Panama Canal Authority to assist with emergency response planning and aid. These exercises provide lessons learned and generate updates and improvements to current plans.

⁶³ U.S. Coast Guard and NOAA. *Cooperative Maritime Strategy*, p. 15 (February 2013).

⁶⁴ U.S. Coast Guard and NOAA. *Cooperative Maritime Strategy*, p. 14 (February 2013).

⁶⁵ *Ibid*

Ice Operations

- *Public/Waterways users:* The efficacy and efficiency of America's waterways has a direct impact on the economic well-being of every American. The Coast Guard supports and facilitates commercial vessel transits and exigent community services, to both coastal and island communities. Supported through domestic icebreaking, U.S./Canada Agreement, and the International Ice Patrol (IIP).
- *National Ice Center:* The Coast Guard supports and facilitates commercial vessel transits and exigent community services, to both coastal and island communities. Supported through domestic icebreaking, U.S./Canada Agreement, and the IIP.
- *Canadian Government:* The Coast Guard partners with the Canadian Coast Guard to assist commercial vessel transits that move millions of tons of cargo. These commodities are crucial to sustaining industrial production and power generation for the Great Lakes region during the winter months. Supported through the U.S./Canada Agreement and domestic icebreaking.
- *Department of Energy (DOE):* In the Northeast, Coast Guard works with DOE Information Administration to track petro distillate levels (i.e., home heating oil, gasoline, highway diesel) for early detection of potential shortages in specific locations in the northern New England area. Supported through domestic icebreaking and the U.S./Canada Agreement.
- *USACE:* USACE monitors water levels of rivers, lakes. USACE requests Coast Guard icebreaking assets to relieve ice jams for flood control/relief efforts. Supported through domestic icebreaking and the U.S./Canada Agreement.
- *DOS:* The Coast Guard provides DOS information that informs the billing process to contributory nations for the use of the IIP's iceberg detection and warning area in the North Atlantic. The Coast Guard also provides the ability to conduct Antarctic Treaty Inspections. Supported through the IIP and polar icebreaking.
- *DOD:* The Coast Guard provides surface access the Polar Regions for all DOD activities and logistical support for remote operating facilities. Coast Guard domestic icebreakers ensure that DOD assets are able to access ports in the Northeast and the Great Lakes, including one of the primary shipbuilding facilities for the Littoral Combat Ship.
- *DOC:* The Coast Guard supports the NOAA with access to the Polar Regions for continuing bathymetric mapping, research and development of new high latitude physical capabilities, and studies related to polar climatology.
- *DOI:* The Coast Guard supports the Bureau of Energy Management specifically with access to the Arctic region for research on mineral, oil and gas deposits, and support for regulation development.
- *DOT:* The Coast Guard supports total Maritime Domain Awareness for the Polar Regions, and the overall MTS as it continues to develop in the high latitudes, specifically through the Arctic Research Commission.

- *Arctic Research Commission:* The Arctic Research Commission was created through the Arctic Research and Policy Act of 1984. The Commission's principal duties are (1) to establish the national policy, priorities, and goals necessary to construct a federal program plan for basic and applied scientific research with respect to the Arctic, including natural resources and materials; physical, biological, and health sciences; and social and behavioral sciences; (2) to promote Arctic research, to recommend Arctic research policy, and to communicate our research and policy recommendations to the President and the Congress; (3) to work with the National Science and Technology Council (as per Presidential Memorandum) and the National Science Foundation as the lead agency responsible for implementing the Arctic research policy and to support cooperation and collaboration throughout the Federal Government; (4) to give guidance to the Interagency Arctic Research Policy Committee to develop national Arctic research projects and a 5-year plan to implement those projects; and (5) to interact with Arctic residents, international Arctic research programs and organizations, and local institutions, including regional governments, in order to obtain the broadest possible view of Arctic research needs.
- *International Partners:* As the national representative to the International Convention for the Safety of Life at Sea, the Coast Guard is required to provide iceberg limit product to commercial vessels of member nations transiting the warning area off the Grand Banks of Newfoundland. Supported by the IIP.
- *National Science Foundation:* The Coast Guard supports the National Science Foundation's research activities in Antarctica by providing heavy icebreaking capability in support of the annual re-supply mission to McMurdo Station. Additionally, Coast Guard icebreakers support the annual National Science Foundation scientific mission in the Arctic.

Appendix C: Authorities

Note: This appendix should only be considered a quick-reference guide for Coast Guard legal authorities and does not constitute an exhaustive list of the Service's extensive legal authorities.

General Authorities:

The general legal authorities listed below represent those federal statutes, regulations, and Executive Branch materials (e.g., Presidential directives, Executive Orders, etc.) and international instruments (e.g., treaties, international conventions, etc.) that have broad Service-wide application. The legal authorities that are more directly applicable to individual missions are listed later in the mission-specific sections.

- *10 U.S.C. § 101: Definition of "Armed Forces."* Defines the terms "armed forces" and "uniformed services" as including the Coast Guard, and "Secretary concerned" as meaning the Secretary of Homeland Security for the Coast Guard when it is not operating as a service in the Navy.
- *14 U.S.C. §§ 1, 3, 4: Coast Guard as an Armed Force.* Establishes the Coast Guard as a military service and branch of the armed forces in the DHS, except when operating as a service in the Navy; sets out policies concerning the Coast Guard's role as a service in the Navy during time of war.
- *14 U.S.C. § 2: Primary Duties.* Requires the Coast Guard to:
 - Enforce or assist in the enforcement of all applicable federal laws on, under, and over the high seas and waters subject to the jurisdiction of the United States.
 - Engage in maritime air surveillance or interdiction to enforce or assist in the enforcement of the laws of the United States.
 - Administer laws and enforce regulations for the promotion of safety of life and property on and under the high seas subject to the jurisdiction of the United States.
 - Develop, establish, maintain, and operate, with due regard to the requirements of national defense, aids to maritime navigation, icebreaking facilities, and rescue facilities for the promotion of safety on, under, and over the high seas and waters subject to the jurisdiction of the United States.
 - Develop and establish icebreaking facilities on, under, and over the high seas and waters subject to the jurisdiction of the United States.
 - Engage in oceanographic research of the high seas and waters subject to the jurisdiction of the United States.
 - 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.
- *14 U.S.C. § 81 Aids to Navigation.* Authorizes the Coast Guard to establish, maintain, and operate maritime navigation aids on waters where the United States has jurisdiction.
- *14 U.S.C. § 88: Saving Life and Property.* Authorizes the Coast Guard to take any and all acts necessary to render aid to distressed persons, vessels, and aircraft on and under the high seas and on and under the waters over which the United States has jurisdiction and in order to render aid

