

A photograph taken from inside a helicopter, showing a Coast Guard crew member wearing a helmet and blue gloves attending to a baby wrapped in a white blanket. The baby is lying down, and the crew member is holding a clear plastic container. The background shows a view of a town and a river through the helicopter window.

- United States Coast Guard

# Annual Performance Report

Fiscal Year 2017

# Letter from the Deputy Commandant for Operations

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**Vice Admiral Charles W. Ray**

*United States Coast Guard*


**Deputy Commandant for Operations**

I am pleased to present the Coast Guard's Annual Performance Report for Fiscal Year 2017.

This year the Coast Guard faced significant challenges. None was greater than the responses to Hurricanes Harvey, Irma, and Maria where we assisted more than 11,200 persons while providing humanitarian relief and other essential services.

While the response to the hurricanes thrust the Coast Guard into the national and international headlines, our dedicated people carried on the Coast Guard's wide portfolio of missions—ensuring the security, safety, and stewardship of our Marine Transportation System; protecting our maritime borders; and defending the nation as a member of the Armed Services. For example, we had the largest seizure rate of narcotics in our history, removing 223 metric tons of cocaine destined for the streets of the United States. At the same time, we conducted fishery patrols; managed the Nation's waterways; ensured compliance with vessel and facility regulations; provided security at our ports; searched and rescued over 16,000 persons in peril; and provided escorts for strategic military assets and the protection of senior leaders. This of course came at a cost. It stretched our already fully committed resources, which may affect future performance results.

The Coast Guard has ships, boats, and aircraft; but its greatest resource is the approximate 80,000 Military, Civilian, and volunteer Auxiliary members that are part of the Coast Guard family. The successes outlined in this report are only possible because of their dedication, professionalism, and willingness to go that "extra mile" to serve the people of this great Nation. I witnessed firsthand Coast Guard members who themselves had lost everything in the hurricanes, putting duty to country first to help their fellow citizens. They remained steadfastly faithful, embodying the Coast Guard motto *Semper Paratus* (Always Ready).



Charles W. Ray  
Vice Admiral, U. S. Coast Guard

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COVER: A Coast Guard aircrew assists an infant in the greater Houston Metro Area during the aftermath of Hurricane Harvey August 29, 2017. (U.S. Coast Guard photo by Petty Officer Second Class Chase Redditt.)



## **Annual Performance Report Purpose and Introduction**

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The Coast Guard Annual Performance Report is a retrospective presentation of results for key mission performance measures for the fiscal year just ended. The results provided are those known at the time of publication. Some data, such as casualties reported by mariners, is delayed in reaching the Coast Guard. Previously published data is therefore subject to revision, with the greatest impact affecting recent quarters.

The Annual Performance Report focuses on a limited set of key “outcome” measures, which are indicators used to monitor and track mission performance and not generally the mission goal itself. The Annual Performance Report does not attempt to report results for every mission aspect, nor is it a comprehensive report on Coast Guard capabilities or operational activities and outputs.

Target expectations and past results provide comparative benchmarks for assessing current performance. Targets generally are not mission goals, they are future performance expectations that reflect the situation and understanding at the time they were established. They usually are set two years prior to the performance report, are built from the previous baseline of results, and are based on ambitious but realistic forecasts of future performance.

Corrective actions are not presented in the Annual Performance Report. Initiatives developed to make corrective strategy adaptations or implement new strategies are presented and tracked separately in annual program plans.

The Annual Performance Report supplements performance metrics with operational highlights and success stories that illustrate the benefits provided by Coast Guard activities in the past year.

## Coast Guard Missions and Mission Programs

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The Coast Guard upholds and safeguards the Nation’s maritime interests. We protect those on the sea, we protect the Nation against threats delivered by sea, and we protect the sea itself.

We ensure the territorial integrity of America’s maritime domain, which is comprised of 95,000 miles of shoreline and an approximately 4.5 million square mile exclusive economic zone. In our Nation’s ports and harbors, and across the vast expanse of our ocean, coastal, and inland waterways, we protect the safety and security of our people and ensure the stewardship of our natural and commercial resources, against all threats internal and external, natural and man-made.

The Homeland Security Act of 2002 transferred the Coast Guard to the newly created Department of Homeland Security. It further specified eleven primary missions assigned to the Coast Guard to ensure performance is reasonably tracked and non-homeland security missions do not suffer because of the transfer. These eleven missions are managed within six mission programs that comprise the Coast Guard’s strategic mission management construct, which is based upon the Service’s prevention and response architecture. The six Coast Guard mission programs and their Homeland Security Act mission responsibilities are listed in the table below.

USCG MISSION PROGRAMS	HOMELAND SECURITY ACT MISSIONS
Maritime Security Operations	Ports, Waterways & Coastal Security — <i>Response Activities</i> (PWCS-R)
Maritime Law Enforcement	Migrant Interdiction (MIGRANT)
	Drug Interdiction (DRUG)
	Living Marine Resources (LMR)
	Other Law Enforcement (OLE)
Maritime Prevention	Ports, Waterways & Coastal Security — <i>Prevention Activities</i> (PWCS-P)
	Marine Safety (MS)
	Marine Environmental Protection — <i>Prevention Activities</i> (MEP)
Maritime Response	Search and Rescue (SAR)
	Marine Environmental Protection — <i>Response Activities</i> (MER)
Defense Operations	Defense Readiness (DR)
MTS Management	Aids to Navigation (ATON)
	Ice Operations (ICE)

The Coast Guard has other mission responsibilities not explicitly delineated in the Homeland Security Act but defined in other federal laws, including products and services for the Intelligence Community; activities and efforts provided in support of U.S. diplomacy and international relations; Bridge Administration, Great Lakes Pilotage, and other Waterways Management functions supplementary to Aids to Navigation.

## **Coast Guard Measures and Target Setting Process**

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To measure mission performance, strategic, management, and operational measures exist for each program area. The results are used to develop strategic plans and initiatives, drive budgetary priorities, and formulate operational direction to improve program performance. Additionally, these measures fulfill the requirements set forth by the Government Performance and Results Modernization Act of 2010.

Each March, the Coast Guard completes a year-long process of performance assessment, improvement planning, and target setting to coincide with our annual budget submission to the Department of Homeland Security (DHS).

Determining appropriate measures and ensuring necessary data validity and availability is challenging; and the Coast Guard suite of primary performance measures continues to evolve as new and improved measurement and reporting capabilities are developed. To establish meaningful expectations for future performance, we set ambitious, yet realistic, out-year targets built from reliable baselines. In developing such expectations, we do not presume every target will be attained each year.

The baseline is the reference point from which expectations of change are determined. In a stable environment, where results are expected to deviate within normal limits of variation, the baseline is typically just a forward projection of the past several years' average. In a period of dynamic change, the baseline is more appropriately determined from a trend line taking into account the significant variations with due care given to both the type of trend line used and its expected duration.

Except for targets that reflect performance standards established with specific stakeholders, we annually refine our targets by:

- Determining the anticipated out-year benefits of Coast Guard performance initiatives (e.g., new technology);
- Identifying the expected benefits of Coast Guard continuous improvement efforts (e.g., better intelligence and processes);
- Ascertaining the impact of constraints on our capabilities due to staffing, training, equipment, infrastructure, information, or operating budget limitations; and,
- Assessing the impact of external drivers such as an overall increase or decrease in economic activity.

# FY 2017 Summary of Coast Guard Mission Performance

MARITIME SECURITY OPERATIONS	SECURITY ACT MISSION	Prior Year	FY17 Target	FY17 Actual
M Percent reduction of all maritime security risk subject to USCG influence	PWCS-R	44.0%	≥ 56.0%	<b>49.0%</b>
M Percent reduction of maritime security risk—USCG consequence management	PWCS-R	1.0%	≥ 4.0%	<b>2.0%</b>
M Percent reduction of maritime security risk—USCG terrorist entry prevention	PWCS-R	59.0%	≥ 58.0%	<b>59.0%</b>
M Percent reduction of maritime security risk—USCG WMD entry prevention	PWCS-R	42.0%	≥ 39.0%	<b>44.0%</b>

## MARITIME LAW ENFORCEMENT

Number of undocumented migrants attempting to enter U.S. by maritime routes	MIGRANT	10,319	≤ 9,180	<b>4,760</b>
M Number of undocumented migrants attempting to enter U.S. by maritime routes interdicted	MIGRANT	8,165	≤ 6,426	<b>3,952</b>
S Migrant interdiction effectiveness in the maritime environment	MIGRANT	79.3%	≥ 74.5%	<b>83.0%</b>
Percent undocumented migrants attempting to enter U.S. by maritime routes interdicted by USCG	MIGRANT	61.5%	≥ 50.0%	<b>52.8%</b>
Metric tons of cocaine removed	DRUG	201.3	≥ 100.0	<b>223.8</b>
M Removal rate for cocaine from non-commercial vessels in maritime transit zone	DRUG	7.1%	≥ 11.5%	<b>8.2%</b>
S Fishing regulation compliance rate	LMR	96.8%	≥ 97.0%	<b>97.1</b>
Percent of federal fisheries found in compliance with laws and regulations	LMR	20.0%	≥ 28.0%	<b>23.0%</b>
S Number of detected incursions of foreign fishing vessels violating U.S. waters	OLE	176	≤ 224	<b>136</b>
Interdiction rate of foreign fishing vessels violating U.S. waters	OLE	25.5%	≥ 18.0%	<b>22.8%</b>

## MARITIME PREVENTION

M Annual MTSA facility compliance rate with transportation worker ID credential regulations	PWCS-P	99.0%	≥ 99.0%	<b>98.2%</b>
S Security compliance rate for high risk maritime facilities	PWCS-P	97.6%	100.0%	<b>98.0%</b>
Annual number of breaches at high risk maritime facilities	PWCS-P	418	≤ 433	<b>257</b>
Annual number of serious marine incidents	MS	676	698	<b>681</b>
S 3-yr average number of serious marine incidents	MS	707	≤ 698	<b>685</b>
Annual number of commercial mariner deaths and critical, serious & severe injuries	MS	136	≤ 148	<b>82</b>
M 3-yr average number of commercial mariner deaths and critical, serious & severe injuries	MS	145	≤ 142	<b>119</b>
Annual number of commercial passenger deaths and critical, serious & severe injuries	MS	98	≤ 173	<b>65</b>
M 3-yr average number of commercial passenger deaths and critical, serious & severe injuries	MS	122	≤ 172	<b>97</b>
Annual number of recreational boating deaths	MS	701	New	<b>657</b>
3-yr average number of recreational boating deaths	MS	637	New	<b>657</b>
Annual number of recreational boating deaths and injuries	MS	3,502	≤ 3,382	<b>2,956</b>
M 3-yr average number of recreational boating deaths and injuries	MS	3,325	≤ 3,583	<b>3,236</b>
Annual number of chemical discharge incidents	MEP	16	≤ 20	<b>13</b>
M 3-yr average number of chemical discharges in maritime environment per 100 million tons shipped	MEP	13.8	≤ 15.5	<b>8.0</b>
Annual number of oil spills > 100 gallons	MEP	85	≤ 127	<b>78</b>
M 3-yr average number of oil spills in the maritime environment per 100 million tons shipped	MEP	10	≤ 10.9	<b>9.2</b>

## MARITIME RESPONSE

S Percent of people in imminent danger saved in the maritime environment	SAR	79.3%	100.0%	<b>78.2%</b>
M Percent of time rescue assets are on-scene within 2 hours	SAR	90.3%	100.0%	<b>91.0%</b>
Percentage of property “in danger of loss: saved	SAR	59.4%	≥ 71.0%	<b>57.9%</b>

## DEFENSE OPERATIONS

Defense readiness of major cutters for DoD contingency planning	DR	99.5%	100.0%	<b>97.0%</b>
Defense readiness of patrol boats for DoD contingency planning	DR	100.0%	100.0%	<b>100.0%</b>
Defense readiness of port security units (deployed)	DR	100.0%	100.0%	<b>100.0%</b>
Defense readiness of port security units (ready to deploy)	DR	57.8%	≥ 85.0%	<b>100.0%</b>

## MARINE TRANSPORTATION SYSTEM MANAGEMENT

S Availability of maritime navigation aids	ATON	97.7%	≥ 97.5%	<b>97.5%</b>
M Percent of time high-priority waterways in Great Lakes and Eastern Seaboard open during ice season	ICE	100%	≥ 95.0%	<b>99.9%</b>
Annual number of navigational accidents	ATON	1,217	≤ 1,890	<b>990</b>
M 5-yr average number of navigational accidents	ATON	1,662	≤ 1,890.0	<b>1,475</b>

S — [STRATEGIC] MEASURE REPORTED PUBLICALLY BY DHS M — [MANAGEMENT] MEASURE NOT REPORTED PUBLICALLY BY DHS, BUT PROVIDED TO CONGRESS

## **Fiscal Year 2017 Performance Highlights**

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40,581 Active Duty members, 7,012 Reservists, 9,463 Civilian employees, and 25,225 volunteer Auxiliary members (Note: Numbers represent the average personnel allowance list for FY 2017.):

- Conducted 4,468 Small Vessel Security Boardings in or around U.S. ports, waterways, & coastal regions; and 635 boardings of “high-interest” vessels.
- Interdicted 2,512 undocumented migrants.
- Removed over 223 metric tons of cocaine; 31,190 pounds of marijuana; 6 kilograms of heroin and other opiates; and 168 kilograms of methamphetamines worth \$6.6 billion wholesale.
- Boarded 5,518 U.S. vessels and cited 158 significant fishery violations and protected the U.S. EEZ from illegal foreign fishing by detecting 136 incursions and interdicting 31 vessels.
- Completed over 5,300 security-related inspections at Maritime Transportation Security Act regulated facilities; and over 8,600 International Ship and Port Facility Security Code exams.
- Conducted over 39,000 vessel and 16,000 facility inspections, resulting in 4,900 enforcement actions for violations; and completed over 9,100 Port State Control exams of foreign vessels, resulting in 75 operational controls reported to the International Maritime Organization.
- Conducted over 3,300 incident investigations, after initiating 18,600 preliminary investigations.
- Conducted over 41,800 recreational vessel boardings and 2,500 recreational boat inspections.
- Monitored over 1,000 transfers of oil, hazardous substances or explosives.
- Reviewed over 14,600 commercial vessel plans for compliance with technical standards.
- Mobilized over 2,000 Active Duty, 800 Reservists, and 150 Civilians for hurricane response.
- Not counting hurricanes, responded to 12,270 pollution incident reports; responded to 16,069 Search and Rescue cases; assisted 22,004 people; saved 4,228 lives; and protected more than \$76 million in property from loss.
- Responded to Hurricanes Harvey, Irma, and Maria assisting more than 11,200 persons.
- Responded to 175 National Capital Region air defense missions with a 100% on-time rate.
- Conducted over 5,300 hours of icebreaking operations to support movement of cargo worth over \$1.5 billion through ice-impeded waters of the Great Lakes and the Eastern Seaboard.
- Identified and tracked 1,004 icebergs in the North Atlantic shipping lanes.
- Reviewed over 3,600 Marine Event permit applications and completed 10,000 waterways activities.
- Serviced 29,295 Aids to Navigation (ATON); responded to over 7,763 ATON discrepancies.
- Provided Geospatial Intelligence support to hurricanes by exploiting over 3,750 images to create 43 Geospatial Intelligence products and 85 Imagery products.

# MARITIME SECURITY OPERATIONS

The Maritime Security Operations program encompasses activities required by executive and policy mandates to detect, deter, prevent, disrupt, and recover from terrorist attacks and other criminal acts in the maritime domain. It includes the execution of antiterrorism, counterterrorism, and security response operations. This program conducts and oversees the operational elements of the Coast Guard's Ports, Waterways, and Coastal Security mission, which complements the other two elements: maritime prevention and maritime domain awareness.

## PORTS, WATERWAYS & COASTAL SECURITY—RESPONSE ACTIVITIES

The Ports, Waterways and Coastal Security-Response (PWCS-R) mission is to prevent and disrupt terrorist attacks, sabotage, espionage, or subversive acts in the maritime domain and the U.S. Marine Transportation System (MTS). Coast Guard Maritime Security Operations deny the use and exploitation of the MTS by terrorists as a means for attacks on U.S. territory, population centers, vessels and critical maritime infrastructure, and key resources. Coast Guard PWCS-R efforts include the establishment and oversight of a maritime security regime and employment of maritime domain awareness activities; the execution of antiterrorism, counterterrorism, response and recovery operations; and related preparedness activities.



Coast Guard 25' Response Boat-Small on patrol on the Potomac River. (U.S. Coast Guard photo.)

### ***FY 2017 Performance Highlights***

- 4,468 Small Vessel Security Boardings in or around U.S. ports, waterways & coastal regions.
- 17,667 waterborne and 3,788 shoreside patrols of maritime critical infrastructure and key resources.
- 198 waterborne enforcement activities of fixed security zones.
- 575 escorts of vessels carrying certain dangerous cargos.
- 3,552 escorts of high-capacity passenger vessels such as ferries and cruise ships.
- 104 escorts of high-value naval vessels transiting U.S. waterways.
- 635 boardings of "high-interest" vessels, those posing a greater-than-normal risk to the U.S.
- 43 escorts of Department of Defense military cargo vessel transits and 178 fixed security zone enforcements in support of 12 multi-day military cargo vessel out-loads.
- 197 escorts of U.S. Navy ballistic missile submarines.

## *Success Stories*

**Layered-Security Strategy Safeguards American Ports.** On January 12, 2017, Coast Guard Sector Hampton Roads responded to information regarding suspicious containers onboard the merchant vessel *Mataquito*, bound for Norfolk, VA. After an interagency assessment of the information, the Sector issued a Captain of the Port order directing the vessel to remain offshore and delay its scheduled arrival at the Norfolk International Terminal.

A Coast Guard helicopter vertically inserted a boarding team from its Maritime Security Response Team and two Canine Explosive Detection Teams, who assumed positive control of the vessel. During the explosive detection sweeps, the canines alerted on a container originally loaded in Saudi Arabia.