to persons and property imperiled by flood. This statute also requires the Coast Guard to establish and maintain a helicopter rescue swimmer program.

- *14 U.S.C. § 89: Law Enforcement.* This is the Coast Guard's basic law enforcement authority. Under this authority, the Coast Guard may board any vessel subject to the jurisdiction of the United States on the high seas or on waters over which the United States has jurisdiction in order to make inquiries, examinations, inspections, searches, seizures, and arrests for the prevention, detection, and suppression of violations of U.S. laws.
- *14 U.S.C. § 91: Safety of Vessels.* The Coast Guard Captain of the Port (COTP) may control the anchorage and movement of any vessel in the navigable waters of the United States for safety and security purposes.
- *14 U.S.C. § 92: General Powers of the Secretary.* Sets out the general powers of the Secretary concerning the administration and organization of the Coast Guard; authorizes the establishment of Coast Guard districts, the training of personnel, the acquisition of vessels and land, etc.
- *14 U.S.C. § 93: Commandant General Powers.* Authorizes the Commandant to engage in patrols over land, sea, and air in furtherance of duties.
- *14 U.S.C. § 94: Oceanographic Research.* The Coast Guard shall conduct such oceanographic research, use such equipment or instruments, and collect and analyze such oceanographic data, in cooperation with other agencies of the Government, or not, as may be in the national interest.
- *14 U.S.C. § 100: Enforcement of Coastwise Trade Laws.* Authorizes the Coast Guard to enforce coastwise trade laws found in chapter 551 of title 46, United States Code.
- *14 U.S.C. § 141: Cooperation with other Agencies, States, Territories, and Political Subdivisions.* The Coast Guard, upon request, is permitted to assist other federal or state entities in the performance of their duties in which Coast Guard personnel are specifically qualified.
- *14 U.S.C. § 149: Foreign assistance.* At the request of foreign governments concerned, the Coast Guard may assist foreign governments in matters for which the Coast Guard is well-suited. The Coast Guard, in coordination with the Secretary of State, may provide, in conjunction with regular Coast Guard operations, technical assistance (including law enforcement and maritime safety and security training) to foreign navies, coast guards, and other maritime authorities.
- *18 U.S.C. § 2237: Criminal sanctions for failure to heave to, obstruction of boarding, or providing false information,* as amended by the Coast Guard Authorization Act of 2010, Pub. L. No. 111-281, 124 Stat. 2905 (2010).
- *Presidential Proclamation No. 5030, 48 Fed. Reg. 10,605 (Mar. 10, 1983).* "The Exclusive Economic Zone of the United States is a zone contiguous to the territorial sea, including U.S. overseas territories and possessions. The Exclusive Economic Zone extends to a distance 200 nm; the same distance from which the baseline for territorial sea is measured. In cases where the maritime boundary with a neighboring State remains to be determined, the boundary of the Exclusive Economic Zone shall be determined."

- *Presidential Proclamation No. 5928*, 54 Fed. Reg. 777 (Dec. 27, 1988). “The territorial sea of the United States henceforth extends to 12 nautical miles from the baselines of the United States determined in accordance with international law.”
- *Homeland Security Act of 2002 (Pub .L. No. 107-296)*. Transfers the Coast Guard from the DOT and 21 other agencies to the new DHS. This Act divided the Coast Guard’s 11 statutory missions between homeland security and nonhomeland security. Section 888(a)(2) specifies five homeland security missions for the Coast Guard: (1) Ports, Waterways, and Coastal Security, (2) Drug Interdiction, (3) Migrant Interdiction, (4) Defense Readiness, and (5) Other Law Enforcement. Section 888(a) (1) defines the Coast Guard’s nonhomeland security missions as (1) Marine Safety, (2) Search and Rescue, (3) Aids to Navigation, (4) Living Marine Resources (fisheries law enforcement), (5) Marine Environmental Protection, and (6) Ice Operations.

Ports, Waterways, and Coastal Security

- *18 U.S.C. § 792 et seq.: Espionage Act of 1917*. Authorizes the Coast Guard to make regulations to prevent damage to harbors and vessels during national security emergencies.
- *50 U.S.C. §§ 191-194: Magnuson Act of 1950*. Provides permanent port security regulations, powers to search vessels in U.S. waters and control the movement of foreign vessels in U.S. ports.
- *33 U.S.C. § 1221 et seq.: Port and Waterways Safety Act of 1972*. Provides port safety authority to protect the use of port transportation facilities and to enhance efforts against degradation of the marine environment.
- *6 U.S.C. § 901: Security and Accountability for Every Port Act*. Codified into law a number of programs to improve security of U.S. ports, including additional security requirements for maritime facilities; the requirement for post-transportation security incident salvage response plans within Area Maritime Security Plans; creation of the Transportation Worker Identification Credential; and establishment of interagency operations centers for port security. The Act also required the reassessment of the effectiveness of antiterrorism measures in foreign ports not less than every 3 years.
- *46 U.S.C. § 2101: Maritime Transportation Security Act*. Supplements existing authorities for port and waterway security after 9/11 and appoint Coast Guard officials as the Federal Maritime Security Coordinator for port areas; create a consistent security program for vessels, waterfront facilities, and port areas, which the Coast Guard oversees and enforces; and provide for Coast Guard-issued regulations to enact provisions of the Acts and to align domestic regulations with the international maritime security standards.
- *Coast Guard Authorization Act of 2010 (Pub. L. No. 111-281)*. Directs the Secretary to establish deployable specialized forces of varying capabilities to safeguard the public and protect vessels, harbors, ports, facilities, and cargo in waters subject to the jurisdiction of the United States. Directs the initiation of a national study to identify measures to improve the security of maritime transportation of especially hazardous cargo.

Drug Interdiction

- *10 U.S.C. § 124: Detection and Monitoring of Aerial and Maritime Transit of Illegal Drugs.* DOD personnel may operate equipment of the Department to intercept a vessel or an aircraft detected outside the land area of the United States.
- *10 U.S.C. § 2576:* Authorizes the Coast Guard to perform maritime law enforcement activities and to utilize appropriate assets in that mission. Also allows Coast Guard personnel to perform law enforcement duties on appropriate naval vessels.
- *10 U.S.C. §§ 379-380: Assignment of Coast Guard Personnel to Naval Vessels for Law Enforcement.* Requires assignment of Coast Guard personnel to naval vessels in drug interdiction areas for law enforcement purposes and sets out requirements to enhance cooperation.
- *14 U.S.C. §§ 141 and 143.* The Coast Guard enforces a number of regulations promulgated by other agencies while executing the Drug Interdiction mission. This includes the portion of the Code of Federal Regulations governing illicit drugs on the high seas (21 C.F.R. §§ 1300-1313), which identifies the substance schedules as well as itemizes the specific behaviors that make transporting controlled substances illegal. The Coast Guard leverages regulatory regimes to detect and deter drug trafficking. The leveraging of these and other authorities maximizes the utility of Coast Guard operational assets at sea while minimizing duplicative efforts by other federal agencies.
- *14 U.S.C. § 637:* Authorizes the Coast Guard to fire into vessels from an authorized vessel or aircraft when that vessel fails to heave to when warned to do so.
- *18 U.S.C. § 2285; 46 U.S.C. § 70508: Operation of Submersible Vessel or Semisubmersible Vessel without Nationality.* Makes it unlawful for any person to knowingly operate, by any means, or embark in any submersible vessel or semisubmersible vessel without nationality and that is navigating seaward of any nation's territorial seas with the intent to evade.
- *19 U.S.C. §§ 1701-1711: Customs Enforcement Area.* Provides for Coast Guard enforcement of anti-smuggling regulations.
- *21 U.S.C. §§ 841-843: Distribution and Possession.* Prohibits knowing or intentional distribution of, or possession with intent to distribute, controlled substances in the United States and provides applicable penalties.
- *21 U.S.C. §§ 844-844a: Possession.* Prohibits possession of controlled substances in the United States and provides penalties.
- *21 U.S.C. §§ 846-848: Conspiracy to Possess or Distribute.* Prohibits attempt or conspiracy to violate 21 U.S.C. § 841 or § 844.
- *21 U.S.C. §§ 951-971 (Certain Provisions): Import and Export of Controlled Substances.* Laws pertaining to importation and exportation of controlled substances, including possession on a vessel (§ 955) and attempt or conspiracy (§ 963) to import or export controlled substances.

- *22 U.S.C. § 2291: Participation in Police Actions in Foreign Nations.* Prohibits U.S. employees or officers from directly effecting an arrest in a foreign country, with certain exceptions (e.g., territorial sea).
- *46 U.S.C. §§ 70501-70507: Maritime Drug Law Enforcement; Manufacture, Distribution, or Possession with Intent aboard a Vessel.* Prohibits the knowing or intentional manufacture, distribution, or possession with intent to distribute of any controlled substances by any person on board a vessel subject to the jurisdiction of the United States; by a U.S. citizen aboard any vessel; or by any person aboard a vessel without nationality; and prohibits importation by any person.
- *Presidential Decision Directive (PDD) 14.* PDD-14 is the Administration's national policy statement for the conduct of drug interdiction operations in the Western Hemisphere beyond U.S. borders. It establishes the Coast Guard as the lead agency for maritime interdiction and co-lead for air interdiction with the Customs Service.

Alien Migrant Interdiction Operations

- *8 U.S.C. § 1101: Immigration and Nationality Act of 1952.* Restricted immigration into the United States and is codified under. The Act governs primarily immigration to and citizenship in the United States. It has been in effect since December 24, 1952. Before this Act, a variety of statutes governed immigration law but were not organized within one body of text.
- *8 U.S.C. § 1185 Illegal Immigration.* Makes illegal migration a federal offense. The Coast Guard enforces this law. These Executive Orders and Presidential Decision Directives provide additional direction and authority to the Coast Guard to meet this obligation.
- *Executive Order (EO) 12,807: Interdiction of Illegal Aliens (1992).* Specifically directs the Coast Guard to interdict undocumented migrants at sea by stopping and boarding defined vessels, making inquiries, and, if warranted, returning the vessel and passengers to the country from which they came or to another country.
- *Executive Order (EO) 13,276: Delegation of Responsibilities Concerning Undocumented Aliens Interdicted or Intercepted in the Caribbean Region.* Provides authority to maintain interdicted undocumented aliens in extraterritorial detention facilities and allocates responsibilities among the participating agencies, including DHS, the Secretary of State, and the Secretary of Defense. Directs the Secretary of DHS to provide and operate a facility at Guantanamo Bay Naval Base to house and care for migrants with a well-founded fear of persecution if returned to their country of origin.
- *PDD-9 Alien Smuggling.* States that the United States will take necessary measures to interdict and deter alien migrant smuggling into the United States and to interdict and hold the smuggled aliens as far as possible from the U.S. border and to repatriate them when appropriate. Specifically tasks the Coast Guard to direct U.S. interdiction efforts at sea with appropriate DOD support and to board suspect vessels when authorized and escort them to flag states or the nearest non-U.S. port, assuming host nation concurrence. This directive was issued in response to the increase in Chinese migrant smuggling operations in the early to mid-1990s.