Sector Hampton Roads stood up a local Unified Command, which included federal law enforcement partners, the U.S. Navy, multiple local law enforcement agencies, and industry partners. In accordance with the Maritime Operational Threat Response (MOTR) plan, the Department of Homeland Security Global MOTR Coordination Center notified the national-level command centers and maritime policy and operations experts of the ongoing response.



Two Coast Guard 45' Response Boat-Mediums provide an armed escort to the *Mataquito* inbound to Hampton Roads on January 13, 2017. (U.S. Coast Guard photo.)

The Unified Command deployed a joint bomb squad with advanced explosive detection capability to board the vessel and assess the containers. Fortunately, nothing of concern was detected and the *Mataquito* was allowed to enter port with a Sector boarding team onboard to ensure positive control measures remained in effect. The *Mataquito*'s inbound transit also included an armed escort by Response Boats and a Coast Guard Cutter. Once moored at Norfolk International Terminal, the Coast Guard maintained a fixed security zone around the vessel while Customs and Border Protection (CBP) x-rayed the containers, the FBI completed a borescope inspection, and the Canine Explosive Detection Teams conducted additional sweeps. CBP then opened and visually inspected the contents of each container. The exams and inspections resolved any remaining suspicions and concerns.

This event, and the Coast Guard's response, tested and demonstrated our ability to coordinate the efforts of multiple Coast Guard commands and various local and interagency partners, across the suite of maritime security response operations, to counter a potential significant maritime security threat.

**Coast Guard Support to Presidential Protection Missions.** The Coast Guard conducted maritime security response operations supporting U.S. Secret Service led protection missions. Notable operations conducted included the establishment and enforcement of fixed security zones around the President's Mar-a-Lago estate in West Palm Beach FL, securing channel approaches to the Wall Street Heliport and JFK airport in and around the New York City metropolitan area, and participation in operations during the United Nations General Assembly meeting in September 2017, whose attendees included the President, Vice President, and other key national and international leaders.



Mar-a-Lago, FL – A deployable Coast Guard Maritime Safety and Security Team enforces a fixed security zone in support of presidential security operations November 22, 2016. (U.S. Coast Guard photo.)

Collectively, these Presidential Protection missions utilized personnel and assets from a number of operational commands, to include multiple small boat crews from the Coast Guard's Maritime Safety and Security Teams.

**Risk-Based Maritime Security Response Operations Model Enhanced.** The Risk-Based Maritime Security Operations model was fully implemented in all Captain of the Port zones in Fiscal Year 2015. Since then, the Coast Guard has worked to develop the tool further to evaluate the unique risk dynamics of special events, such as those classified as National Special Security Events and those given a Special Event Assessment Rating.

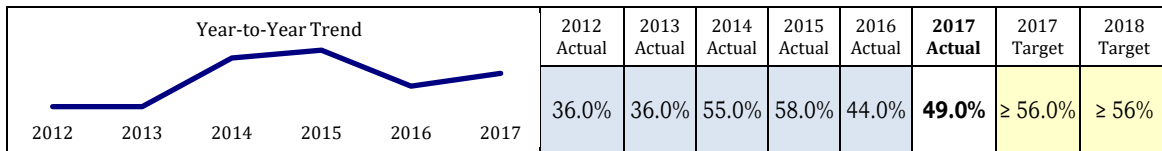
The new Special Event Tool provides operational planners with information needed to effectively place the right capability, in the right place, at the right time in support of events like the Presidential Inauguration, State of the Union Address, United Nations General Assembly meetings, and similar events.

**Addressing the Threats Posed by Unmanned Aircraft Systems (UAS).** These systems represent an emerging threat, since they are remotely piloted and can be employed by those who intend to do harm. To address this emerging threat, the Coast Guard has, in concert with the Department of Defense, Department of Homeland Security, and other federal partners and Congressional stakeholders, worked on developing a two-pronged solution: acquire the necessary authorities to engage and neutralize this emerging threat, and develop the graduated spectrum of capabilities needed to detect, deter, and respond to such an attack.

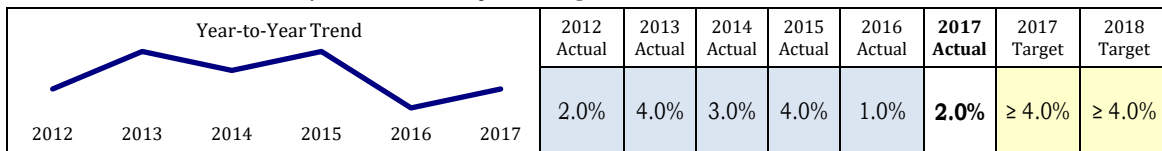
The Coast Guard has proposed counter-UAS technology and authority language for the next Coast Guard Authorization Act. Coast Guard Maritime Force Protection Units are likely candidates to be among the first units to field this capability once the necessary authorities are established and technologies developed.

## ***FY 2017 Performance Results***

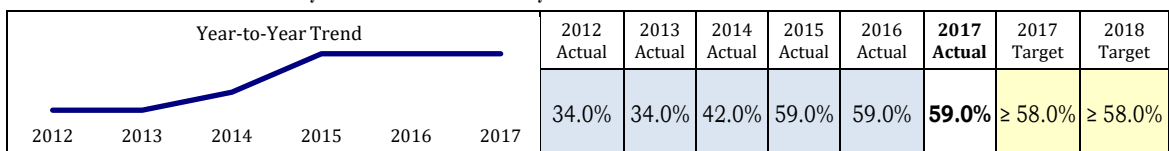
### **Percent Reduction of all Maritime Security Risk Subject to USCG Influence**



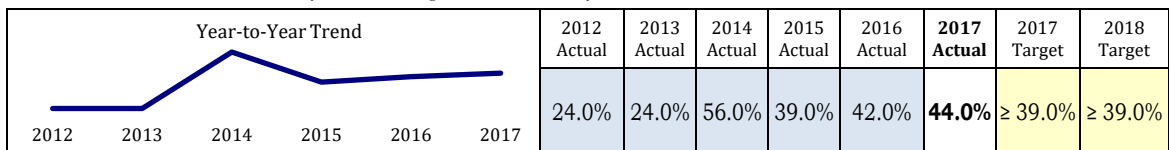
### **Percent Reduction of Maritime Security Risk—USCG Consequence Management**



### **Percent Reduction of Maritime Security Risk—USCG Terrorist Entry Prevention**



### **Percent Reduction of Maritime Security Risk Resulting—USCG WMD Entry Prevention**



## ***Explanation of Results***

Coast Guard maritime security performance remains strong. PWCS employment hours continue to be within historical norms, and maturation of the Coast Guard's Risk Based Maritime Security Operations tool has allowed more effective use of operational assets. These factors resulted in greater overall risk reduction in FY 2017 than the prior year.

The Coast Guard did not meet target expectations for overall risk reduction and consequence management, which was largely due to shifts in the underlying assumptions within the PWCS Risk-Model. Revalidation and updates to annual risk and consequence data changed the maritime risk profile used in the model, altering the paradigm from what was originally in place when targets were set.

# MARITIME LAW ENFORCEMENT

The Maritime Law Enforcement (MLE) program protects America's maritime borders from encroachment, defends the Nation's maritime sovereignty from illicit activity, facilitates legitimate use of the waterways, and suppresses violations of federal law on, under, and over the high seas and waters subject to the jurisdiction of the United States. The Coast Guard is the lead federal maritime law enforcement agency and the only agency with both the authority and capability to enforce national and international law on the high seas, Outer Continental Shelf, and inward from the U.S. Exclusive Economic Zone (EEZ) through U.S. inland waters.

Coast Guard MLE responsibilities are diverse. They include detecting and interdicting contraband and illegal drug traffic; at sea enforcement of U.S. immigration laws and policies; enforcing U.S. fisheries and marine protected resource laws and regulations; ensuring the integrity of the EEZ; monitoring compliance with international living marine resource regimes and international agreements to which the U.S. is party; and through compliance with international agreements, combating illegal, unreported, and unregulated fishing that negatively impacts maritime and economic security in coastal and regional areas worldwide.

## UNDOCUMENTED MIGRANT INTERDICTION

Coast Guard interdiction of undocumented migrants provides effective law enforcement presence at sea and helps achieve safe, legal, and orderly migration. Coast Guard migrant interdiction operations also stem the flow of human smuggling and trafficking through maritime routes and approaches to the United States. Leveraging statutory authority, bilateral agreements, and key policies, the Coast Guard conducts these interdictions as far from U.S. borders as possible. Doing so facilitates the return of migrants to their home country while further protecting them from an often perilous sea voyage.

Strong partnerships and information sharing with other agencies, such as Citizenship and Immigration Services, Immigration and Customs Enforcement, Customs and Border Protection, and Department of State are critical. While the Coast Guard leads the high seas interdiction mission, these partnerships with other agencies are essential for carrying out timely disposition of interdicted migrants via repatriation and removal operations and for conducting further investigations and prosecutions of human smugglers or traffickers.



Coast Guard Cutter Mohawk interdicting 113 Haitian migrants aboard a Haitian sail freighter in the Windward Passage. (U.S. Coast Guard photo.)

### ***FY 2017 Performance Highlights***

- Interdicted 2,512 undocumented migrants.
- Collected biometric identification data on 2,288 undocumented migrants.
- Repatriated 1,532 Cuban, 451 Dominican, and 1,442 Haitian migrants that were interdicted by both the Coast Guard and its partners.

### ***Success Stories***

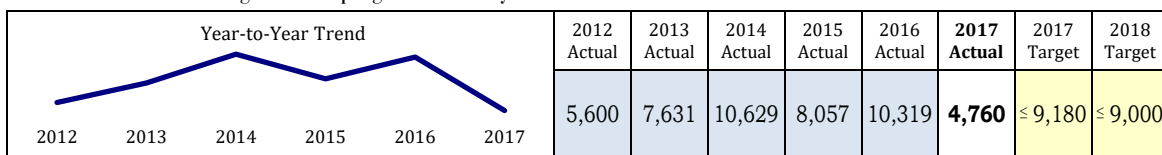
**Training Program To Improve Human Trafficking Awareness.** Though human trafficking is commonly associated with the Coast Guard's migrant interdiction mission, it is also discovered while conducting other Coast Guard operations. Human trafficking is encountered during search and rescue operations, found on fishing vessels in the course of living marine resource and other law enforcement, and revealed in the course of interacting with recreational boaters, with passengers and crewmembers on commercial vessels, and among the public and industry. Smuggling vessels interdicted by the Coast Guard are routinely found to have migrants onboard ranging in age, nationality, and gender.

In FY 2017, the Coast Guard trained more than 10,000 personnel in identifying and reporting incidents of suspected human trafficking. The training program ensured Coast Guard members were ready to recognize, react to, and report indicators of human trafficking. The training improved Coast Guard members' awareness of subtle cues often associated with sex trafficking, domestic servitude, and forced labor. The training allowed members to identify possible trafficking concerns and enabled quick referrals to other law enforcement partners and agencies such as Homeland Security Investigations. It became an essential element in deciding the disposition of at-risk children. In FY 2017, the Coast Guard interdicted 2,512 migrants, of which 100 were unaccompanied children.

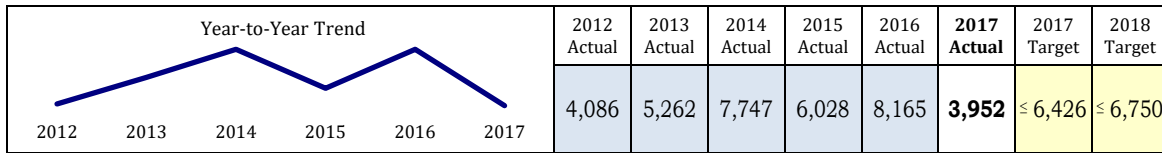
Working with the Department's Blue Campaign and the Federal Law Enforcement Training Center, the Coast Guard has further enhanced its Human Trafficking training program, which is due for release during Fiscal Year 2018. This new training will enable unit self-assessments and provide the oversight needed to ensure competency and compliance with Human Trafficking awareness policy. Opportunities are also being explored to expand this training across additional missions and to 6,000 more Coast Guard members.

### ***FY 2017 Performance Results***

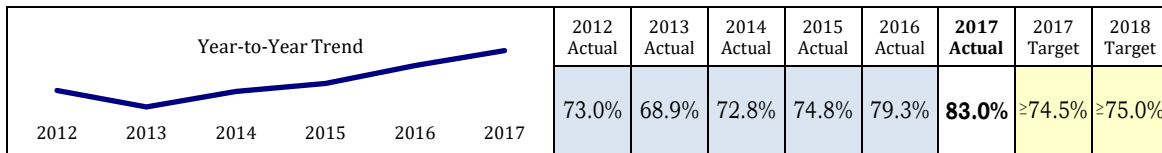
Number of Undocumented Migrants Attempting to Enter U.S. by Maritime Routes



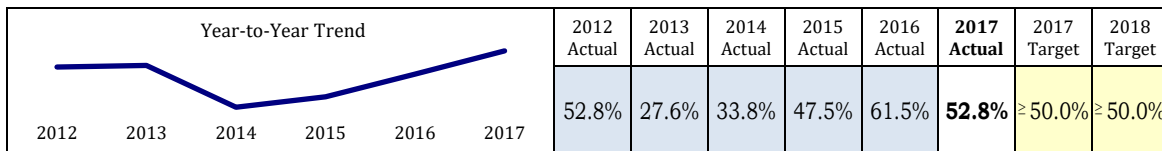
#### Number of Undocumented Migrants Attempting to Enter U.S. by Maritime Routes Interdicted



#### Migrant Interdiction Effectiveness in the Maritime Environment



#### Percent of Undocumented Migrants Attempting to Enter U.S. by Maritime Routes Interdicted by USCG



### Explanation of Results

The total known flow of undocumented migrants attempting to enter the United States by maritime routes decreased from 10,319 in FY 2016 to 4,760 in FY 2017. This decrease is largely attributable to the 71% reduction in Cuban migrant flow in FY 2017 resulting from the termination of the “wet foot, dry foot” policy and establishment of more normal diplomatic relations between the United States and Cuba. Cuban migrants accounted for 44% of the total migrants interdicted in FY 2017, a 27% decrease from FY 2016.

The Coast Guard interdicted 2,512 undocumented migrants this year, with 4,760 interdicted in total by the Coast Guard and its agency partners. This equates to 83% of the total known flow, the highest rate of effectiveness since FY 2009, when 84.4% were interdicted.

In FY 2017, the Coast Guard unilaterally interdicted 52.8% of undocumented maritime migrants, a rate higher than the 50% target, and the second highest ever-recorded rate of interdiction by the Coast Guard. This success is largely due to the Coast Guard effectively leveraging bilateral agreements for interdiction and disposition with countries like the Bahamas, Dominican Republic, Cuba, and Haiti. Likewise, interagency cooperation through Maritime Operational Threat Response (MOTR) standing concurrences has allowed for expedited disposition and afforded Coast Guard assets more time for interdiction efforts.

## ILLEGAL DRUG INTERDICTION

The Drug Interdiction mission supports national and international strategies to deter and disrupt the market for illegal drugs, dismantle Transnational Organized Crime and Drug Trafficking Organizations, and prevent transnational threats from reaching U.S. waters. The Coast Guard is the lead federal agency for drug interdiction on the high seas. In the territorial seas, the Coast Guard shares the lead with Customs and Border Protection and receives assistance from numerous other federal, state, local, and tribal agencies. The Coast Guard strategy is to maintain a strong interdiction presence that denies smugglers access to maritime routes and deters trafficking activity; to strengthen ties with source and transit zone nations to increase their willingness and ability to reduce the production and trafficking of illicit drugs within and beyond their sovereign boundaries; and to support interagency and international efforts to combat drug smuggling through increased cooperation and coordination.



Members of Coast Guard Cutter Stratton, homeported in Alameda, CA, pose alongside Attorney General Jeff Sessions and Admiral Paul Zukunft during the offload of over 50,000 pounds of cocaine in San Diego, CA on September 20, 2017. (U.S. Coast Guard photo.)

### ***FY 2017 Performance Highlights***

- Removed over 223.8 metric tons of cocaine, 31,190 pounds of marijuana, 6 kilograms of heroin and other opiates, and 168 kilograms of methamphetamines worth an estimated \$6.6 billion in wholesale value.
- Detained 708 suspected smugglers for prosecution in the United States or partner nations.

### ***Success Stories***

**Coast Guard Achieves Record Cocaine Removal.** The Coast Guard removed a record 223.8 metric tons of cocaine from the Western Hemisphere Transit Zone. This was a 21% increase from FY 2016. At the same time, 708 suspected smugglers were apprehended, a 30% increase from FY 2016. Additionally, 181 cases involving 606 suspected smugglers were referred to the Department of Justice (DOJ) and DHS partners for prosecution.

Since the 2014 implementation of the Coast Guard's Western Hemisphere strategy, the number of drug smugglers apprehended annually has doubled, with nearly triple the amount of cases referred for federal prosecution. Enhanced evidence collection capabilities, such as document and media exploitation, along with in-depth case package preparation, have greatly enhanced effectiveness.

Specialized training administered in 2017 to more than 40 field units enhanced effectiveness resulted in finely tuned procedures and focused efforts on targeting smugglers and criminal

organizations. In addition to the physical removal of illicit drugs, the larger success is reflected in the increased number of smugglers apprehended and subsequent cases brought to the U.S. for prosecution, both achieving record highs in FY 2017. It starts with stronger evidence collection and case package preparation at the unit level, which allows DOJ and DHS prosecutions that are more aggressive.

The training also facilitated the extraction of timely and actionable intelligence. Department of Justice and Department of Homeland Security investigations, including custodial interviews of



A Coast Guard law enforcement team member inspects a detainee following a drug interdiction. (U.S. Coast Guard photo.)

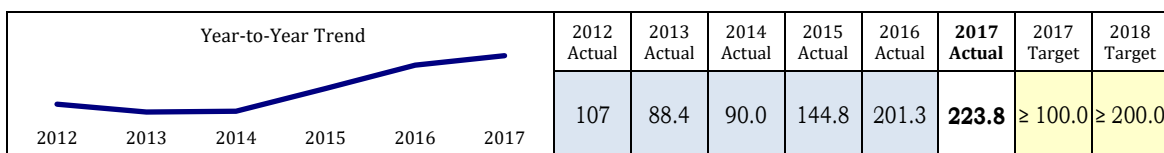
apprehended smugglers and the examination of the evidence collected by Coast Guard boarding teams, have allowed investigators and DOJ prosecutors to identify thousands of drug traffickers. In turn, federal prosecutions have become more targeted to upper echelons of transnational criminal networks. In fact, nearly three-quarters of designated priority drug targets extradited to the United States from South America have been linked to Coast Guard interdictions in the Western Hemisphere Transit Zone, including several high-level drug kingpins extradited who DOJ successfully prosecuted.

Improved intelligence has proven to be a great interdiction and apprehension force-multiplier. It has allowed Joint Interagency Task Force South and others to focus detection and monitoring assets and improve targeting. The result is not only greater amounts of illicit drugs removed, but also correspondingly less funding available to transnational criminal organizations.

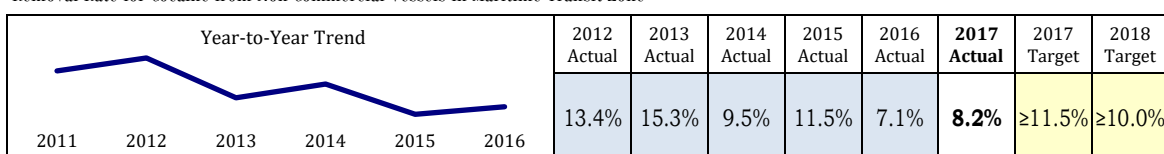
### ***FY 2017 Performance Results***

The Coast Guard is primarily concerned with non-commercial maritime flows of illegal narcotics, and cocaine is by far the most predominant illicit drug conveyed by these sources. Opiates and similar substances move primarily on land or by commercial maritime conveyances whose cargos are regulated by Customs and Border protection. Cocaine removal is therefore used as the basis for reporting Coast Guard drug interdiction performance.

**Metric Tons of Cocaine Removed**



**Removal Rate for Cocaine from Non-Commercial Vessels in Maritime Transit Zone**



## ***Explanation of Results***

The estimated flow of cocaine by non-commercial maritime means declined by 3%; down from 2,833 MT in 2016 to 2,738.4 MT this year. The amount of cocaine removed by the Coast Guard, nevertheless, reached a record total of 223.8 metric tons—the largest quantity of cocaine removed in the history of the Service.

Despite the greater amount of cocaine removed, the Service’s overall removal rate rose only slightly to 8.2%. This was less than the target expectation of 11.5%, which was based on a lower anticipated flow. Two key factors contributed to the higher cocaine flow. Colombian peace talks with insurgent groups resulted in a reduction or cessation of eradication efforts, allowing a surge of cocaine into the transit zone. Second, the quantity of intelligence reporting and information captured in the Consolidated Counter Drug Database improved, providing a better awareness and higher estimate of non-commercial maritime flow of cocaine through the transit zone.



Boarding officers in an interceptor boat from the U.S. Coast Guard Cutter Stratton take suspected smugglers into custody during the boarding of a suspected smuggling vessel in international waters in the drug transit zone of the Eastern Pacific Ocean, Feb. 23, 2017. The Stratton seized a total of 3,700 pounds of cocaine during this counter-smuggling patrol. (U.S. Coast Guard photo by Petty Officer First Class Mark Barney)

## LIVING MARINE RESOURCES LAW ENFORCEMENT

Living Marine Resources (LMR) Law Enforcement is a Coast Guard mission authorized under the Magnuson-Stevens Fishery Conservation and Management Act, the Endangered Species Act, and several other federal laws. The core objective of these authorities is to provide effective and professional enforcement to advance national goals for the conservation, management, and long-term sustainability of living marine resources, marine protected species, and national marine sanctuaries and monuments. Coast Guard efforts include enforcement of LMR laws and regulations, as well as numerous other activities that strengthen both domestic and international fisheries management regimes.



The crew of the Coast Guard Cutter Crocodile assisting entangled leatherback turtle. (U.S. Coast Guard photo.)

### ***FY 2017 Performance Highlights***

- Boarded 5,518 U.S. vessels.
- Issued 158 significant fishery violations. (Significant violations are defined as domestic LMR violations that result in one or more of the following conditions: significant damage / impact to the resource or fisheries management plan; significant monetary advantage to the violator over a competitor; high regional or national interest.)
- Supported 66 requests to assist with stranded, distressed, or entangled animals protected by Endangered Species or Marine Mammal Protection Acts.

### ***Success Stories***

**Protecting Atlantic Striped Bass Migration.** Atlantic Striped Bass make seasonal migrations ranging from North Carolina to Nova Scotia. The fishery is limited to state waters; but many commercial and recreational fishermen were found targeting the species in the Federal Exclusive Economic Zone (EEZ).

To combat this problem, the Coast Guard's First District increased its enforcement efforts through the implementation of Operation Striper Striker. Boat Stations Montauk and New London successfully led the way with the issuance of 15 violations for fishing or possessing Atlantic Striped Bass outside state waters.

The strong enforcement effort was a great success. It helped protect a valuable living marine resource by educating recreational fisherman on regulations for this fishery, penalizing violators, and dissuading further illegal fishing practices.

**Coast Guard Shields Protected Species.** Coast Guard assets responded to 66 Federal and State Marine Protected Species Conservation assistance requests in FY 2017. Requests included

monitoring safety zones, providing assistance for stranding and entanglement situations, and providing transportation for the release of rehabilitated animals.

In June, Coast Guard Cutter Crocodile located and recovered a leatherback turtle entangled in fishing nets. The crew transferred this vulnerable species to Station Cape May, where it was retrieved by the Marine Stranded Mammal Center.

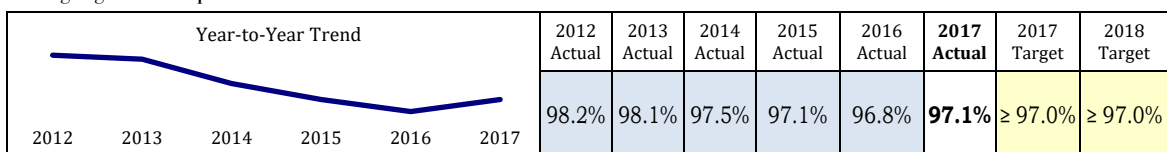
In August, Coast Guard Cutter Joshua Appleby partnered with Sea World and NOAA to transport a female short-finned pilot whale 140 miles west of Clearwater, FL for release. Prior to its release, the whale had beached in Dixie County, FL and was rescued by teams from the University of Florida and Clearwater Marine Aquarium.

Fifteen North Atlantic Right Whale mortalities were identified along the Atlantic coast during the year, and these combined with a low reproductive rate raised concerns about declining population size. The occurrences heightened attention and raised calls for action; and the U.S. declared an “Unusual Mortality Event” under the Marine Mammal Protection Act. At least four of the mortalities showed indications of vessel strikes, and the Coast Guard responded by strengthening enforcement of NOAA’s North Atlantic Right Whale Ship Strike Reduction Final Rule. Canada took similar action, implementing an emergency speed restriction in the Gulf of St. Lawrence.

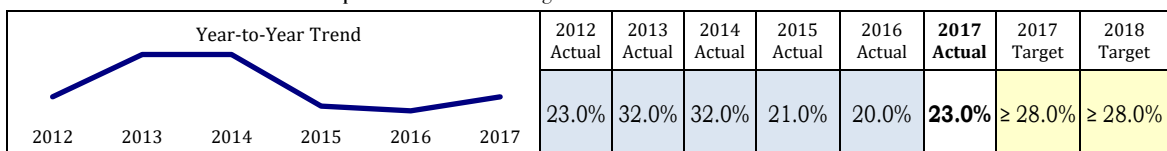
In total, the Coast Guard generated seventeen Right Whale case packages in 2017 for excessive speed with respect to the Ship Strike Reduction Rule.

### ***FY 2017 Performance Results***

#### **Fishing Regulation Compliance Rate**



#### **Percent of Federal Fisheries Found in Compliance with Laws and Regulations**



### ***Explanation of Results***

The Coast Guard uses the percentage of fishing vessels observed at sea complying with domestic regulations as an indirect measure of the Coast Guard’s impact on the health and well-being of U.S. fisheries and marine protected species. During FY 2017, the Coast Guard conducted 5,518 domestic LMR enforcement boardings, resulting in 158 significant violations. Compared to the prior year, in FY 2017 there was an approximately 20% increase in boardings and an increase of 11 significant violations detected. The Coast Guard met its performance goal for FY 2017 with an Observed

Compliance Rate of 97.1%. The Coast Guard used limited resources to conduct effective boardings, in large part due to improved intelligence and more focused outreach and education.

The percent of federal fisheries found in compliance with laws and regulations provides a measure of the Coast Guard's level of effective enforcement. It is a measure of the percentage of fisheries in which the Coast Guard met its boarding standard and found an adequate level of compliance (the standard is to board 20% of vessels in high precedence fisheries; and 10% in low precedence fisheries). The Coast Guard met its combined boarding and compliance standards in only 23% of the 202 fishery components for which we have an enforcement obligation. This is a 3% improvement over last year, but below the target rate of 28% due to constrained asset hours and correspondingly fewer boardings.



The crew of the Coast Guard Cutter Joshua Appleby transport a whale to safety. (U.S. Coast Guard photo.)

## OTHER LAW ENFORCEMENT

Protecting the United States' 3.4 million square nautical miles Exclusive Economic Zone (EEZ) is a fundamental Coast Guard maritime security objective. The Coast Guard Other Law Enforcement (OLE) mission protects the U.S. EEZ from encroachments by foreign fishing vessels and enforces regulations and agreements to curtail "Illegal, Unreported, and Unregulated" fishing. OLE mission responsibilities include the deterrence, detection, and interdiction of illegal foreign fishing vessel incursions, which represent a threat to our Nation's renewable natural resources and a violation to U.S. sovereignty. The OLE mission also ensures compliance



Japanese Fishing Vessel Take Maru. (U.S. Coast Guard photo.)

with international agreements for the management of living marine resources. This is accomplished through enforcement of conservation and management measures created by Regional Fishery Management Organizations. The Coast Guard also helps build organic, OLE enforcement capacity within partner nations for resource management and commercial fishery regulations. These partnerships serve as force multipliers, helping to monitor compliance with various international agreements and deter illegal, unreported and unregulated fishing activity worldwide.

### ***FY 2017 Performance Highlights***

- Detected 136 vessel incursions in the U.S. Exclusive Economic Zone.
- Interdicted 31 vessels in the U.S. Exclusive Economic Zone.
- Boarded 86 foreign vessels to suppress illegal, unreported, and unregulated fishing on the high seas and in the Exclusive Economic Zones.

### ***Success Stories***

**Coast Guard OLE Collaboration with Russia.** Early in FY 2017, the Coast Guard received notification from the Russian Border Guard Directorate of an unknown vessel within the Russian EEZ, which was associated with Illegal, Unreported, and Unregulated fishing activities. Coast Guard District Seventeen, in coordination with the Russian Border Guard, deployed a Coast Guard C-130 plane to intercept the suspicious vessel.



Motor Vessel Virile. (U.S. Coast Guard photo.)

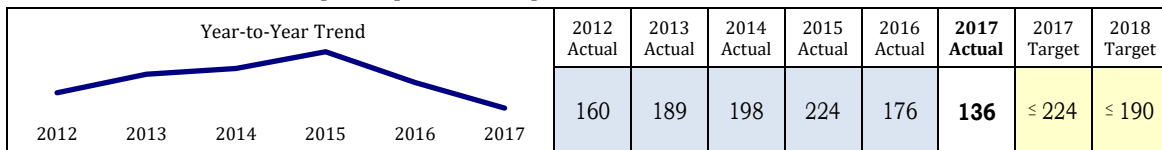
The Coast Guard passed sighting information to Russian enforcement officials and patrol resources. The illegal transshipment vessel Virile was seized by the Russian Border Guard Directorate, resulting in 30 tons of illegal live Blue King Crab (worth approximately \$1.6 million)

being released back into the ocean. An administrative case was brought against the master, and the vessel was confiscated under a court decision. The parent company, North Cargo Services, was also fined \$468,000.

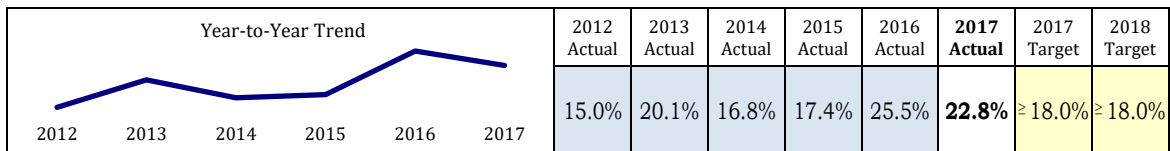
The case highlighted the multi-national dimension of the fight against Illegal, Unreported, and Unregulated fishing and the need for increased communication and coordination between the U.S., Russia, and other partners. The Coast Guard continued to employ a full range of capabilities; including patrols and enforcement by its cutters and aircraft; engagement in Regional Fishery Management Organizations; and ship rider and bilateral agreements that support partner-nation enforcement.

### ***FY 2017 Performance Results***

Number of Detected Incursions of Foreign Fishing Vessels Violating U.S. Waters



Interdiction Rate of Foreign Fishing Vessels Violating U.S. Waters



### ***Explanation of Results***

In FY 2017, there were 136 detected incursions of foreign fishing vessels in U.S. waters, a decrease from 176 detected incursions in FY 2016. Coast Guard units interdicted 31 of these, resulting in an interdiction rate of 22.8%, slightly less than the 25.5% in FY 2016.

Nearly 99% of the documented incursions in FY 2017 were Mexican lanchas located in the Gulf of Mexico. Lanchas are small, usually 20-25 feet in length, open fishing vessels with an outboard engine. Lancha crews typically fish with small gillnets or longlines. These vessels normally deploy fishing gear in the U.S. EEZ, then return to Mexican waters until they are ready to retrieve their gear. Their small size, low profile, and homemade floats make incursions difficult to detect.

The other 1% of documented incursions in FY 2017 were four incursions detected along the U.S.-Russia Maritime Boundary Line. No incursions were detected in the Western and Central Pacific. The Western and Central Pacific region is extremely remote, so it is difficult to detect potential incursions and even more difficult to respond in a timely manner. However, tuna fisheries are present in these waters, and they are among the most valuable pelagic fisheries in the world.

# MARITIME PREVENTION

The Maritime Prevention Program prevents personnel casualties and property losses, minimizes security risks, and protects the marine environment. The Coast Guard develops and enforces Federal marine safety, security, and environmental regulations. It reviews and approves vessel and maritime facility security plans, conducts security and safety inspections, and enforces Transportation Worker Identification Credential (TWIC) regulations. The program conducts domestic and international port security assessments, analyzes maritime security risk nationwide to identify high-risk targets and support risk reduction measures, and supports administration of port security grant funding. The program periodically reviews the effectiveness of anti-terrorism measures in foreign ports by conducting assessments of those ports to determine compliance with the International Maritime Organization's (IMO) International Ship and Port Facility Security (ISPS) Code, and requires vessels arriving in the United States from ports with inadequate anti-terrorism measures to take additional security precautions. The Coast Guard develops and applies design, construction, and equipment standards for vessels; conducts compulsory, as well as voluntary vessel exams and inspections; certifies and licenses U.S. mariners; and promotes best practices by investigating marine casualties and sharing its findings. It provides grants to States to improve recreational boating safety, and supports a variety of government and non-government boating safety initiatives in partnership with other Federal agencies, state, local, and tribal governments, marine industries and associations, including the Coast Guard Auxiliary. The Coast Guard also maintains strong leadership roles in many international maritime organizations, contributing shared inspection techniques and best practices.

## PORTS, WATERWAYS AND COASTAL SECURITY—PREVENTION ACTIVITIES

The focus of the Coast Guard's Ports, Waterways and Coastal Security—Prevention Activities is to prevent security incidents, including terrorist attacks, sabotage, espionage, or subversive acts in the maritime domain, upon the global supply chain or to the U.S. marine transportation system. It also seeks to improve security in the world's ports and thus reduce risk to the United States.

The Coast Guard strives to deny terrorists the ability to use or exploit the maritime domain or marine transportation system as a means for attacks on our territory, population centers, vessels and maritime critical infrastructure and key resources. The mission requires intelligence support, establishment and oversight of maritime security regimes, employment of maritime domain awareness activities, and initiatives that enhance the resilience of the Marine Transportation System (MTS), maritime critical infrastructure, and key resources. To do so, the Coast Guard employs a layered and collaborative strategy that relies upon the cooperation of U.S. citizens, and governmental, private sector, and international partners.



Coast Guard personnel participate in multi-agency strike force operations. (Photo by U.S. Coast Guard Petty officer Third Class Johanna Strickland.)

## ***FY 2017 Performance Highlights***

- Completed over 5,300 security-related inspections at Maritime Transportation Security Act (MTSA) regulated facilities.
- Completed over 8,600 International Ship and Port Facility Security (ISPS) exams.
- Completed International Port Security Program assessment visits to over 150 port facilities in more than 50 countries and conducted over 30 capacity building activities in 16 countries.
- Considered over 40,000 potential targets and assessed more than 151,000 scenarios using the Maritime Security Risk Analysis Model (MSRAM).