- *William Wilberforce Trafficking Victims Protection Reauthorization Act of 2008 (P.L. 110-457)*. Prohibits trafficking in persons, especially into the sex trade, slavery, and involuntary servitude to reauthorize certain federal programs to prevent violence against women, and for other purposes.
- *Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (P. L. 104-208)*. This Act was designed to improve border control by imposing criminal penalties for racketeering, alien smuggling, and the use or creation of fraudulent immigration-related documents and by increasing interior enforcement by agencies charged with monitoring visa applications and visa abusers.
- *Cuban Adjustment Act of 1966 (P.L. 89-732)*. Establishes that Cuban nationals can apply for legal permanent residency 1 year after arriving in the United States. This Act also established policies for screening Cuban nationals for fear of persecution prior to repatriation and the “wet feet/dry feet” policy.

Defense Readiness

- *10 U.S.C. § 101: Armed Forces – Definitions*. States that the term “armed forces” means the Army, Navy, Air Force, Marine Corps, and Coast Guard.
- *10 U.S.C. § 379: Assignment of Coast Guard Personnel to Naval Vessels for Law Enforcement Purposes*. States that members of the Coast Guard assigned to duty on board naval vessels under this section shall perform such law enforcement functions, including drug interdiction functions (1) as may be agreed upon by the Secretary of Defense and the Secretary of Homeland Security; and (2) as are otherwise within the jurisdiction of the Coast Guard.
- *10 U.S.C. § 6011: Naval Defensive Sea Areas*. Authorizes Coast Guard cutters and aircraft to enter Naval Defensive Sea Areas.
- *14 U.S.C. § 1: Establishment of Coast Guard*. States that the Coast Guard is a military service and branch of the armed forces of the United States at all times.
- *14 U.S.C. § 2: Primary Duties*. Articulates the primary duties of the Coast Guard and requires the Coast Guard to maintain a state of readiness to function as a specialized service in the U.S. Navy in time of war.
- *14 U.S.C. §§ 3-4: Relationship with the Navy*. Defines the Coast Guard’s relationship to the Navy and directs its operation as a service in the Navy upon declaration of war or when the President otherwise directs.
- *14 U.S.C. § 141: Cooperation with Other Agencies, States, Territories, and Political Subdivisions*. Authorizes the Coast Guard to assist DOD in the performance of any activity for which the Coast Guard is specially qualified.

Other Law Enforcement

- *14 U.S.C. § 89 Primary Law Enforcement Authority.* Authorizes the Coast Guard to go on board any vessel subject to the jurisdiction or operation of any law of the United States whether on the high seas, or on waters over which the United States has jurisdiction, in order to make inquiries, examinations, inspections, searches, seizures, and arrests for the prevention, detection, and suppression of laws of the United States. Provides the authority for Coast Guard active-duty commissioned, warrant, and petty officers to enforce applicable U.S. law. It authorizes Coast Guard personnel to enforce federal law on waters subject to U.S. jurisdiction and in international waters, as well as on all vessels subject to U.S. jurisdiction (including U.S., foreign, and stateless vessels).
- *14 U.S.C. § 143; 19 U.S.C. § 1401: Customs Authority.* Specifies that Coast Guard petty officers, warrant officers, and commissioned officers are also customs officers and grants them general law enforcement authority, including conducting border searches subject to guidance and regulations by the Customs Service.
- *16 U.S.C. (multiple sections): Conservation.* The vast majority of mandates for living marine resource protection, management, and enforcement are identified in title 16, United States Code. The provisions within Title 16 are further refined in regulations.
- *Executive Order (EO) 13,089: Coral Reef Protection (1998).* Requires agencies to inventory activities that may affect coral reefs, use their authorities to protect and enhance reef systems, and take steps to ensure that their activities do not degrade the condition of reef systems. The EO also established the U.S. Coral Reef Task Force.
- *EO 13,158: Marine Protected Areas (2000).* Addressed the need to consider protected regions of the marine environment in the aggregate as a “system” rather than in isolation as individual units. The EO directed agencies to, consistent with their authorities, enhance and expand protection of marine protected areas, defined broadly to include sites designated by authorities other than the federal government. It also established the Marine Protected Areas Federal Advisory Committee, and the Coast Guard participates in meetings of the Committee as an ex-officio member.
- *EO 13,196: Final Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve (2001).* Designated approximately 150,000 square nautical miles of the Pacific Ocean around the Northwestern Hawaiian Islands as a Marine National Monument. This designation was accompanied with extensive federal regulation of activities in the Marine National Monument area, most of which the Coast Guard has, in partnership with NOAA and U.S. Fish & Wildlife Service, enforcement responsibility.
- *EO 13,449: Protection of Striped Bass and Red Drum Fish Populations (2007).* Makes it illegal to sell striped bass and red drum fish caught within the U.S. EEZ in the Atlantic Ocean and Gulf of Mexico, essentially ending all fishing effort on these species. The Coast Guard enforces regulations developed in response to this order.
- *EO 13,547: Stewardship of the Ocean, Our Coasts, and the Great Lakes (2010).* Established a national policy “to ensure the protection, maintenance, and restoration of the health of ocean, coastal, and Great Lakes ecosystems and resources, enhance the sustainability of ocean and coastal economies, preserve our maritime heritage, support sustainable uses and access, provide

for adaptive management to enhance our understanding of and capacity to respond to climate change and ocean acidification, and coordinate with our national security and foreign policy interests.”