## ***Success Stories***

**Alternative Security Program Workshop Conducted.** Representatives from 11 Alternative Security Program Organizations met in Washington, DC in June 2017 to discuss ongoing and



Captain Ryan Manning and Ms. Betty McMenemy discuss maritime security topics. (Photo courtesy of Jen Wilk, Passenger Vessel Association.)

emergent MTSA issues. MTSA protects our maritime industry and critical infrastructure and implements provisions of the International Ship and Port Facility Security Code. It ensures our shores and waterways are open, safe, and secure by requiring vessel and port facility vulnerability assessments and security plans, which may necessitate passenger, vehicle, and baggage screening; personnel identification procedures; restricted areas; access control measures; security patrols; or surveillance equipment.

Alternative Security Programs provide a collaborative approach to compliance with MTSA for groups of similar vessels or facilities. Members operating under Alternative Security Programs do not have to submit individual vessel or facility security plans. They must complete a vulnerability assessment and demonstrate they are a “member in good standing” of an approved sponsoring organization before being recognized as such by the Coast Guard. Approved Alternative Compliance Program Organizations include vessel operators such as the Lake Carriers Association, Passenger Vessel Association, and American Waterways Operators; and maritime facility operators such as Washington State Ferries and American Chemistry Council members.

The Coast Guard’s Assistant Commandant for Prevention Policy opened the Alternative Compliance Program workshop by welcoming attendees and thanking them for their ongoing efforts to ensure a safe and secure marine transportation system. A robust agenda of briefings followed, including a presentation on upcoming changes to TWIC and TSA Pre-Check programs by the Transportation Security Administration. Topics covered by Coast Guard Headquarters staff included breach of security and situational awareness reporting requirements; the Chemical Facility Anti-Terrorism Standards and the Policy Advisory Council registry; unmanned aircraft systems; and MTSA compliance deficiencies identified during Coast Guard inspections. Open discussion

sessions in the afternoon allowed all attendees an opportunity to ask questions and share best practices and lessons learned. The workshop was a very useful and productive event. “Every opportunity we have to meet with large industry groups, to listen to their issues and address areas of concern, is certainly beneficial,” said the Chief of the Office of Port and Facility Compliance.

**Coast Guard Partners with Mexico to Strengthen Port Safety and Security.** The Coast Guard sent several senior members with Captain of the Port expertise to Mexico following their restructuring of maritime security responsibilities earlier this year.



Mexican Navy and U.S. Coast Guard representatives inspect cargo for liquid cocaine and explosives. (U.S. Coast Guard photo.)

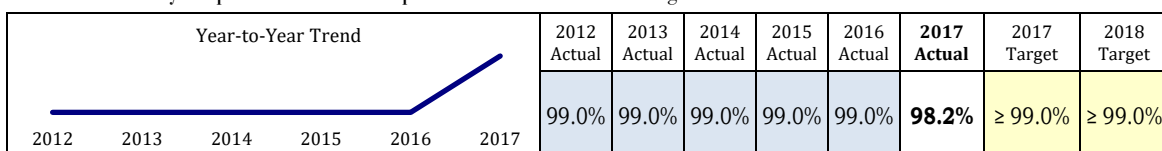
Mexico’s Senate approved reforms in 2016 allowing the Navy—La Secretaría de Marina (SEMAR)—to assume all security functions of the country’s ports and coasts. (The Navy controlled the ports from 1821 until 1977, when Mexican President José López Portillo reformed the Organic Law of Public Federal Administration, which put the Secretariat of Communications and Transportation in charge.) The new reconfiguration is expected to reinforce security in Mexico’s ports and along its coasts.

In addition to maritime and port security, SEMAR will also authorize the arrival and departure of vessels, and inspect and certify Mexican and foreign vessels. SEMAR established the General Directorate for Captain of the Port Offices and Maritime Affairs to carry out these responsibilities and develop additional Mexican Coast Guard functions in 117 ports throughout Mexico.

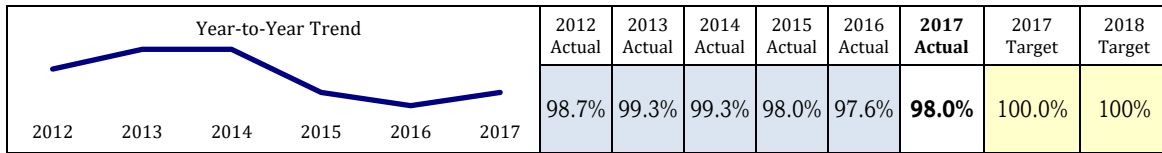
The U.S. Coast Guard has provided Mexico a model for much of their regulatory oversight program; and the Mexican Government has looked to us for specific help to address sub-standard conditions of its 363 offshore platforms and floating hotels. The U.S. Coast Guard will work with SEMAR to develop marine safety training programs, implement inspection and marine casualty investigation regimes, expand maritime domain awareness capabilities, and establish port reconstitution and incident response protocols—including Search and Rescue. The U.S. Coast Guard International Port Security Program will also continue to provide expertise and transition assistance to ensure port security remains a high priority.

## ***FY 2017 Performance Results***

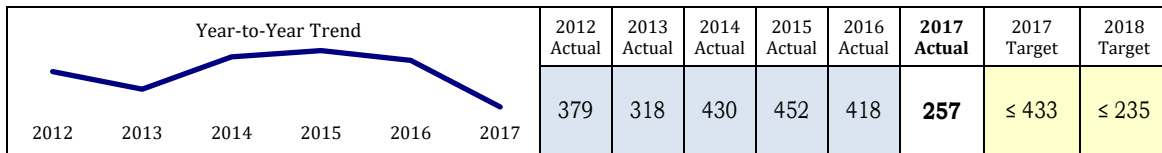
Annual MTSA Facility Compliance Rate with Transportation Worker ID Credential Regulations



#### Security Compliance Rate for High Risk Maritime Facilities



#### Annual Number of Breaches at High Risk Maritime Facilities



### *Explanation of Results*

In FY 2017, the Coast Guard conducted over 5,300 MTSA-related inspections, finding only 19 instances of non-compliance with TWIC regulations. This resulted in a 98.2% compliance rate, slightly less than the 99.0% target.

In FY 2017, the Coast Guard found 68 of the approximately 3,400 high-risk maritime facilities not in compliance with MTSA regulations, a 98.0% compliance rate. FY 2016's compliance rate was 97.6%, when 83 MTSA-regulated facilities were found not in compliance.

In FY 2017 there were 257 verified breaches of security recorded across the community of 172 MTSA regulated waterfront facilities. This number is significantly better than the 418 reported last year and the established target expectation of 433. Since 2014, the percentage of MTSA facilities that did not report a breach of security has remained at 95% or greater. (Note. A breach is defined as an established security measure having been circumvented, eluded, or violated. None of the breaches reported in 2017 resulted in a Transportation Security Incident, which are security incidents that result in significant loss of life, environmental damage, or transportation system or economic disruption.)

## MARINE SAFETY

The Coast Guard's Marine Safety mission is to prevent death, injury, and property loss in the U.S. Maritime Domain. Marine Safety responsibilities include ensuring the safe and environmentally sound operation of millions of recreational vessels and thousands of U.S. flagged commercial vessels wherever they are in the world, as well as exercising Port State Control for foreign vessels operating in U.S. waters. The Coast Guard develops and enforces federal marine safety regulations, certifies and provides credentials to over 218,000 mariners, administers the approval program for marine safety equipment and materials, investigates commercial marine casualties and shares its findings, conducts compulsory inspections, and utilizes the Coast Guard Auxiliary to conduct voluntary safety exams.



U.S. Coast Guard Marine Inspector prepares to survey a Mobile Offshore Drilling Unit. (U.S. Coast Guard photo.)

### ***FY 2017 Performance Highlights***

- Conducted over 41,800 recreational vessel boardings.
- Conducted over 2,500 recreational boat manufacturer compliance inspections.
- Conducted over 39,000 vessel inspections and 16,000 facility inspections; and initiated over 4,900 enforcement actions for violations of marine safety laws and regulations.
- Completed over 9,100 Port State Control safety examinations of foreign vessels, resulting in 75 operational control restrictions reportable to the International Maritime Organization.
- Conducted more than 3,300 incident investigations, after having initiated more than 18,600 preliminary investigations; and partnered with the National Transportation Safety Board (NTSB) in the investigation of 27 major marine casualties or marine casualties involving a public vessel.
- Conducted over 590 personnel investigations of credentialed mariners for actionable misconduct, illegal drug use, incompetence, negligence, or violations of marine safety laws and regulations.

### ***Success Stories***

**Marine Safety Center Engineers Respond to Massive Hurricane Damage.** The Marine Safety Center's Salvage Engineering Response Team (SERT) deployed seven Coast Guard Salvage Engineers in support of recovery operations in the aftermath of Hurricanes Harvey, Irma, and Maria. The SERT provided more than 1,600 person-hours of specialized technical expertise. Specifically, the SERT assisted Captains of the Port, Federal On-Scene Coordinators, and Emergency Support Function 10 Unified Commands in Florida, Puerto Rico, and the Virgin Islands in triaging vessel recovery operations and evaluating thousands of identified pollution targets. In

prioritizing response efforts, the SERT evaluated the technical complexity and potential impact of each situation on sensitive marine sanctuaries and commerce.

Notably, the Hurricane Harvey wreckage of Southwest Shipyard Dry Dock No. 3 and the Paragon DPDS1 Drill Ship were significant cases that occurred in critical deep-draft waterways. The Port of Houston was impacted by the wreckage of the Southwest Shipyard Dry Dock No. 3, and the Port



Coast Guard SERT Salvage Engineer LT Will Cotta and a local Coast Guard Marine Inspector oversee recovery operations for the Southwest Shipyards Dry Dock in support of Hurricane Harvey recovery operations in Houston, TX. (U.S. Coast Guard photo.)

of Corpus Christi was affected by the wreckage of the Paragon DPDS1 Drill Ship.

The wrecks presented a risk of release of thousands of metric tons of oil and posed serious hazards to maritime navigation; and, based on the *2015 State of Texas Comptroller's Economic Impact Reports for the Ports of Corpus Christi and Houston*, disrupted upwards of \$421 million of commerce per day.

The SERT's expert technical oversight and assistance resulted in the safe recovery of these vessels and the expeditious restoration of the ports.

**Coast Guard Auxiliary Hurricane Efforts.** The Coast Guard Auxiliary provided invaluable assistance, across the full gamut of mission activities, for the Service's 2017 hurricane response efforts. Within the first five weeks of response operations, the Auxiliary logged more than 11,500 hours of direct mission support.

Members of the Auxiliary joined the Hurricane Harvey Crisis Action Team to monitor and coordinate the availability of their personnel and facilities engaged in recovery missions. Their members also provided vital command center watchstanding and communications support at Incident Command Posts.

The Coast Guard Auxiliary helped coordinate surface and air rescues, performed surface and air sorties in support of transportation, evacuation, and rescue missions, and provided photographic imagery to support Coast Guard public affairs activities.



Staging area for Hurricane Harvey. (U.S. Coast Guard photo.)

**Coast Guard Investigations of USS Fitzgerald and USS John S. McCain.** The Coast Guard led independent marine casualty investigations into the tragic Fitzgerald and McCain incidents on behalf of the NTSB. Two Coast Guard teams, consisting of members from the Investigation National Center of Expertise and District Fourteen, carried out the investigations. The investigations required collaboration with U.S. Navy investigators, and with multiple foreign maritime authorities, vessel owners, and other stakeholders. The Coast Guard was well suited to lead these investigations given its maritime expertise and its relationships with the U.S. Navy and Japanese and Singapore authorities. Additionally, the Coast Guard has trained investigators stationed in Japan as part of Coast Guard Activities Far East.

**Establishment of E-Zero Program.** In April 2017, the Coast Guard announced a new program, *Zero Environmental Deficiencies or Violations*, or E-Zero. Ships having earned the E-Zero designation are provided greater flexibility to conduct cargo operations immediately upon arrival—vice waiting for Coast Guard inspectors. The E-Zero Program builds upon the legacy QUALSHIP 21 compliance program, by recognizing ships committed to achieving the highest degree of environmental compliance. Ships must be enrolled in QUALSHIP 21 for at least three years, have *zero* pollution related detentions worldwide, *zero* environmental deficiencies or violations within the past three years, *zero* violations of regulations protecting North American Right Whales, and must be in *full compliance* with U.S. ballast water regulations.

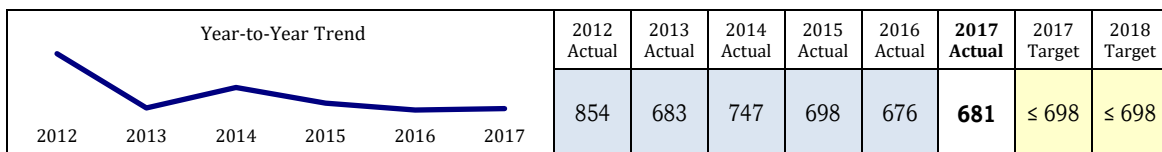
The Coast Guard began screening and enrolling ships in the program in April. To date, 42 ships have earned the E-Zero designation. The number is expected to increase dramatically as more companies learn about the program, just as the QUALSHIP 21 Program grew from 400 ships enrolled in 2002 to more than 1,800 ships enrolled today. The E-Zero designation signifies the immense environmental commitment demonstrated by certain ships and their respective companies. E-Zero will promote greater safety and environmentally sound operations in U.S. waters.



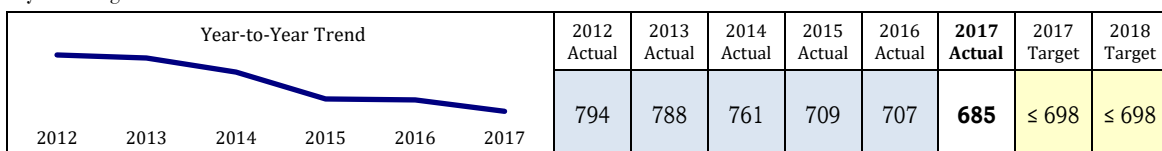
QUALSHIP Certificate. (U.S. Coast Guard photo.)

## FY 2017 Performance Results

### Annual Number of Serious Marine Incidents



### 3-year Average Number of Serious Marine Incidents



#### Annual Number of Commercial Mariner Deaths and Critical, Serious & Severe Injuries

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		162	161	161	138	136	82	≤ 148	≤ 148

#### 3-year Average Number of Commercial Mariner Deaths and Critical, Serious & Severe Injuries

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		172	172	161	153	145	119	≤ 142	≤ 133

#### Annual Number of Commercial Passenger Deaths and Critical, Serious & Severe Injuries

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		184	157	140	127	98	65	≤ 173	≤ 173

#### 3-year Average Number of Commercial Passenger Deaths and Critical, Serious & Severe Injuries

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		145	162	160	141	122	97	≤ 172	≤ 134

#### Annual Number of Recreational Boating Deaths

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		674	559	597	613	701	657	NEW	NEW

#### 3-year Average Number of Recreational Boating Deaths

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		705	663	610	590	637	657	NEW	NEW

#### Annual Number of Recreational Boating Deaths and Injuries\*

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		3,627	3,243	3,224	3,249	3,502	2,956	≤ 3,382	≤ 3,382

#### 3-year Average Number of Recreational Boating Deaths and Injuries\*

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		3,781	3,588	3,365	3,239	3,325	3,236	≤ 3,583	≤ 3,191

\* In FY 2017, the Coast Guard moved from a five-year average number of recreational boating deaths and injuries to a three-year average, as the shorter period is more reflective of current performance trends. The combined boating deaths and injuries measures will be retired after this year; only boating deaths will be reported in the future.

## ***Explanation of Results***

Some marine casualties are never reported; many casualties are delayed in reaching the Coast Guard. Consequently, results for FY 2017 are those reports of casualties recorded to date, numbers are expected to rise as additional reports are received, and published data is therefore subject to revision, with the greatest impact affecting recent quarters.

In FY 2017, there were 681 significant marine incidents, 5 more than last year, though slightly better than the 3-year average of 685. The 3-year average continued its multi-year trend of annual improvement, and the result this year was slightly better than target expectation. (Note. “significant marine incidents” comprise deaths or injuries requiring professional treatment beyond first aid, reportable property damage greater than \$100,000, actual or constructive loss of certain vessels, discharge of oil of 10,000 gallons or more, or a discharge of a reportable quantity of a hazardous substance.)

In FY 2017, there were 20 deaths and 62 critical, serious, or severe injuries of commercial mariners recorded. These statistics are significantly better than previous years, even considering the likely future upward revision. The 3-year average reflected the improvement; the average of 97 deaths was well below the target expectation of 148. Fishing vessels and towing vessels and barges account for approximately two-thirds of mariner casualties. Towing vessels and barges showed the greatest reduction in personnel casualties of all vessel groups.

In FY 2017, there were 14 deaths and 51 critical, serious, or severe injuries of commercial passengers. These statistics are substantially better than what was expected when targets were established and contributed to a corresponding decline in the 3-year average, which improved from a revised 122 in FY 2016 to 97 this year, a much better result than anticipated when the FY 2017 target of 172 was established.

In FY 2017, there were 657 reported boating deaths versus 701 the year before, and the 2,299 reported injuries were significantly fewer than the 2,801 recorded in FY 2016. The combined number of boating deaths and injuries in FY 2017 was 2,956, compared to 3,502 in FY 2016, a nearly 16% improvement and better than target expectations. Favorable annual results produced a corresponding improvement in the 3-year average, which improved from 3,325 in FY 2016 to 3,236 this year; again, this average was better than the target expectation. In FY 2017, the Office of Auxiliary and Boating Safety moved from a 5-year to a 3-year average, to better reflect the impact of more recent performance trends.

The combined boating deaths and injuries measure will be retired after this year, with only the number of deaths reported in the future. The change recognizes that many boating injuries go unreported, and there is limited ability to distinguish the severity of injuries reported. Target expectations have not yet been established for boating deaths.

## MARINE ENVIRONMENTAL PROTECTION—PREVENTION ACTIVITIES

The Marine Environmental Protection-Prevention mission maintains a multitude of objectives: to preserve precious natural resources by regulating the handling of oil, hazardous substances, and other shipboard wastes; to prevent illegal discharges and dumping into U.S. and international waters; to reduce ship-based air emissions; and to avert the introduction of invasive species. The Coast Guard develops regulations and operating standards for



Coast Guard offshore rig inspection. (U.S. Coast Guard photo.)

domestic vessels and marine facilities and advocates for responsible environmental and operational standards at the International Maritime Organization and the International Organization for Standardization. The Coast Guard enforces standards by conducting vessel examinations and inspections, performing inspections and spot-checks of waterfront facilities, and conducting criminal investigations into violations. Transfer monitoring activities are also performed to ensure vessels and facilities engaged in the movement of oil, hazardous materials, and explosives have implemented required safeguards. Finally, containers used in the transport of hazardous materials are examined to ensure structural integrity is sufficient to withstand global transport and to assess if hazardous materials are packaged, labeled, and declared properly.

### *FY 2017 Performance Highlights*

- Completed over 25,000 container inspections for compliance with structural and hazardous materials regulations.
- Ensured compliance with environmental protection regulations and operating procedures by monitoring over 1,000 transfers of oil, hazardous substances, or explosives.
- Conducted over 1,400 examinations of marine pollution waste reception facilities to ensure adequate services provided for discharging oily waste, noxious liquid substances, and garbage.

### *Success Stories*

**Carnival-Princess Cruise Lines Environmental Crimes Case.** In the spring of 2017, Princess Cruise Lines, a subsidiary of Carnival Cruise Lines, was sentenced to pay a \$40 million fine, the largest ever awarded for crimes involving deliberate vessel pollution.

The Coast Guard investigation leading up to Carnival-Princess Cruise Lines' convictions and sentence uncovered false record keeping and approximately eight different methods of discharging oily waste. The company's practices dated as far back as 2005. The methods of discharge gradually matured so that by 2013, fixed piping was installed to minimize efforts needed to bypass the vessel's oil water separator. Investigators also uncovered illegal practices aboard four other Princess ships—the Star Princess, Grand Princess, Coral Princess, and Golden Princess.

Princess Cruise Lines was the sole defendant in the case and pleaded guilty to seven counts of three violations. As a part of the plea agreement, 78 of the 101 vessels in the Carnival fleet will be subject to a court supervised environmental compliance program for a five-year probationary period. The compliance program will require Princess Cruise Lines to develop long-term environmental management plans and to complete independent audits.

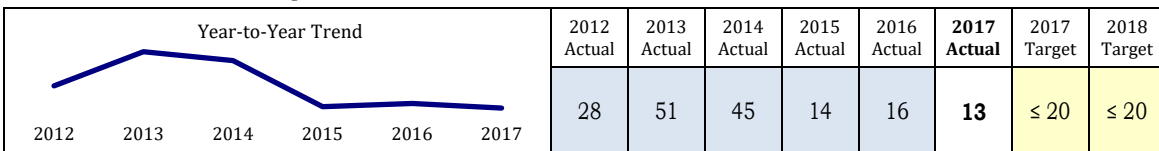


Cruise Ship Carnival Princess' engine room showing equipment used by the crew to bypass the vessel's oil water separator. (U.S. Coast Guard photo.)

Inspections, investigations, and prosecutions prove necessary whenever voluntary compliance falters and public safety, security, and environmental stewardship are put at risk. The Carnival Princess case illustrates how the Coast Guard is able to leverage both its skilled personnel and its intergovernmental relationships. DOJ's successful prosecution required a diverse suite of skills, including Coast Guard inspectors, investigators, pollution responders, Coast Guard Investigative Service special agents, Marine Safety Lab, and judge advocates.

### ***FY 2017 Performance Results***

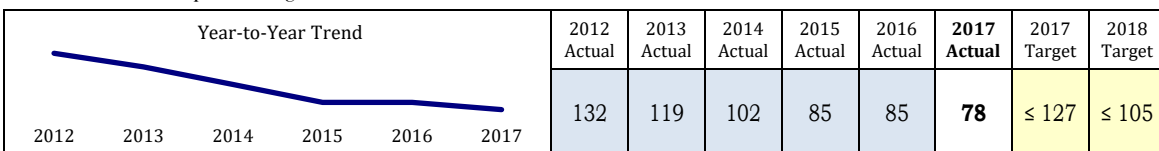
#### **Annual Number of Chemical Discharge Incidents**



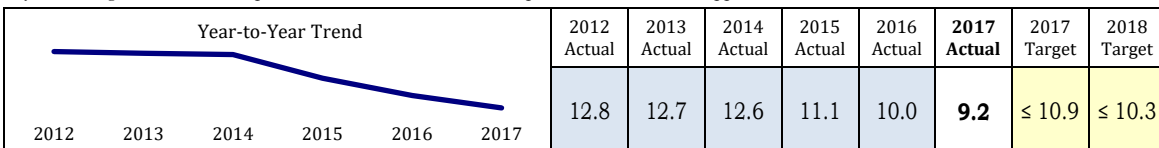
#### **3-year Average Number of Chemical Discharge Incidents in the Maritime Environment per 100 million tons shipped**



#### **Annual Number of Oil Spills >100 gallons**



#### **3-year Average Number of Oil Spills in the Maritime Environment per 100 million tons shipped**



### ***Explanation of Results***

In FY 2017, the Coast Guard recorded only 13 hazardous chemical discharge incidents. This number is substantially less than the target expectation of 20. Unlike FY 2016, when marine facilities, mobile offshore drilling units, and offshore service vessels accounted for two-thirds of reportable chemical spills, in FY 2017 over half of the reportable chemical spills came from fishing vessels, towing vessels and barges, and other vessels. The three-year average number of chemical discharge incidents per 100 million short tons of chemical and chemical products shipped correspondingly declined to 8.0; a 42% improvement over the revised 2016 average of 13.8 spills per 100 million short tons shipped.

In FY 2017, there were 78 oil spills greater than 100 gallons, a modest improvement from 85 in 2016, and a continuation of the five-year downward trend. The three-year average number of oil spills per 100 million short tons of oil and oil products shipped was 9.2, a slight improvement over the revised 2016 rate of 10.0. Both met established target expectations. Fishing vessels and marine facilities accounted for over half of oil spills greater than 100 gallons. Towing vessels and their barges have declined significantly as a source of oil spills.

## COMMERCIAL REGULATIONS AND STANDARDS

The Coast Guard's Regulatory Development Program provides enforceable policies and requirements applicable to the maritime industry. Statutes, international agreements, changes in technology, and lessons learned from marine accidents are driving forces. Project management methodologies and ISO 9000 compliant best practices form the basis of the regulatory development process. The goal is timely and cost-effective regulations that balance government, industry, and the public's needs. The Administrative Procedures



Coast Guard and industry working together in preparation for the implementation of inspected towing vessel regulations. (U.S. Coast Guard photo by Petty Officer Second Class Ali Flockerzi.)

Act, various Executive Orders, and other directives require that the Coast Guard show that the benefits of proposed actions exceed costs or costs are minimized for statutory mandates; impacts to small businesses or other entities are mitigated; and environmental impacts are characterized. All of these requirements are also subject to public comment before regulations are implemented. The Regulatory Development Program is also a key mechanism for outreach and engagement with the regulated public, industry, and international partners.

### ***FY 2017 Performance Highlights***

- Published six effective rules and four proposed rules.
- Issued over 50,000 Merchant Mariner Credentials and endorsements and over 60,000 mariner medical certificates.
- Reviewed over 14,600 commercial vessel plans for compliance with technical standards for design, construction, alteration and repair, with an average cycle time of 18 days.

### ***Success Stories***

**Streamlined Processes Offer Faster Mariner Credentialing.** In FY 2017, the Coast Guard's Mariner Credentialing Program underwent significant organizational streamlining. Notably, the Coast Guard evaluated and issued over 50,000 Merchant Mariner Certificates in FY 2017, of which more than 20,000 were Standards of Training, Certification, and Watchkeeping endorsements. Less than 1% of these evaluations resulted in an appeal, a 50% improvement; and equally important to mariner satisfaction, the time to complete an appeal was reduced from a 120 day average to just a 50 day-average.

Medical certificate processing also greatly improved in FY 2017. New policy and a more consistent approach to medical evaluations of mariners provided a 30% reduction in processing times. The National Maritime Center evaluated and issued over 60,000 medical certificates, with overall processing times improving from 23 days previously to 16 days.

**Coast Guard Minimizes Effects of Global Position System Spoofing.** Shipboard systems are potential victims of hackers, malware, and other malicious agents. In June 2017, the crew of a vessel transiting the Black Sea noticed their GPS position was off course and positioned the vessel over land. Fortunately, the crew recognized the malfunction and safely navigated the vessel using traditional paper chart methods. Incidents like this are likely to become more prevalent as cyber vulnerabilities are exploited.

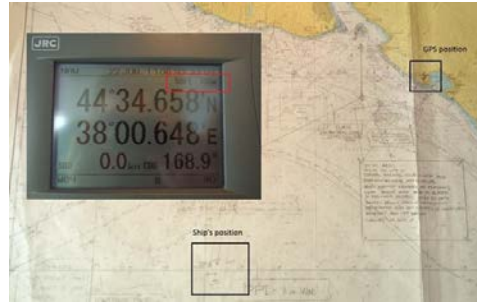


Chart showing GPS disruption placing the vessel's location on land. (U.S. Coast Guard photo.)

The Coast Guard is working diligently with industry partners to promote a culture of cyber risk management, and it is equally engaged with the International Maritime Organization (IMO) to prevent or mitigate cyber vulnerabilities. The Coast Guard's transparent, collaborative leadership at the IMO and other venues has had a significant favorable impact on maritime safety and environmental protection. In FY 2017, the Coast Guard began advocating that Safety Management Systems, systems required for all ships greater than 500 gross tons engaged in trade, should take into account cyber risks.

**Ballast Water Management Compliance and Enforcement.** The International Convention for the Control and Management of Ships Ballast Water and Sediments entered into force on September 8, 2017. The purpose of the Convention is to protect the marine environment from the transfer of harmful aquatic organisms in ballast water carried by ships. According to IMO estimates, ships carry some 3 to 5 billion tons of ballast water globally each year. All ships of 400 gross tonnage and above, to which the Convention applies, are now required to possess an International Ballast Water Management Certificate. For ships engaged in U.S. waters, installation of a Ballast Water Management System is to be approved by the U.S. Coast Guard.

In December 2016, the Coast Guard Marine Safety Center issued the first ever Type Approval Certificates for three Ballast Water Management Systems; and two more were approved in the summer 2017. The five approved systems use three different technologies—ultraviolet light, electrolytic chlorination, and chemical injection. They have a range of treatment capacities to suit vessel pumping rates from 150-16,200 cubic meters per hour. Two additional applications have since been submitted, and more systems are undergoing testing at Coast Guard-accepted Independent Laboratories.

In March 2017, the Coast Guard's Office of Operating and Environmental Standards updated its processes for requesting an extension to the Ballast Water Management compliance date. Vessels with foreign type-approved Ballast Water Management Systems will be required to use them and provide a strategy for coming into compliance, including documenting whether type-approved systems are available for their specific needs. The length of an extension, when granted, will be based on the availability and detailed installation plans for Coast Guard type-approved Ballast Water Management Systems. Further extensions are not to be expected.

# MARITIME RESPONSE

The Coast Guard is the Nation's maritime first responder. It searches for and rescues persons in distress, alleviates human suffering, and mitigates marine casualties and other disastrous events. The Maritime Response program also mitigates pollution and damage to the marine environment through incident response operations. The Coast Guard's all-threats and all-hazards preparedness efforts ensure incident response and recovery resources are fully ready and capable of scalable mobilization in coordination with, and in support of, local, state, tribal, federal, and private sector partners. Additionally, the Coast Guard provides these same services in support of U.S. interests during international incidents.

## SEARCH AND RESCUE

The Coast Guard is the lead agency for maritime Search and Rescue (SAR) in U.S. waters. The



Coast Guard Flood Punt Teams conduct rescue operations in Jacksonville, FL, September 11, 2017. (U.S. Coast Guard photo.)

Coast Guard also works with other nations through the International Maritime Organization, International Civil Aviation Organization, and other regional forums to save lives and advance the SAR system both nationally and globally. The Coast Guard strives to alleviate human suffering and minimize loss of life and property by rendering aid to those in distress in the maritime environment and elsewhere when Coast Guard intervention can influence the outcome of life-threatening incidents. The Coast Guard maintains a high state of vigilant readiness and continuous distress monitoring, and

it employs sophisticated drift modeling and search optimization tools to improve SAR planning and execution. When someone is in peril, the Coast Guard coordinates SAR efforts utilizing afloat and airborne Coast Guard units, and those of other federal, state, and local responders. The Coast Guard manages the Maritime Mass Rescue Response Preparedness Program, and using its Captain of the Port authorities and responsibilities, coordinates response efforts on waterways after incidents or disasters.

In support of the global and U.S. SAR system, the Coast Guard is one of four federal partners in the Search and Rescue Satellite-Aided Tracking (SARSAT) program and participates in the governance and operation of the International Cospas-Sarsat Programme. The Coast Guard also partners with the world's merchant fleet to rescue mariners in distress around the globe through the Automated Mutual-assistance Vessel Rescue (AMVER) system; a computer based, voluntary global ship reporting system used worldwide by SAR authorities to arrange for assistance to persons in distress at sea.

### ***FY 2017 Performance Highlights***

- Responded to 16,069 SAR cases; assisted 22,004 people, saved 4,228 lives and protected approximately \$76 million in property from loss (excluding hurricane responses).
- Saved or assisted more than 11,200 victims of Hurricanes Harvey, Irma, and Maria.

### ***Success Stories***

**Coast Guard Assists More Than 11,000 Hurricane Victims.** During August and September, nature dealt the Nation a triple punch with the Coast Guard responding to the devastation caused by Hurricanes Harvey, Irma, and Maria.

Hurricane Harvey made landfall on the Texas coastline on August 25, 2017 as a Category 4 hurricane. It had winds of up to 130 miles per hour and produced 51.9 inches of torrential rainfall that set records for the greatest rainfall ever recorded in the continental United States. Harvey led to fatalities, and it caused extensive flooding in Houston, Port Arthur, and the Beaumont areas of Texas.



Hurricane Irma followed shortly after Harvey, hitting Puerto Rico, the Virgin Islands, and Florida; causing fatalities, destruction exceeding \$50 billion, and widespread environmental impacts. Finally, Hurricane Maria struck Puerto Rico as a Category 5 storm with sustained winds in excess of 150 miles per hour. Maria had a disastrous impact on the entire island, causing fatalities, extensive flooding, complete loss of the power grid, severe shortages of clean drinking water, and some \$95 billion in damage, environmental, and economic impacts.

Coast Guard Air Station Houston responds to search and rescue requests after Hurricane Harvey in Houston, Texas, Aug. 27, 2017. (U.S. Coast Guard photo by Petty Officer Third Class Johanna Strickland.)

The Coast Guard launched one of the largest responses in its history to these three natural disasters, and saved or assisted more than 11,200 persons in peril. Following pre-established contingency plans, the Coast Guard mobilized more than 2,900 personnel, including 2,000 Active Duty, 800 Reservists, and 150 Civilians. The Coast Guard committed 66 helicopters that flew more than 1,600 hours in the effort, 28 fixed wing aircraft flying more than 1,400 hours, 29 cutters, and 115 shallow water assets. Coast Guard teams also restored significant numbers of lost and damaged aids to navigation, mitigated environmental concerns from reported oil and hazardous material releases, and resolved many other significant waterways management issues.

**Intensive Coordination Allows Hurricane Maria Rescue.** The Coast Guard's ability to coordinate and leverage available resources from national and international partner agencies led to the successful coordination and dramatic rescue of a mother and her two children.

Prior to landfall of Hurricane Maria, the Coast Guard District Seven Rescue Coordination Center in Miami, FL received a distress alert from the Motor Vessel Ferrel via the Search and Rescue Satellite Aided Tracking (SARSAT) system. (SARSAT is an integral part of the worldwide search and rescue system; it can detect and locate mariners and aviators in distress almost anywhere in the world, at any time, and in almost any condition.)

Following the SARSAT alert, a broadcast on the Channel 16 distress frequency was received. The master reported the Ferrel disabled, adrift with four persons on board, and taking on water approximately 11 nautical miles North of St. Croix. Initial communications indicated the four occupants were preparing to abandon ship in two life rafts; but with winds in excess of 100 knots and seas 14–16 feet and building, communications with the stricken vessel were lost.

With weather conditions outside the operational limitations of available Coast Guard rescue assets, District Seven planned a first light search and issued an Urgent Marine Information Broadcast on all frequencies, calling for assistance from any available ships in the area.



Survivors of the motor vessel Ferrel await rescue. (U.S. Coast Guard photo.)

As Maria's winds subsided, various search vessels and aircraft headed toward the last known position of the Ferrel. A Coast Guard C-130H fixed-wing aircraft from Air Station Clearwater, FL located the capsized vessel and three survivors 50 miles from its initial distress location. A helicopter embarked on the United Kingdom's Royal Fleet Auxiliary Ship Mounts Bay hoisted the three survivors and transported them to the U.S. Navy amphibious assault ship Kearsarge, where they could be assessed and treated.

**Coast Guard Rescues 57 in Multi-Agency Operation.** On the evening of June 17, 2017, Coast Guard Sector Southeastern New England received notification that the high-speed ferry Iyanough, with 48 passengers and 9 crewmembers, collided with the Hyannis Harbor West Jetty while operating in limited visibility, gale force winds, and dense fog. Coast Guard Sector Southeastern New England, in coordination with other federal, state, and local search and rescue responders, quickly initiated their mass rescue operations plan and issued an Urgent Marine Information Broadcast. They activated surface assets from Coast Guard Stations in Woods Hole, Chatham, and Brant Point; and a rescue helicopter from Coast Guard Air Station Cape Cod.