- *Presidential Proclamations 8,335-8,337*. These 2009 Presidential Proclamations designated the Marianas Trench (PP 8,335), seven Pacific Remote Islands (PP 8,336), and Rose Atoll (PP 8,337) as Marine National Monuments, essentially closing 195,274 square nautical miles of the Pacific Ocean to nearly all extraction activities unless specifically permitted. This is a large enforcement responsibility for the Coast Guard for which no additional funding was allocated. In support of the designated sanctuaries, the Coast Guard established policy guidance with *Coast Guard Participation in the Marine Sanctuary Program* (COMDTINST 16004.3A), signed in 2003. A list of all the monuments located in the Pacific can be found in the *NOAA Fisheries Pacific Islands Regional Office Compliance Guide*.
- *PPD on Global Development* (22 September 2010). Emphasizes that global development is vital to U.S. national security and is a “strategic, economic, and moral imperative for the United States.” To support global development, the directive states that the United States will place greater emphasis on increasing the capacity of our foreign partners, and underscores the importance of country ownership and responsibility. Coast Guard efforts to build the fisheries enforcement capacity of partner nations directly support this directive. Expanding fisheries enforcement capabilities in accordance with the PPD on Global Development also enhances global food security needs.

Marine Safety

- *14 U.S.C. § 91: Safety of Vessels*. Authorizes the Coast Guard to control the anchorage and movement of vessels in the navigable waters of the United States to ensure the safety and security of U.S. naval vessels.
- *14 U.S.C. § 633: Officer in Charge Marine Inspection*. 33 C.F.R. § 1.01-20 provides final authority regarding inspection of vessels in order to determine compliance with applicable laws, rules, and regulations related to the safe construction, equipment, manning, and operation and that they are in a seaworthy condition for the services in which they are operated. Also oversees investigation of marine casualties and accidents along with the licensing and certificating of mariners.
- *33 U.S.C. § 1221 et seq.: Ports and Waterways Safety Act*. Authorizes the Coast Guard to implement vessel operating requirements; establishes provisions for waterfront safety; establishes provisions for port, harbor, and coastal facility security; affords the Coast Guard investigatory powers; allows the Coast Guard to set entry conditions for U.S. ports; and allows enforcement of numerous vessel safety and operating requirements, exercised by Coast Guard COTP.
- *33 U.S.C. §§ 1501-1524: The Deepwater Port Act of 1974 (DWPA)*. Establishes a licensing system for ownership, construction, operation, and decommissioning of deepwater port structures located beyond the U.S. territorial sea. The DWPA sets out conditions that applicants for licenses must meet, including minimization of adverse impact on the marine environment and submission of detailed plans for construction, operation, and decommissioning of deepwater

ports. The DWPA also sets out detailed procedures for the issuance of licenses by the Secretary of Transportation and prohibits the issuance of a license without the approval of the Governors of the adjacent coastal states.

- *33 U.S.C. §§ 1601-1608: Implementation of the Convention on the International Regulations for Preventing Collisions at Sea, 1972.* Authorizes the Secretary of the Department in which the Coast Guard is operating to promulgate rules and regulations necessary to implement the provisions of the Convention. Implemented via E.O. 11964.
- *43 U.S.C. §§ 1331-1356: Outer Continental Shelf Lands Act.* Authorizes the Coast Guard to promulgate and enforce regulations with respect to lights and other warning devices, safety equipment, and other matters relating to the promotion of safety of life and property on the Outer Continental Shelf.
- *46 U.S.C. Subtitle II, chapters 21-147:* The bulk of the Coast Guard's Marine Safety authority is found in Subtitle II, of Title 46 U.S. Code. The provisions in subtitle II allow the Coast Guard to inspect and regulate vessels, authorize load lines, conduct activities in response to marine casualties, issue, suspend or revoke merchant mariner credentials, regulate the manning of vessels, the documentation and numbering of vessels, and to measure vessels.
- *46 U.S.C. §§ 4301-431;113101-13109: Recreational Vessel Safety.* Authorizes Coast Guard to establish and enforce minimum safety standards for recreational vessels and associated equipment; establishes Federal recreational boating safety program and prescribes requirements for State boating safety programs as a condition of receipt of Federal recreational boating safety funds.
- *46 U.S.C. Chapter 4501-4507: Commercial Fishing Industry Vessels.* Establishes safety standards for commercial fishing industry vessels.
- *50 U.S.C. § 191 et seq.: Regulation of Anchorage and Movement of Vessels during National Emergency.* Authorizes COTP to take actions deemed necessary to prevent damage or injury to vessels and waterfront facilities; to safeguard ports, harbors, and waters of the United States; and to secure the rights and obligations of the United States. Key activities include preventing access of persons, articles, and things to vessels and waterfront facilities; causing a vessel to be searched or inspected; controlling the movement or removal of vessels; and the establishment of security zones.

Search and Rescue

- *6 U.S.C. § 748: Training and Exercises.* Directs that the Federal Emergency Management Administrator, in coordination with the heads of appropriate federal agencies, the National Council on Disability, and the National Advisory Council, shall carry out a national exercise program to test and evaluate the national preparedness goal, National Incident Management System (NIMS), National Response Plan [now National Response Framework], and other related plans and strategies. The Coast Guard is mandated through this law to participate in the National Exercise Program.