As rescue units raced to the scene, a Coast Guard Flight Surgeon consulted with an emergency room doctor who was a passenger aboard the Iyanough. Together, they determined the injuries to four passengers required immediate medical evacuation. Air Station Cape Cod's MH-60 helicopter hoisted the four and transported them to the nearest hospital.



HH-60 helicopter crew from Air Station Cape Cod medevacs passengers from high-speed ferry Iyanough. (U.S. Coast Guard photo.)

The Sector command center continued coordination efforts with Coast Guard and local agency response boats to assist the six passengers. Rescue assets braved four foot seas and winds in excess of 30 knots to save the remaining 53 passengers and crew.

**Coast Guard Saves Lives in the Arctic.** The Coast Guard's Seventeenth District has supported and increased its commitments to Operation Arctic Shield since initial deployments began in 2009. This annual event enhances Arctic Maritime Domain Awareness, broadens Coast Guard partnerships, and expands response experience and capabilities in these remote but increasingly accessible waters.

In FY 2017, the Coast Guard kicked off its annual Operation Arctic Shield on July 1, 2017, with the opening of a Forward Operating Base (FOB) in Kotzebue, Alaska, an Arctic Circle community of about 3,000 people. Air Station Kodiak sent C-130 fixed wing aircraft and MH-60 and HH-65 helicopters to Kotzebue; and Coast Guard Cutters Healy, Sherman, Maple, Hickory and Alex Haley deployed to the region.

The value of the Coast Guard's presence in the Arctic became acutely apparent soon after operations began. On July 25, 2017, the Coast Guard Command Center in Juneau received a request for assistance from the Alaska State Troopers. Four passengers aboard an 18-ft skiff were reported adrift due to an engine fire. A Coast Guard MH-60 Jayhawk helicopter launched from FOB Kotzebue and located the distressed vessel and all four of its passengers 155 miles southwest of Kotzebue. The Jayhawk remained on scene and vectored rescue boat assistance.


Later the same day, a second MH-60 aircrew assisted in the search for two missing mariners and located their vessel and occupants 26 miles south of Point Hope, Alaska.




ARCTIC SHIELD 2017. Petty Officer Second Class Alejandro Delgado, an aviation maintenance technician at Coast Guard Air Station Cape Cod, Mass. hoists Petty Officer Third Class John Crow, an aviation survival technician at Coast Guard Air Station Elizabeth City, NC. (U.S. Coast Guard photo.)

## FY 2017 Performance Results

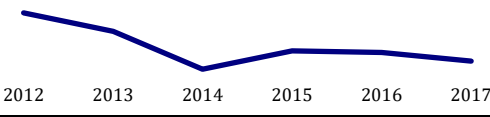
### Percent of People in Imminent Danger Saved in the Maritime Environment

Year-to-Year Trend	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
	77.3%	78.7%	79.4%	79.8%	79.3%	<b>78.2%</b>	100%	80%

### Percent of Time Rescue Assets on Scene within 2 Hours

Year-to-Year Trend	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
	92.3%	92.2%	95.4%	95.8%	90.3%	<b>91.0%</b>	100.0%	100.0%

### Percentage of property "in danger of loss" saved

Year-to-Year Trend	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
	66.3%	63.1%	56.5%	59.7%	59.4%	<b>57.9%</b>	≥ 71.0%	≥ 71.0%

## Explanation of Results

In FY 2017, the Coast Guard responded to 16,069 maritime search and rescue cases, assisted 22,004 people, and saved 4,228 lives in imminent danger. These statistics do not include people saved or assisted by Coast Guard disaster response efforts directly related to Hurricanes Harvey, Irma, and Maria.

The percentage of people in imminent danger in the maritime environment saved by the Coast Guard was 78.2% in FY 2017, which is less than the 79.3% achieved last year, but consistent with the previous five years' average of 78.9%. In FY 2017, the Coast Guard strategic goal was to save every life in danger; thus, the FY 2017 target of 100%. However, factors beyond Coast Guard control often lead to tragic outcomes regardless of our life saving efforts. Victims may succumb to traumatic injuries before first responders are notified or before Coast Guard assets can reach the scene. In some cases, distress notifications are never received by the Coast Guard. Consequently, the FY 2018 target was revised and is 80%, which reflects realistic performance expectations.

The time it takes to reach the scene of distress is a key performance factor that may influence the response outcome. The Coast Guard's performance benchmark is to arrive on scene within two hours of notification 100% of the time. In FY 2017, Coast Guard search and rescue assets met this standard 91.0% of the time. This year's results were better than the 90.3% average achieved in FY 2016, but less than the 93.2% average over the past five years. Factors beyond the Coast Guard's control influence its ability to arrive within the benchmark timeframe, including adverse weather conditions, unfavorable geographical proximity, and limited asset availability. The Coast Guard is continually looking at ways to improve this performance, with particular focus on where search and rescue assets are strategically located.

Saving lives is always the Coast Guard priority; recovery of property is a secondary consideration and undertaken only if it can be done with minimal risk and without degrading search and rescue effectiveness. Prospects for property recovery are always case dependent and vary widely. In many instances, such as when a vessel sinks before a Coast Guard asset arrives on scene, there is no opportunity for recovery. In FY 2017, the Coast Guard was able to save 57.9% of property in danger of loss. This is notably less than the 71.0% target, 59.4% result in 2016, and 61.0% average over the previous five years. The Coast Guard continues to work closely with partners in the salvage industry to strengthen marine property recovery capabilities to improve these results.

## MARINE ENVIRONMENTAL PROTECTION—RESPONSE ACTIVITIES

The Coast Guard is the lead Federal agency for directing the removal and mitigation of oil and hazardous substances from spills and releases in the waters and shorelines of the coastal zone. The Coast Guard accomplishes this mission by strategically distributing marine environmental response program elements at the national, regional, and local level. This includes strategic program management and policy support at Coast Guard Headquarters and National Contingency Plan Special Teams, which include the Coast Guard National Strike Force and District Response Advisory Teams; Federal On-Scene Coordinators (FOSCs) and Representatives; and Pollution Responders at Sectors, Marine Safety Units, and Marine Safety Detachments.



Coast Guard Commander Kelly Thorkilson oversees the safe removal of damaged, displaced, submerged or sunken vessels from the Puerto Chico Marine in Fajardo, Puerto Rico. (U.S. Coast Guard photo by Petty Officer First Class Timothy Tamargo.)

### ***FY 2017 Performance Highlights***

- Responded to 12,270 pollution incident reports (excluding hurricane responses).
- Deployed the National Strike Force in response to 5 natural disasters, 4 special events, and 12 oil and 11 hazardous substance incidents.
- Managed 301 federal cleanup projects, costing more than \$24 million (excluding hurricane responses), under the Oil Spill Liability Trust Fund and Comprehensive Environmental Response, Compensation, and Liability Act Fund.
- Directed 148 Government Initiated Unannounced Exercises.
- Reviewed more than 7,231 submissions for compliance with the Oil Pollution Act of 1990.
- Conducted 185 Oil Spill Removal Organization site inspections, during 13 Preparedness Assessment Visits.

### ***Success Stories***

**Coast Guard and Partners Mitigate Storm-Related Environmental Damage.** The Coast Guard, the Environmental Protection Agency, and other federal, state, and local partners reacted promptly to protect the environment and reopen critical waterways in the aftermath of Hurricanes Harvey, Irma, and Maria. The response to Irma was emblematic of the success achieved by such earnest collaboration.

On September 10, 2017, after devastating large areas of the Caribbean, Hurricane Irma made landfall in Cudjoe Key, Florida and a few hours later in Marco Island. A Unified Command (UC) was established to address pollution, environmental, and navigation hazards associated with sunken

vessels. The UC included the Coast Guard, the Environmental Protection Agency, the Florida Fish and Wildlife Conservation Commission, and the Florida Department of Environmental Protection.



Contractors remove a vessel displaced by Hurricane Irma at Boot Key Harbor City Marina in Marathon, Florida. (U.S. Coast Guard photo by Petty Officer Second Class David Weydert.)

Given the statewide impact, four regional UCs were separately established to mirror existing Coast Guard Captain of Port Zones in Key West, Miami, St. Petersburg, and Jacksonville. Recognizing the environmental sensitivity of the Florida Keys, the Coast Guard and the State of Florida worked around the clock to ensure potential threats were quickly identified and that only approved cleanup practices were employed to protect this vital ecosystem. Under Emergency Support Function 10, the Coast Guard mobilized experts in oil spill response and vessel salvage from the National Strike Force to serve as technical advisors. Due to the sheer size of the impacted area, the Coast Guard also mobilized reserve personnel trained to lead environmental assessment teams.

In total, over 1,200 personnel from the Coast Guard, Environmental Protection Agency, and state agencies provided support for these emergency response activities immediately after the storm. Within 10 days after landfall, assessment teams identified more than 750 sunken vessels, and salvage teams were supervising removal of 66 vessels to begin the long road to recovery.

**Construction Barge Threatens to Close Bay Area Rapid Transit.** During the early morning of April 7, 2017, the 112-foot Derrick Barge Vengeance capsized and sank south of the San Francisco Bay Bridge. The Vengeance came to rest directly on top of 25-30 feet of sediment that covers the trans-bay tunnel for the Bay Area Rapid Transit (BART) system, a tunnel that carries more than 400,000 daily passengers under the San Francisco Bay.

No personnel were onboard at the time the Vengeance sank, but the wreck raised public safety concerns. It was not just a hazard to navigation; it could disrupt a critical piece of transportation infrastructure in the Bay Area. In addition, the sinking presented an environmental risk of thousands of gallons of petroleum products being released into the San Francisco Bay.

Global Diving and Salvage Inc., the largest diving contractor on the West Coast and an experienced marine casualty responder was contracted to provide support. Underwater imagery was taken and divers were deployed to plug the fuel vent. The salvage plan, vetted through the Coast Guard Salvage Engineering Response Team and the Unified Command, called for a two-phase operation. Phase One required a “parbuckle” operation to roll the vessel upright and move it away from the BART tube. Phase Two included pumping off the remaining oil products, sectioning the barge into three pieces, and lifting the pieces onto a work barge.

Phase One was completed on May 7, 2017; Phase Two was completed on July 17, 2017. In total, approximately 3,500 gallons of petroleum products were removed. A final side-scan sonar was conducted after all equipment was demobilized and showed all hazards to navigation had been successfully removed. The approximately \$5 million cost was entirely assumed by the responsible party. A joint investigation by the Coast Guard and State of California to determine the cause of this marine casualty is now underway.



Global Diving and Salvage conducts removal operations to raise the Derrick Barge Vengeance from the San Francisco Bay on July 11, 2017. (U.S. Coast Guard photo by Petty Officer Second Class Cory J. Mendenhall.)

## CONTINGENCY PREPAREDNESS AND INCIDENT MANAGEMENT

The Contingency Preparedness and Exercise Policy Program establish processes and procedures to ensure effective employment of all Coast Guard resources during significant incidents in coordination with partner responders. Through active outreach to Coast Guard mission program managers, the Incident Management and Preparedness Program assesses, maintains, and improves the knowledge, skills, and abilities necessary to ensure consistency within the Coast Guard, agency interoperability, and support to the National Preparedness and Planning Systems as established by Presidential Policy Directive 8. Program efforts ensure response readiness for all threats and all hazards, and include exercises and real-world events that cut across all Coast Guard missions and support programs.

### ***FY 2017 Performance Highlights***

- Performed 424 exercises and 101 Preparedness for Response quarterly notification drills.
- Mobilized over 2,000 Active Duty, 800 Reservists, and 150 Civilians for hurricane response operations in Texas, Florida, Puerto Rico, and the U.S. Virgin Islands.

### ***Success Stories***

**Coast Guard Units Benefit from Dynamic Exercises.** The 2017 hurricane season demonstrated the importance and benefit of Coast Guard contingency exercises and other preparedness efforts. Over the course of three weeks in August and September, the states and territories of Texas, Florida,



Coast Guard Captain Kevin Oditt, Commander of Coast Guard Sector Houston-Galveston, and Senator Ted Cruz of Texas, discuss Coast Guard rescue operations in response to Hurricane Harvey, August 31, 2017. (U.S. Coast Guard photo by Petty Officer First Class Patrick Kelley.)

Puerto Rico, and the U.S. Virgin Islands were devastated by a series of powerful hurricanes. The Nation had not faced storms of this magnitude, or demands for federal, state, and local response as great, since Hurricane Katrina in 2005.

The Coast Guard has established a robust contingency preparedness system with an annual exercise program as its cornerstone. “Preparation through education is less costly than learning through tragedy,” offers Max Mayfield, Director of the National Hurricane Center. This wisdom is embraced by the Coast Guard. The Coast Guard is continuously improving the readiness of its personnel, validating planning constructs, and strengthening critical relationships with local, state, tribal, and federal partners through annual exercise requirements established at each unit. These preparations paid huge dividends when the hurricanes struck.

For example, prior to the 2017 hurricane season, Coast Guard Sector Corpus Christi planned and executed a week-long, operations-based functional exercise to test and evaluate their Severe Weather and Continuity of Operations plans. The exercise required the unit to activate their Incident

Management Team and work through the principles of the Incident Command System for closing the port, establishing personnel accountability, and deployment of essential personnel to the pre-identified continuity of operations site. In conjunction with the U.S. Army Corps of Engineers and the Texas General Land Office, participants role-played search and rescue, marine environmental response, and marine transportation system recovery during the exercise.

At Coast Guard Sector San Juan and Marine Safety Detachment St. Thomas, contingency exercises also centered on heavy weather preparedness. To strengthen situational awareness and cooperation, Sector San Juan stood-up an Incident Command Post to test coordination and outreach with partners during a mock hurricane approach. A second aspect of the exercise was an evacuation workshop designed to improve understanding of the logistical challenges and to educate personnel on the policies that govern these activities.



A Coast Guard member deployed to Borinquen, Puerto Rico in support of Hurricane Maria relief efforts delivers water to residents of Moca, Puerto Rico, October 9, 2017. (U.S. Coast Guard photo by Petty Officer Third Class David Micallef.)

**Continuity of Operations Planning Evident During Disaster Response Operations.** During Hurricane Harvey, Coast Guard bases and infrastructure were damaged and critical technology systems were rendered useless. For example, the Sector Houston-Galveston command center was responsible for all search and rescue coordination, but it lost its primary system, Rescue-21, and all connectivity to the Coast Guard network.



Aircrews from Coast Guard Air Station Miami serve as eyes in the sky as they help coordinate search and rescue efforts in the aftermath of Hurricane Harvey. (U.S. Coast Guard photo by Petty Officer Third Class Corrie Smith.)

and other available technology to maintain situational awareness, determine the urgency of distress calls, and deploy the most effective response assets.

Fortunately, the Coast Guard has Continuity of Operations plans established throughout the organization and routinely conducts exercises and training in these plans. Coast Guard command centers in New Orleans, LA, Portsmouth, VA, Martinsburg, WV, and at the National Command Center in Washington, DC, rapidly mobilized personnel and resources, and at the peak of the response were handling 1,000 distress calls an hour. Sector Houston-Galveston adapted to the emergent conditions by utilizing alternative means of communication and leveraging social media

# DEFENSE OPERATIONS

Coast Guard forces possess the authorities, capabilities, and capacity to carry out homeland security and defense operations, either under Coast Guard control or under the control of a Department of Defense (DoD) Combatant Commander. The Service provides trained, equipped, and mission-matched forces in support of Combatant Commanders' initiatives as outlined in the 2008, DoD-DHS Memorandum of Agreement. Coast Guard Defense Operations missions include: Maritime Interception and Interdiction Operations; Military Environmental Response; Port Operations Security and Defense (including maintaining a Title 10 Reserve force and providing Aids to Navigation support for battle-space preparation); Theater Security Cooperation; Coastal Sea Control Operations (including providing DoD the only assured access in ice-covered and ice-diminished waters); Rotary Wing Air Intercept Operations; Combating Terrorism Operations; and Maritime Operational Threat Response Support.



U.S. Coast Guard Port Security Unit 305 personnel man a battle position along the shores of Naval Station Guantanamo Bay, Cuba on July 19, 2017. (U.S. Coast Guard photo by Petty Officer Third Class Matthew Masaschi.)

## ***FY 2017 Performance Highlights***

- Coast Guard Tactical Law Enforcement Team South conducted 8 deployments onboard U.S. Navy and Allied vessels totaling more than 369 days.
- Coast Guard Pacific Tactical Law Enforcement Team conducted 9 deployments onboard U.S. Navy and Allied vessels totaling more than 379 days.
- National Capital Region Air Defense Facility crews responded to over 175 active air defense missions, maintaining a 100% on-time scramble rate, including 9 launches for reported Unmanned Aircraft Systems within the Washington, DC Flight Restricted Zone.
- Deployable Rotary Wing Intercept aircraft, crews, and support personnel deployed 19 times as requested by the U.S. Secret Service, providing a record 167 days of restricted airspace defense for Presidential Protection or National Special Security Events.

## ***Success Stories***

**Coast Guard Furthers Strategic Objectives Abroad.** Coast Guard Patrol Forces Southwest Asia (PATFORSWA) provides near-continuous effective presence in the Northern, Central, and Southern Arabian Gulf. Aside from ongoing support to maritime security operations, PATFORSWA has proven a critical force multiplier to training and capacity building in the region.



U.S. Coast Guard, U.S. Special Forces personnel, and United Arab Emirates personnel participate in joint training operations. (U.S. Coast Guard photo.)

In support of U.S. Central Command's (CENTCOM) Theater Security Cooperation mission, PATFORSWA's 12-member Maritime Engagement Team led or participated in exercises and Subject Matter Expert Exchanges with more than 1,300 coalition partner personnel, improving maritime boarding and law enforcement capacity and capabilities for 39 nations across three Combatant Commands. This Team enhanced the ability of dozens of foreign mission partners to establish and sustain maritime security and maritime law enforcement operations.