- *14 U.S.C. § 2: Search and Rescue as a Primary Duty.* Requires the Coast Guard to develop, establish, maintain, and operate rescue facilities for the promotion of safety on, under, and over the high seas and waters subject to the jurisdiction of the United States.
- *14 U.S.C. § 88: Saving Life and Property.* Authorizes the Coast Guard to perform any and all acts necessary to rescue and aid persons, and to protect and save property.
- *14 U.S.C. § 88(d): Rescue Swimmer Training.* Authorizes the Secretary to establish a helicopter rescue swimming training program, which may include rescue diver training.
- *14 U.S.C. § 93: Commandant; General Powers.* Authorizes the Coast Guard to maintain air and water patrols, to operate shore facilities, to move vessels from one place to another, to acquire and maintain small boats, and to accept voluntary services in times of emergency in order to save lives or protect property, to maintain data circuits, and to maintain radio transmitting and receiving stations.
- *14 U.S.C. § 147a: Department of Health and Human Services.* Authorizes the Coast Guard to provide medical emergency helicopter transportation services to civilians.
- *14 U.S.C. § 674: Small Boat Station Rescue Capability.* Requires each Coast Guard small boat station to maintain at least one vessel that is fully capable of performing offshore rescue operations within the station's area of responsibility. These requirements take into consideration prevailing weather, marine conditions, and sandbars.
- *42 U.S.C. §§ 5121-5206: Robert T. Stafford Disaster Relief and Emergency Assistance Act.* Describes the programs and processes by which the Federal Government provides disaster and emergency assistance to state and local governments, tribal nations, eligible private nonprofit organizations, and individuals affected by a declared major disaster or emergency. The Stafford Act covers all hazards, including natural disasters and terrorist events. This Act constitutes the authority for Coast Guard disaster response as well as provides funding for the response.
- *42 U.S.C. § 5170: Procedure for Declaration.* Authorizes on direction of the President in any major disaster, federal agencies to provide general assistance and assistance essential to meet immediate threats to life and property.
- *47 U.S.C. § 363: Global Maritime Distress & Safety System (GMDSS).* Authorizes the Coast Guard to make a determination that U.S. documented vessels have the equipment required to implement the Global Maritime Distress and Safety System installed and operating in good working condition.

Aids to Navigation and MTS Management

- *14 U.S.C. § 2: Primary Coast Guard Duties.* Establishes ATON, Icebreaking, and Polar Operations as three of the Coast Guard's primary duties.
- *14 U.S.C. § 81 Aids to Navigation.* Authorizes the Coast Guard to establish, maintain, and operate maritime aids to navigation required to serve the needs of the armed forces or the commerce of the United States in order to aid navigation and to prevent disasters, collisions, and

wrecks of vessels and aircraft.

- *14 U.S.C. § 85: Regulating Aids to Navigation.* Provides regulatory authority concerning aids to navigation and prescribes penalties for violations.
- *14 U.S.C. § 86: Sunken Wrecks & Obstructions.* Authorizes Coast Guard to mark sunken vessels or other obstructions when the owners fail to properly do so, at owner's expense.
- *33 U.S.C. §§ 1221-1236: Port and Waterways Safety Act.* Provides the Secretary with broad authority to regulate the movement, operation, and equipment of vessels subject to U.S. jurisdiction.
- *33 U.S.C. § 1223: Captain of the Port Orders.* Authorizes the Secretary to order vessels to operate as directed or to anchor, and to require pre-arrival notices.
- *33 U.S.C. §§ 401-535i: General Bridge Authorities.* Requires approval for certain bridges over U.S. navigable waters; provides procedures for alteration, removal, and repair of such bridges; and prescribes penalties for violations.
- *46 U.S.C. § 80302: Ice Patrol Service.* Requires the Commandant of the Coast Guard to maintain an ice patrol to guard the region of icebergs near the Grand Banks of Newfoundland and inform passing vessels of the extent of the dangerous region in support of U.S. treaty obligations under the 1974 International Convention for the Safety of Life at Sea (SOLAS).

Living Marine Resources

- *14 U.S.C. § 2.* Requires the Coast Guard to “enforce or assist in the enforcement of all applicable federal laws on, under and over the high seas and waters subject to the jurisdiction of the United States; shall engage in maritime air surveillance or interdiction to enforce or assist in the enforcement of the laws of the United States.”
- *14 U.S.C. § 89.* Authorizes the Coast Guard to “make inquiries, examinations, inspections, searches, seizures, and arrests upon the high seas and waters over which the United States has jurisdiction for the prevention, detection and suppression of violations of laws of the United States.”
- *16 U.S.C. §§ 1361-1407: Marine Mammal Protection Act (MMPA).* Tasks the Coast Guard with enforcement responsibility. This Act provides a program to ensure optimum sustainable populations of marine mammals. The MMPA prohibits, with certain exceptions, the “take” of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States.
- *16 U.S.C. §§ 1431-1445: National Marine Sanctuary Act (NMSA).* Tasks the Coast Guard with enforcement responsibility. Provides for designation of discrete areas of the marine environment as national marine sanctuaries to promote comprehensive management of their unique ecological, historical, recreational, and aesthetic resources. Each sanctuary has its own separate set of regulations promulgated in title 15 of the C.F.R.

- *16 U.S.C. §§ 1531, 1540, and 1543-1544: Endangered Species Act (ESA)*. Tasks the Coast Guard with enforcement responsibility. This Act provides a program for the conservation of endangered and threatened species and the ecosystems upon which they depend. To implement the ESA, numerous regulations are promulgated in title 50 of the C.F.R.
- *16 U.S.C. §§ 1801-1883: Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA)*. Tasks the Coast Guard with enforcing fisheries laws at sea. The MSFCMA establishes a national program for the conservation and management of the fishery resources of the United States to prevent overfishing, to rebuild overfished stocks, and to facilitate long-term protection of essential fish habitats. Domestic fisheries regulations are promulgated in 50 C.F.R. Parts 600-697. The vast majority of authorities for the Coast Guard to support Living Marine Resources management and enforcement are identified in numerous sections of title 16, United States Code.
- *16 U.S.C. §§ 3371-3378: Lacey Act*. The Lacey Act prohibits unlawful transportation of certain fish or wildlife that was taken or possessed in violation of any law, treaty, or regulation. The Act provides for seizure of the catch and vessel if supporting evidence exists.