While deployed to the CENTCOM Theater, an Advanced Interdiction Team of 12 members from the Coast Guard's Maritime Security Response Team (MSRT) participated in the largest U.S. Special Operations Command-Central Command exercise of its kind. They supported an oil platform assault and medical evacuation exercise as they trained the United Arab Emirates special forces. This exercise provided an excellent opportunity to help build critical partner nation capability while enhancing interoperability with U.S. Special Operations Command forces.



PATFORSWA crew members from USCG Cutter Aquidneck conduct a Visit Board Search Seizure exercise with the Royal Bahrain Navy Ship Muhharraq and USS Thunderbolt, Arabian Gulf, August 8, 2017. (U.S. Coast Guard photo.)

**Answering the Search and Rescue Call.** The at-sea experience and expertise among PATFORSWA boat crews was instrumental in the successful search for a downed helicopter. PATFORSWA facilitated the generation of over 40 search patterns that integrated six U.S. Navy Search and Rescue units. The search plan optimized the odds for success; and the process and capabilities developed by the Coast Guard were institutionalized by U.S. Naval Forces Central Command to facilitate future maritime Combat Search and Rescue operations.

**Building Partner Forces of Tomorrow.** Coast Guard Deployable Specialized Forces help foreign partners build the sustainable capacity they need to address today's global challenges. Building partner capabilities, and enhancing cooperation and interoperability, is a key element in the achievement of Coast Guard multi-mission strategic goals.

Multinational exercises are vital to this effort. In FY 2017, Coast Guard Maritime Safety and Security Team members deployed in support of SOUTHCOM's Joint Riverine Training Teams. The Team conducted Security Force Assistance operations with U.S. Marine Forces South to help build partner nation marine and riverine force capabilities for conducting drug and counter narcotics interdiction operations in Belize, Costa Rica, Guatemala, and Panama.

The Coast Guard Cutter Alert and Law Enforcement Detachment (LEDET) members participated in the North American Maritime Security Initiative, a multi-day exercise to help stop illegal trafficking in Canada, Mexico, and the United States. This exercise took place before Operation CARIBBE, a multinational campaign against transnational criminal organizations.



Coast Guard Ensign Joaquin Reyes participates in UNITAS 2017 conducting a maritime law enforcement symposium onboard a Peruvian Navy vessel, July 16, 2017. (U.S. Navy photo by Petty Officer Second Class Michael Hendricks)

Coast Guard LEDETs and the Coast Guard Cutter Escanaba participated in UNITAS, the world's longest-running annual multilateral exercise. Coast Guard members strengthened existing regional partnerships and encouraged new relationships through exchange of maritime mission-focused knowledge and expertise for 14 days in Peru.



Coast Guard Rear Admiral Daniel Abel, director of operations for U. S. Southern Command, and U.S. Ambassador Linda Swartz Taglialatela, depart the opening ceremony for TRADEWINDS 2017, Barbados June 6, 2017. (U.S. Coast Guard photo by Petty Officer First Class Melissa Leake.)

The Coast Guard Cutter Winslow participated in TRADEWINDS 2017, a 19-nation maritime security and disaster response exercise in the Caribbean. TRADEWINDS supports the Caribbean Basin Security Initiative and U.S. Southern Command's partner nation capacity at the tactical and operational levels.

security  
environment  
combined  
Phase I, from  
countries of  
Cameroon. It  
maritime law  
United States  
from August



Coast Guard Law Enforcement Detachment 406 present a Coast Guard Flag to members of the Senegalese Navy during Operation Junction Rain, September 15, 2017 (U.S. Navy photo by Petty Officer Third Class Ford Williams)

Coast Guard LEDETs also deployed for Operation Junction Rain to support African Maritime Law Enforcement Partnerships in five West African nations. This program enabled African partners to build maritime

capacity and improve maritime management through real-world maritime law enforcement operations. February through April, focused on the Cabo Verde, Togo, Benin, and included the first ever combined enforcement operations between the and both Togo and Benin. Phase II, through September, focused on the

countries of Senegal and Cabo Verde. Phase II resulted in 22 law enforcement boardings, including a first-ever U.S.-Senegal-Cabo Verde combined maritime operations.

**Increased Rotary Wing Air Intercept Support.** Primarily due to the presidential election season, the Coast Guard saw an increased demand for Rotary Wing Air Intercept capabilities in FY 2017. In addition to providing continual airspace security for the National Capital Region, deployments increased 230% to support the Secret Service and National Special Security Events. Air Stations Atlantic City, New Orleans, Detroit, and Savannah, covered 19 separate deployments for 167 days,

requiring 2,672 personnel days away from home station, and Coast Guard aircrew alerts and scrambles required in support of Operation Noble Eagle standards were up 500% from the previous year. The Coast Guard ensured 100% mission effectiveness throughout the year, despite overlapping deployments and emergent maintenance issues.

To further improve Rotary Wing Air Intercept capabilities, the Coast Guard Deputy Commandant for Operations, and the North American Aerospace Defense Command, signed the first formally defined and consolidated set of mission requirements in the history of the mission. In addition to providing a basis for future policy and strategy development between DoD and DHS, this document established the requirement for a Link 16/Tactical Data Link capability to ensure flight safety and enhance mission effectiveness.



Coast Guard HH65-C Dolphin engages a Civil Air Patrol Cessna acting as a "target of interest" during a "cross tell" exercise with the New Jersey Air Guard. (Photo by Daily Record Reporter William Westhoven.)

The Coast Guard is also continuing work with its air defense partners in the National Capital Region and elsewhere to address the growing UAS threat to airspace security and force protection.

## ***FY 2017 Performance Results***

### **Defense Readiness of Major Cutters for DoD Contingency Planning**

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		n/a	n/a	100.0%	100.0%	99.5%	<b>97.0%</b>	100.0%	100%

### **Defense Readiness of Patrol Boats for DoD Contingency Planning**

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		n/a	n/a	100.0%	100.0%	100.0%	<b>100.0%</b>	100.0%	100%

### **Defense Readiness of Port Security Units (Deployed)**

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		n/a	n/a	100.0%	100.0%	100.0%	<b>100.0%</b>	100.0%	100.0%

### **Defense Readiness of Port Security Units (Ready to Deploy)**

Year-to-Year Trend							2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2017 Target	2018 Target
2012	2013	2014	2015	2016	2017		n/a	n/a	61.0%	89.0%	57.8%	100.0%	≥ 85.0%	≥ 85%

### ***Explanation of Results***

In FY 2017, the Coast Guard met or exceeded DoD requirements outlined in the Global Force Management Allocation Plan for patrol boats and Port Security Units deployed overseas.

In FY 2017, the availability of major cutters was reduced due to a higher level of dry-dockings resulting in a slight decline in major cutter readiness and a corresponding decrease in readiness to meet the allocation plan levels.

# MARINE TRANSPORTATION SYSTEM MANAGEMENT

The Marine Transportation System Management program ensures a safe, secure, efficient, and environmentally sound waterways system. The Coast Guard minimizes disruptions to maritime commerce by assessing and mitigating risks to safe navigation, and by providing waterway restoration capabilities after extreme weather events, marine accidents, or terrorist incidents. The Coast Guard works in concert with other Federal agencies, state, local, and tribal governments, marine industries, maritime associations, and the international community to optimize balanced use and champion development of the Nation's marine transportation system.

## AIDS TO NAVIGATION

The Coast Guard's Aids to Navigation (ATON) mission is to mitigate transit risks and promote the safe, economic, and efficient movement of military, commercial, and other vessels by assisting navigators with determining their position, setting a safe course, and warning them of dangers and obstructions. The Coast Guard establishes, maintains, and operates more than 48,000 lighted and unlighted buoys and beacons that mark 25,000 miles of U.S. coastal, intracoastal, and inland waters. ATON are set in compliance with international standards, such as those promulgated by the International Association of Marine Aids to Navigation and Lighthouse Authorities. The Coast Guard is responsible for administration of a nearly equivalent number of Private ATON. To augment the physical ATON, the Coast Guard uses the National Automatic Identification System (NAIS) to transmit electronic ATON in operationally or environmentally restricted areas to mark waterways in situations where it was previously impossible. NAIS is also utilized to facilitate efficient and reliable transfer of Marine Safety Information between and among vessels and shore facilities. Available Marine Safety Information includes navigation rules; schemes and standards; support for mapping and charting; and tide, current and pilotage information.



A 49-foot Buoy Utility Stern Loading boat crew from Aids to Navigation Team Southwest Harbor performs maintenance on a buoy, Aug. 31, 2017 near Southwest Harbor, Maine. (U.S. Coast Guard photo by Petty Officer Third Class Andrew Barresi.)

### ***FY 2017 Performance Highlights***

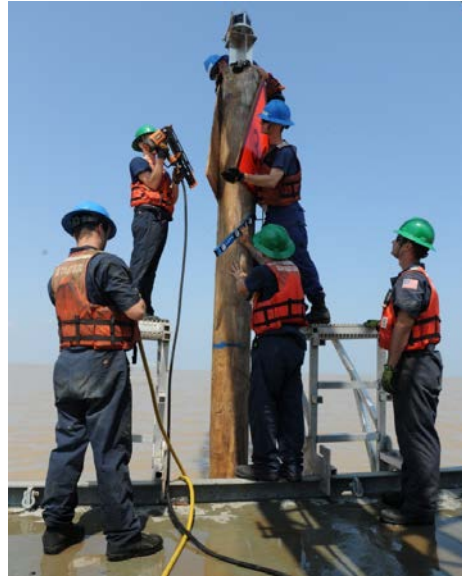
- Coast Guard ATON units performed maintenance on 29,295 buoys and beacons throughout the Marine Transportation System, including the Western Rivers System.
- Coast Guard ATON units responded to over 7,763 ATON infrastructure discrepancies.

## Success Stories

**Electronic Aids During Hurricanes.** The Coast Guard leveraged electronic Aids to Navigation (eATON) during Hurricanes Harvey, Irma, and Maria. As anticipated, many physical aids to navigation were damaged or off station because of the storms.

Following Hurricane Harvey, the Coast Guard employed eATON to provide temporary markings along the Gulf Coast where physical ATON were destroyed or damaged. The eATON transmitted over NAIS, and could be seen by any mariner with a radar or electronic charting system capable of displaying AIS information.

A portable AIS system was also deployed to the effected regions in Texas, as a backup to the NAIS network. This portable system provided eATON broadcasting in areas not covered by NAIS. This contributed to the reopening of the Port of Aransas, Texas several days earlier than anticipated.



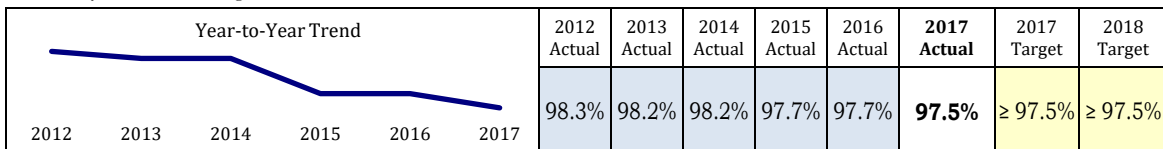
Coast Guard Cutter Hatchet crewmembers construct a channel marker to maintain Aids to Navigation in the Houston Shipping Channel near Galveston, Texas, Sept. 1, 2017. (U.S. Coast Guard photo by Petty Officer Second Class Paul Krug.)

Capitalizing on lessons learned from Hurricane Harvey, and in anticipation of Hurricanes Irma and Maria, the Coast Guard utilized eATON around critical U.S. waterways in each hurricane's path. In total, the Coast Guard established 301 eATON in Puerto Rico, in waterways from Key West to Tampa, Florida, and up the eastern seaboard to Charleston, South Carolina.

The eATON capabilities made available by the Coast Guard contributed to safe navigation, while buoy tenders and ATON teams repaired and reconstituted the physical ATON constellation. As the Coast Guard works diligently with international, interagency, and industry stakeholders to pioneer the future of navigation, eATON is already playing a critical role in making U.S. waters safer, more efficient, and more resilient.

## FY 2017 Performance Results

Availability of Maritime Navigation Aids



### ***Explanation of Results***

Short-range federal Aids to Navigation were available 97.5% of the time in FY 2017. This performance met the same-value target for the year, which is derived from standards established by the International Association of Marine Aids to Navigation and Lighthouse Authorities.

Aid Availability in FY 2017 met its FY 2017 target; however, it was lower than any result in the previous five years. Several factors contributed to the decline, including the impacts of Hurricanes Harvey, Irma, and Maria; specifically, availability was below target in those Districts most affected by the storms; 97.2% in District Seven and 95.3% in District Eight.



Fireman Garret McCorkle and Petty Officer 3rd Class Charles Fox work a buoy needing replacement from Hurricane Irma-generated winds and waves, Sept. 16, 2017. (U.S. Coast Guard photo by Petty Officer Second Class Dustin R. Williams.)

## ICE OPERATIONS

Coast Guard Icebreakers, in cooperation with the Canadian Coast Guard, keep the Great Lakes and Northeastern U.S. connecting waterways open for commercial traffic, assist vessels transiting ice-filled waterways, and prevent ice-related flooding. The International Ice Patrol promotes safe navigation by monitoring icebergs and broadcasting the iceberg geographical limit to vessels transiting the North Atlantic between North America and Europe. Coast Guard Polar Icebreakers support national security and sovereignty in the Polar Regions, are used to determine and demonstrate the extent of U.S. Extended Continental Shelf claims, enforce U.S. laws and international treaty obligations, and provide a science platform in the Arctic region for obtaining vital ecological and geographic data necessary to protect U.S. Arctic marine environment and resources. In the Antarctic, the Coast Guard annually supports Operation Deep Freeze, the U.S. military's contribution to the National Science Foundation's scientific research mission.

The Coast Guard Cutter Healy, a medium icebreaker, sits in the Chukchi Sea off the coast of Alaska during an Arctic deployment in support of scientific research and polar operations, Saturday, July 29, 2107. The Coast Guard's leadership role in providing a continued Arctic presence is essential to national security, maritime domain awareness, freedom of navigation, U.S. sovereign interests and scientific research. (U.S. Coast Guard photo by Petty Officer Second Class Meredith Manning.)

### ***FY 2017 Performance Highlights***

- Identified and tracked 1,004 icebergs in the North Atlantic shipping lanes, extending a 106-year perfect safety record of preventing ship-iceberg collisions.
- Conducted more than 5,300 hours of icebreaking to support movement of dry bulk and liquid cargoes valued at over \$1.5 billion through ice-impeded waters of the Great Lakes and the Eastern Seaboard.

### ***Success Stories***

**International Ice Patrol Supports Historic Coast Guard Transit.** 2017 marked the 60<sup>th</sup> anniversary of the transit by three Coast Guard Cutters and a Canadian ship of the Northwest Passage, the sea route that connects the Atlantic and Pacific Oceans through the Canadian Arctic Archipelago. In August 2017, the crew of the Coast Guard Cutter Maple replicated the feat. The 225-foot seagoing buoy tender, whose homeport is in Sitka, Alaska, completed the 45-day voyage through the Northwest Passage while en route to dry dock in Baltimore, Maryland.

The Maple's voyage provided an opportunity to support scientific research and aid understanding of marine species in this remote part of the world. The Maple's crew deployed sonographic buoys used to record the acoustic sounds of marine mammals and assisted in analyzing data retrieved from the buoys.

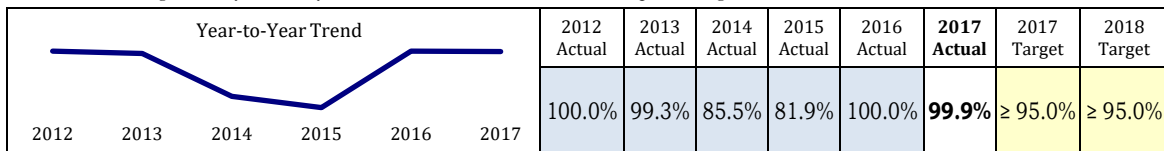
Maple's successes would not have been possible without the assistance of the Coast Guard International Ice Patrol. Utilizing a novel idea and their unique resources, members of the International Ice Patrol developed an iceberg-warning chart for Baffin Bay, a body of water southwest of Greenland not usually navigable because of ice cover, high density of floating ice, and icebergs. The warning chart ensured that Maple could safely navigate without incident. It also marked the first time in the International Ice Patrol's 104-year history that satellite-reconnaissance was used as the sole source for iceberg warning information.



Crew members aboard Coast Guard Cutter Maple stand lookout watch in the Arctic Ocean approximately 100 miles east of Barrow, Alaska, July 25, 2017. (U.S. Coast Guard photo by Petty Officer Second Class Nate Littlejohn.)

### ***FY 2017 Performance Results***

Percent of Time High-Priority Waterways in Great Lakes and Eastern Seaboard Open during Ice Season



### ***Explanation of Results***

Keeping Tier 1 waterways open to waterborne commerce is essential to public health and safety and the economies of the Great Lakes and Northeast. Coast Guard icebreaking operations prevented all but two brief closures in FY 2017, leading to the 99.9% result that spanned three Coast Guard Districts, and exceeded the established target of 95%.

## WATERWAYS MANAGEMENT

The Waterways Management program fosters a safe, secure, resilient, and environmentally sound marine transportation system, and it leverages other federal agencies, harbor safety committees, pilots, port authorities, and other industry and waterway stakeholders to support this mission. The Coast Guard works closely with the U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration (NOAA), Marine Board of the Transportation Research Board, the Committee on the Marine Transportation System, and regional Federal Advisory Committee Act bodies. Waterways management encompasses Vessel Traffic Services, which minimize safety risks in the most congested ports by monitoring and coordinating vessel traffic; Great Lakes Pilotage, which ensures navigational safety on the Great Lakes by regulating pilotage for foreign trade vessels; and Coastal and Marine Spatial Planning, which collaborates with other federal agencies and stakeholders to support the balanced use of national waters in forums such as regional planning bodies created by the President's National Ocean Policy.