Marine Environmental Protection

- *14 U.S.C. § 89*. Authorizes the Coast Guard to “make inquiries, examinations, inspections, searches, seizures, and arrests upon the high seas and waters over which the United States has jurisdiction.”
- *16 U.S.C. §§ 4701-4727: Aquatic Nuisance Species Prevention & Control*. Authorizes the Secretary to issue regulations to control the introduction of aquatic nuisance species to the waters of the United States and requires the Coast Guard to implement a ballast water management program for seagoing vessels of the Coast Guard.
- *26 U.S.C. § 9509: OSLTF*. Establishes the Oil Spill Liability Trust Fund (OSLTF).
- *33 U.S.C. §§ 401-418: Rivers and Harbors Act of 1899*. Prohibits discharge of refuse matter in the waters of the United States without a permit.
- *33 U.S.C. §§ 1251-1387: Clean Water Act (CWA)*, as amended by the Oil Pollution Act of 1990. Provides statutory authority to the Coast Guard for pollution prevention, contingency planning, and response activities within the 200-mile EEZ for oil and hazardous substances.
- *33 U.S.C. §§ 1321-1330: Federal Water Pollution Control Act – Clean Water Act*. Requires the President to ensure effective and immediate removal of a discharge of oil or hazardous substances in the EEZ and for natural resources under the exclusive management authority of the United States. Pursuant to EO 12,777, the Coast Guard is delegated responsibility for removal of a discharge, or mitigating a substantial threat of a discharge, of oil or hazardous substances in the Coastal Zone.
- *33 U.S.C. § 1401 et seq., Marine Protection, Research and Sanctuaries Act (MPRSA)*, commonly referred to as the Ocean Dumping Act. The Coast Guard is charged with maintaining surveillance of ocean dumping of industrial waste, sewage sludge, biological agents, NBC,

radioactive waste, medical waste, and other wastes that would unreasonably degrade or endanger human health or the marine environment unless a permit is issued under the MPRSA.

- *33 U.S.C. § 1417.* Requires the Coast Guard to conduct surveillance and appropriate enforcement activity to prevent the unlawful transportation of material for dumping, or unlawful ocean dumping.
- *33 U.S.C. § 1474.* Authorizes the Coast Guard to take intervention action on the high seas when a vessel incident results in grave and imminent danger to the coastline or related interests of the United States from oil or hazardous substances pollution or the threat of oil or hazardous substances pollution.
- *33 U.S.C. § 1901-1915: MARPOL Implementation.* Requires the Coast Guard to enforce the provisions of the MARPOL Convention, the *Act to Prevent Pollution from Ships*, and Annex IV of the Antarctic Protocol relating to discharges of vessels on the high seas and the EEZ.
- *33 U.S.C. § 2701-2720: Oil Pollution Act of 1990.* Authorizes the Coast Guard to respond to oil spills that occur in coastal waters and to act as the Federal On-Scene Coordinator.
- *33 U.S.C. §§ 2701-2761: Title I of Oil Pollution Act (OPA) of 1990.* Amends the CWA and addresses a wide range of issues associated with preventing, responding to, and paying for oil pollution.
- *42 U.S.C. § 9118.* Requires the Coast Guard to enforce procedures with respect to any ocean thermal energy conversion facility in order to (1) promote the safety of life at sea, (2) prevent pollution of the marine environment, (3) clean up any pollutants that may be discharged, and (4) otherwise prevent or mitigate any adverse impact from the construction and operation of such ocean thermal energy conversion facility or plant ship.
- *42 U.S.C. §§ 9601-9675: The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).* Pursuant to EO 12,580, the Coast Guard is authorized as the lead agency for planning and implementing response actions addressing contamination for releases occurring on or from Coast Guard facilities or vessels. CERCLA, also known as *Superfund*, was enacted by Congress in 1980 in response to the Love Canal disaster to protect people, families, communities, and others from heavily contaminated toxic waste sites that have been abandoned. This law serves as a principal authority for federal response to pollution incidents. It extends the response provisions of the CWA to a wide range of “hazardous substances, pollutants, and contaminants” and to releases that threaten not only coastal or navigable waters but also those that may threaten other environments, such as the air or ground.

Ice Operations

- *14 U.S.C. § 2 Primary Coast Guard Duties.* Establishes ATON, Icebreaking, and Polar Operations as three of the Coast Guard’s primary duties.
- *14 U.S.C. § 93(a): Authority to Maintain Icebreaking Facilities.* Authorizes the Commandant to maintain icebreaking facilities.

- *14 U.S.C. § 141: Icebreaking Assistance to Other Agencies.* Authorizes the Coast Guard to utilize its personnel and facilities to assist, among others, Federal and State agencies. Under this authority the Coast Guard provides icebreaking escort for Navy and National Science Foundation operations in the Arctic and Antarctic.
- *16 U.S.C. § 2405: Implement Annex IV and Article 15 of the Protocol on Environmental Protection of the Antarctic Treaty.* Authorizes the Coast Guard to implement Annex IV of to the Protocol and, with the concurrence of the National Science Foundation, Article 15 of the Protocol with respect to vessels. Annex IV to the Protocol resembles in many respects MARPOL 73/78. Article 15 requires each party to provide for prompt and effective response actions to such emergencies as might arise from activities in the Antarctic, and establish contingency plans for response to incidents with potential adverse effects to the Antarctic environment. *See also* the Antarctic Science, Tourism and Conservation Act of 1996 (P.L. 104-227).
- *46 U.S.C. § 80302: Ice Patrol Service.* Requires the Commandant of the Coast Guard to maintain an ice patrol to guard the region of icebergs near the Grand Banks of Newfoundland and inform passing vessels of the extent of the dangerous region in support of U.S. treaty obligations under SOLAS.
- *Executive Order (EO) 7,521: Use of Vessels for Icebreaking Operations in Channels and Harbors.* The Coast Guard, operating under the direction of the Secretary of the Treasury, is hereby directed to assist in keeping open to navigation by means of icebreaking operations, in so far as practicable and as the exigencies may require, channels and harbors in accordance with the reasonable demands of commerce.
- *National Security Presidential Directive (NSPD) 66/Homeland Security Presidential Directive (HSPD) 25: Arctic Region Policy.* U.S. policy in the Arctic was most recently articulated in NSPD 66/HSPD 25, issued on 9 January 2009. The six policy elements from the directive directly involve Coast Guard responsibilities and provide a future-oriented, overarching context for Coast Guard mission performance in the Arctic region. NSPD-66/HSPD-25 clearly recognize that the Arctic is changing and will require active U.S. involvement.
- *PDD-26.* Reaffirmed as the current source of presidential Antarctic policy by NSPD-66/HSPD-25. According to PDD-26, the objectives of United States policy toward the Antarctic are:
 - Protecting the relatively unspoiled environment of Antarctica and its associated ecosystems.
 - Preserving and pursuing unique opportunities for scientific research to understand Antarctica and global physical and environmental systems.
 - Maintaining Antarctica as an area of international cooperation reserved exclusively for peaceful purposes.
 - Assuring the conservation and sustainable management of the living resources in the oceans surrounding Antarctica.

Appendix D: Glossary

<u>Term</u>	Definition
AIS	Automatic Identification System
AMIO	Alien Migrant Interdiction Operations
AMSC	Area Maritime Security Committees
AOR	Area of Responsibility
ATON	Aids to Navigation
C4IT	Command, Control, Communications, Computers, and Information Technology
CBP	U.S. Customs and Border Protection
CBRN	Chemical, Biological, Radiological, Nuclear
CD	Counter Drug
CERCLA	<i>The Comprehensive Environmental Response, Compensation, and Liability Act</i>
CG-IMAT	Coast Guard Incident Management Assistance Team
CIP	Capital Investment Plan
CMTS	Committee on the Marine Transportation System
CONOPS	Concept of Operations
COTP	Captain of the Port
CWA	<i>Clean Water Act</i>
DHS	Department of Homeland Security
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
DOJ	Department of Justice
DOS	Department of State
DOT	Department of Transportation
DR	Defense Readiness
DRUG	Drug Interdiction
DWPA	<i>Deepwater Port Act of 1974</i>
ECA	Emissions Control Area
EEZ	Exclusive Economic Zone

<u>Term</u>	Definition
EPA	Environmental Protection Agency
ESA	<i>Endangered Species Act</i>
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FFV	Foreign Fishing Vessel
FMP	Fisheries Management Plans
FWS	Fish and Wildlife Service
FY	Fiscal Year
GPS	Global Positioning System
GPRA	<i>Government Performance and Results Act</i>
GRP	Gulf Research Program
HSC	Harbor Safety Committee
HSPD	Homeland Security Presidential Directive
IC	Intelligence Community
ICE	Ice Operations
ICW	Intracoastal Waterway
IIP	International Ice Patrol
IMO	International Maritime Organization
ISPS	International Ship and Port Facility Security
IUU	Illegal, Unreported, and Unregulated
JIATF	Joint Interagency Task Force
JTF	Joint Task Force
LMR	Living Marine Resources
LNG	Liquefied Natural Gas
MDA	Maritime Domain Awareness
MEP	Marine Environmental Protection
MMPA	<i>Marine Mammal Protection Act</i>
MNS	Mission Needs Statement
MODU	Mobile Offshore Drilling Unit
MOTR	Maritime Operational Threat Response
MPRSA	<i>Marine Protection, Research and Sanctuaries Act</i>
MS	Marine Safety

<u>Term</u>	Definition
MSFCMA	<i>Magnuson-Stevens Fisheries Conservation and Management Act</i>
MSRO	Maritime Security Response Operations
MTS	Maritime Transportation System
MTSA	<i>Maritime Transportation Security Act</i>
NASA	National Aeronautics and Space Administration
NCP	<i>National Oil and Hazardous Substances Pollution Contingency Plan</i>
NDCS	National Drug Control Strategy
NIMS	National Incident Management System
NM	Nautical Miles
NMFS	National Marine Fisheries Service
NMSA	<i>National Marine Sanctuaries Act</i>
NOAA	National Oceanic and Atmospheric Administration
NPFC	National Pollution Funds Center
NRF	National Response Framework
NRS	National Response System
NSARC	National Search and Rescue Committee
NSF	National Strike Force
NSPD	National Security Presidential Directive
NVDC	National Vessel Documentation Center
OCS	Outer Continental Shelf
OLE	Other Law Enforcement
OMB	Office of Management and Budget
OPA	<i>Oil Pollution Act</i>
OSLTF	Oil Spill Liability Trust Fund
OSV	Offshore Supply Vessel
PDD	Presidential Decision Directive
PNT	Position, Navigation, and Timing
PWCS	Ports, Waterways, and Coastal Security
QHRS	Quadrennial Homeland Security Review
RFMO	Regional Fishery Management Organization
RWAI	Rotary-Wing Air Intercept
SAR	Search and Rescue

<u>Term</u>	Definition
SARSAT	Search and Rescue Satellite-Aided Tracking
SBACP	Southern Border and Approaches Campaign Plan
SDCIP	Surveillance, Detection, Classification, Identification, and Prosecution
SOLAS	Safety of Life at Sea
TOC	Transnational Organized Crime
TOI	Target of Interest
TSA	U.S. Transportation Security Administration
TSC	Theater Security Cooperation
UAS	Unmanned Aerial Systems
UNFSA	United Nations Fish Stock Agreement
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USCENTCOM	U.S. Central Command
USCIS	United States Citizenship and Immigration Services
VTS	Vessel Traffic Services
WMD	Weapons of Mass Destruction