Coast Guard protects "Old Ironsides" during turnaround voyage in Boston Harbor. (U.S. Coast Guard photo by Petty Officer Third Class Andrew Barresi.)

### ***FY 2017 Performance Highlights***

- Coast Guard waterway managers reviewed over 3,600 Marine Event permit applications and conducted over 10,000 waterway management activities, including harbor surveys, vessel traffic management, and coordination of safety and security zones.
- Great Lakes Registered Pilots completed over 4,203 pilotage assignments, safely moving nearly 39 million metric tons of cargo.

### ***Success Stories***

**Coast Guard and Its Partners Clear Critical Waterways After Hurricane Maria.** Following Maria's September 20, 2017 landfall, the most intense storm in Puerto Rico since 1928, Puerto



Coast Guard member catalogs a sunken vessel in Puerto Rico waterway. (U.S. Coast Guard photo.)

Rico suffered widespread damage to buildings, infrastructure and supply chains. Flooding, high winds, and storm surge left critical ports without power and paralyzed from debris, shoaling, and damaged infrastructure. Days later, all ports of Puerto Rico remained closed by the Coast Guard and Puerto Rico-bound shipments were being held at their last in-transit seaport. Reopening the ports to allow for the flow of humanitarian aid was a primary goal of Coast Guard waterways managers.

Restoring maritime commerce was also essential. Puerto Rico is a regional hub for healthcare and life sciences companies, with 12 of the 20 top

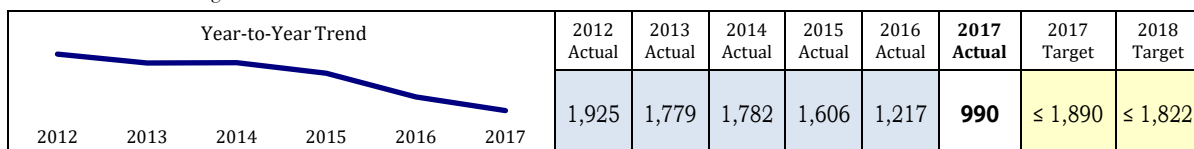
pharmaceutical and medical device companies having manufacturing plants on the island. The Port of San Juan's top exports in 2017 were medicines; plasma, vaccines, and blood; and medical instruments.

At the request of the Coast Guard, NOAA sent its mobile integrated survey team, with its quick-install side-scan/singe-beam sonar kit. The Team worked with Coast Guard waterways managers to address the most pressing needs of the island, including conducting emergency hydrographic surveys in the Port of Arecibo, a key fuel and chemical port. Also at the request of the Coast Guard, NOAA Ship Thomas Jefferson was dispatched to Puerto Rico. It deployed its launches in the Port of Ponce to survey the deep draft channel, a crucial step to its re-opening.

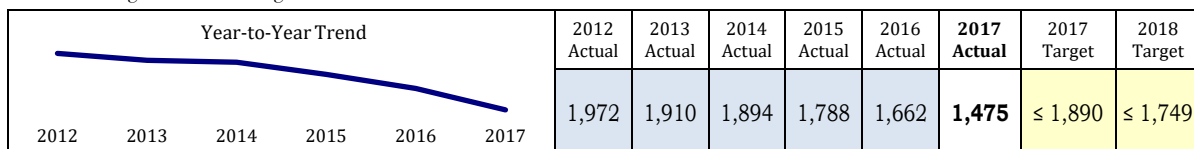
The Coast Guard and partners stood up an Emergency Support Function 10 command post to oversee the assessment, mitigation, and removal of sunken vessels and hazardous substances. In addition to the Coast Guard, team members included representatives from the Environmental Protection Agency, the U.S. Fish & Wildlife Service, the Puerto Rico Environmental Quality Control Board, and the Puerto Rico Department of Natural & Environmental Resources. The Captain of the Port of San Juan and his team worked around the clock to get these port assessments completed and the port opened as soon as it was safe to do so. By October 2, 2017, the Ports of San Juan, Ponce, Charlotte Amalie in St. Thomas, and all the other key affected ports were open, though some with restrictions.

### ***FY 2017 Performance Results***

Annual Number of Navigational Accidents



5-Year Average Number of Navigational Accidents



NOTE: Negative Slope indicates improved performance

### ***Explanation of Results***

Navigational accidents, consisting of distinct collision, allision (vessel striking a fixed object), and grounding events, provide a proxy measure of Waterways Management effectiveness in preventing disruptions to commerce; they can and often do result in waterway closures.

There were 990 navigational accidents reported in FY 2017, nearly 19% fewer than the updated and revised number of 1,217 recorded last year and substantially fewer than the five-year average

of 1,475. Groundings accounted for more than half (52.3%) of FY 2017 navigational accidents, while collisions accounted for just 9.9%. Groundings have been decreasing faster than other navigational accidents, declining 37% between FY 2015 and FY 2017. This is likely due to revised reporting criteria promulgated in 2015 making “bump-and-go” groundings (a less severe, momentary grounding) non-reportable.

Just over 75% of the FY 2017 navigational accidents involved uninspected vessels, the majority of which were towing vessels or barges. These vessels will become subject to inspection with the 2018 implementation of 46 Code of Federal Regulations Subchapter M.

## BRIDGE PROGRAM

The Coast Guard collaborates with federal, state, local, and tribal agencies, industry, and other stakeholders to ensure that over 20,000 bridges and causeways spanning the navigable waters of the United States do not unreasonably obstruct navigation. Coast Guard statutory authority to carry out the bridge program can be found in several federal statutes, and the program regularly supports marine safety, aids-to-navigation, and ports, waterways, and coastal security missions throughout the Nation. Bridges are defined as assets within DHS' Transportation Systems Sector, and the National Data Base lists certain railroad bridges as critical infrastructure.

The Program's day-to-day responsibilities include issuing permits; establishing bridge lighting and marking requirements; approving drawbridge schedules; investigating bridges that may be unreasonably obstructive; monitoring rehabilitation, repair, maintenance and construction activities; and managing design construction and funding for Truman-Hobbs projects.

### ***FY 2017 Performance Highlights***

- Issued 30 bridge permits with a total project cost of \$2.82 billion.

### ***Success Stories***

**Permit Approved for Critical Hurricane Evacuation Route Bridge.** The Coast Guard approved construction of a \$398.5 million Pensacola Bay Bridge replacement project across Pensacola Bay. Constructed in 1960, the current Pensacola Bay Bridge is nearing the end of its anticipated lifespan. The last inspection found the bridge to be functionally obsolete and structurally deficient. The bridge is an important east-west transportation corridor (U.S. Route 98) and a primary hurricane evacuation route for the Florida Panhandle.

The replacement bridge has modified vertical and horizontal clearances that will better facilitate commercial and recreational vessel traffic around Pensacola Bay and the Gulf Intracoastal Waterway. It will allow increased vehicle capacity and have accommodations for bicycles and pedestrians. The new Pensacola Bay Bridge is expected to be completed in mid-2020.



Pensacola Bay Bridge design. (Florida Department of Transportation illustration).

## ARCTIC PROGRAM

The United States has been an Arctic Nation since 1867, when it purchased Alaska from Russia for \$7.2 million. The U.S. has significant equities in the region, and the Coast Guard is responsible for ensuring safe, secure, and environmentally responsible maritime activity throughout this domain. This includes exercising maritime sovereignty and maintaining persistent maritime domain awareness in the Arctic; providing effective maritime border control; overseeing and ensuring the safety of maritime activities; protecting natural resources; providing governance regimes; and supporting collaborative engagement that safeguards U.S. Arctic interests and promotes cooperative effort in forums such as the Arctic Council, the International Maritime Organization, and Inuit Circumpolar Council.

### ***FY 2017 Performance Highlights***

- Coast Guard air and surface assets deployed in the Arctic led or took part in 23 SAR cases and saved or assisted 29 persons.
- During Arctic Shield, deployed five cutters as well as fixed wing and rotary-wing air assets throughout four-month annual operation. Conducted ice rescue training to first responder personnel in 7 cities, performed 51 safety and compliance examinations on Nome gold dredge vessels, completed 22 waterfront facility inspections in remote areas, performed 35 commercial fishing vessel inspections, and performed 12 commercial vessel inspections.

### ***Success Stories***

**Arctic Coast Guard Forum Search and Rescue Exercise Conducted.** In September 2017, the Coast Guard participated in ARCTIC GUARDIAN, a joint search and rescue exercise in Reykjavik, Iceland with other members of the Arctic Coast Guard Forum.

Launched in 2015, the Arctic Coast Guard Forum is an independent, informal organization not bound by treaty, whose purpose is to foster safe, secure, and environmentally responsible maritime activity in the Arctic. Partner nations include: Canada, Denmark, Finland, Iceland, Norway, Sweden, the Russian Federation, and the United States.

The Forum provides an expedient platform for multilateral cooperation and coordination. If something happens in the Arctic region, it may take days for help to arrive and accidents could affect sensitive arctic ecosystems. Cooperation is crucial to securing the safety of people and the environment.

ARCTIC GUARDIAN tested cooperation, coordination, and communication across all eight partner nations' Rescue Coordination Centers, using a scenario where a fictional cruise line operator lost communications with their cruise ship while the ship transited the Denmark Strait from Greenland to Iceland. Air and maritime units from Canada, Denmark, Iceland, and the United States, and a Norwegian vessel, were dispatched to the ship's last known position; and over the

course of the day, succeeded in locating exercise life rafts by successfully communicating and coordinating their operations.

ARCTIC GUARDIAN provided an excellent first step toward achieving more concrete and closer cooperation between the member states, and established a sound basis for developing further joint exercises. Future annual operations and tabletop exercises are planned.



Caption (Left to Right): Multipurpose Offshore Patrol Vessel Icgv Thor (Iceland), Frigate HDMS Vaedderen (Denmark), Medium River Icebreaker CCGS Pierre Radisson (Canada), Medium Endurance Cutter Spencer (United States), and Offshore Patrol Vessel Nocgv Andenes (Norway) sail in formation during exercise ARCTIC GUARDIAN 2017. (U.S. Coast Guard photo by Petty Officer Third Class Frank Iannazzo Simmons.)

# COAST GUARD INTELLIGENCE

The Coast Guard is a member of the Intelligence Community (IC), a group of 17 Executive Branch departments and agencies that work together and separately to conduct intelligence activities



necessary to conduct foreign relations and protect our national security. Roles and responsibilities of the Intelligence Community and its members are defined in Executive Order (EO) 12333. As a community member, Coast Guard Intelligence produces and disseminates intelligence products that support other national intelligence and federal law enforcement agencies, the Department of Homeland Security (DHS), and the National Command Authority. In addition to the authority prescribed in EO 12333, the Coast Guard collects information

of potential intelligence value using its law enforcement and regulatory authorities. Coast Guard Intelligence provides decision advantage, knowledge about adversaries, threats, and the surrounding environment. Coast Guard Intelligence provides essential mission support to Coast Guard tactical and operational commanders, and to senior Coast Guard leaders in their strategic management and policy-making roles.

## ***FY 2017 Performance Highlights***

- Published 3,395 Field Intelligence Reports (FIR), of which 853 satisfied national level Intelligence Community Collection Requirements and were converted into Intelligence Information Reports (IIR) and published to partner agencies in the intelligence community.
- The ICC Geospatial Intelligence Department's support to maritime working groups provided actionable geospatial intelligence tied to 126 drug events that contributed to the removal of 35,630 pounds of marijuana, with a street value of over \$16 million.
- Coast Guard Foreign Disclosure Program favorably approved 3,526 foreign disclosure requests supporting bilateral and multilateral operations and cooperation, spanning nearly all Coast Guard statutory missions, and ranging from disclosure of the most sensitive intelligence products to the sale and transfer of high-value defense articles and services, e.g., the sale of the Coast Guard Cutter Morgenthau to Vietnam in May 2017.

## ***Success Stories***

**Intelligence Coordination Center (ICC) Answering the Call.** During the 2017 hurricane season, the ICC demonstrated its ability to perform not just its intelligence-related responsibilities but also served as a force multiplier to facilitate the Coast Guard's response efforts. Specifically, as thousands of distress calls overwhelmed the National Command Center on the morning of August 28, 2017, the Commandant's Intelligence Plot (CIP) portion of the ICC was the first entity outside the National Command Center and Incident Management Team chains of command to render critical assistance for those impacted by Hurricane Harvey.

Plot members served as a central point for data entry to relay information from thousands of calls taken by the NCC watchstanders down to responders in Houston, ensuring lifesaving operations were directed to the most critical needs. In addition, the CIP coordinated, built, and delivered daily intelligence briefings to the Commandant by fusing law enforcement intelligence, geospatial intelligence, and Intelligence Community reporting. These briefings provided the Commandant with a unique perspective on the strategic implications of Hurricane Harvey in terms of energy impacts, international engagement, and assessments of maritime critical infrastructure. At the same time, the CIP built a collection plan using social media to monitor for indications and warnings of civil unrest for the visibility of Coast Guard senior leadership.

For five weeks, the ICC Geo-Spatial Intelligence (GEOINT) also supported the Coast Guard's response efforts. Support began in Texas and Louisiana with historic flooding caused by Hurricane Harvey. Analysts deployed to the Houston Emergency Operations Center in Texas and Maritime Intelligence Fusion Center Atlantic to provide GEOINT subject matter expertise, support, coordination, and information de-confliction for the event. Before Harvey support had wrapped up, the GEOINT team turned their attention to the Caribbean and Florida, for Hurricane Irma. Hurricane Jose was then monitored closely as it slowly worked its way up the eastern seaboard. After Hurricane Maria made landfall, the ICC GEOINT fully engaged to support Puerto Rico and the U.S. Virgin Islands with pre and post-storm assessments, responding to requests for information that included over 87 targets of interest.

In total, ICC GEOINT accessed 3,750 images, creating 85 imagery products, and 43 geospatial products against more than 120 targets in ten states, territories, and countries prior to and during hurricane response efforts. Pre-storm products included hurricane tracks overlaid with Coast Guard units, predicative storm surge modeling, data mapping, and critical infrastructure key resource data overlays. Post-landfall geospatial mapping products included flood inundation modeling based on rainfall amounts, the plotting of 911 rescue call data, emergency shelter locations, and crime reporting, overlaid with Coast Guard units. Post-storm, the damage assessment and flood extent work began in earnest, utilizing imagery collected from numerous airborne and space-based sensors. ICC GEOINT imagery analysts assessed every Coast Guard unit, critical infrastructure and key resource, ports, major waterways, dams and levees, transportation routes, and public utilities.

The imagery was provided to Coast Guard decision-makers at all levels and with the Secretary of the Department of Homeland Security's briefing staff to be included in Secretarial-level storm update briefings. Products were further shared with Federal Disaster Response partners at the National Reconnaissance Office, Federal Emergency Management Agency, Customs and Border Protection Air and Marine Operations Center, and U.S. Northern Command (NORTHCOM), providing a critically needed common understanding of the operating environment to ensure the proper prioritization of support to affected areas.

**Expanding Arctic Interests.** In June 2017, ICC analysts participated in the 2017 Arctic Intelligence Forum (AIF) in Ottawa, Canada, an event hosted by the North American Aerospace Defense Command, U.S. Northern Command, and the Canadian government. The forum, conducted annually, provides Arctic analysts in the Intelligence Community a valuable opportunity to share information, make new partnerships, and to gain knowledge about the efforts of the rest of the Arctic Community of Interest. ICC briefed a recently published ICC Arctic intelligence assessment, which informed U.S., Canadian, and Norwegian counterparts; and led to a valuable group discussion that helped identify gaps and define future opportunities for information sharing and analysis on important Arctic issues.

**Safeguarding our Natural Resources.** Working with international partners to save critical fish stocks, the Coast Guard deployed intelligence analysts to four Quadrilateral Defense Partnership and Forum Fisheries Agency regional maritime surveillance and fisheries enforcement operations in the Western, Central, and South Pacific. Analysts integrated into the operations' multinational command centers and provided data fusion, maritime domain awareness, network analysis, and development of intelligence resources and methodologies for 17 Pacific Island Nations. During Operation NASSE (French word for fish trap), intelligence cued 27 boardings that resulted in 29 fisheries citations. Participation in this operation advanced Coast Guard relationships with international partners and reinforced deterrence in the world's most lucrative tuna fisheries, now threatened by illegal catch.

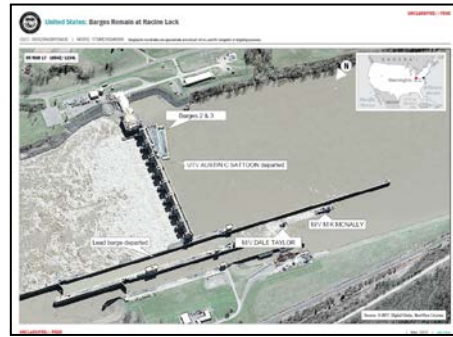


LT Anna Sanders and IS2 Brenda Tejada deployed to the Joint Command Centre in Wellington New Zealand during Operation NASSE. Operation NASSE participants included the French Navy, Australia Fisheries Management Authority, New Zealand Ministry for Primary Industries, New Zealand Navy, and US Coast Guard. (U.S. Coast Guard photo.)

**Partnership with DoD Identifies Sanction Violations.** After receiving an interagency request for vessel tracking support, Coast Guard Coastwatch monitored a vessel that had disabled its Automated Identification System near Cyprus and proceeded to the port of Baniyas in Syria. The vessel's actions violated sanctions previously imposed by the United States. As a result, the U.S. seized approximately \$2.6 million as penalty from a Russian-based company for the sanctions violation.

**Innovating Support to Critical Incidents:** On March 2, 2017, the Tug Austin C Sattoon collided with the Racine Lock on the Ohio River. The tug was pushing three barges carrying 30,000 gallons of oil down the river when the incident occurred, and the barges broke free from the tug and drifted down stream with the current. Fearing a major oil spill, Sector Ohio River immediately stood up an Incident Management Team, and Coast Guard District Eight stood up the District Response Advisory Team.

Once the Intelligence Coordination Center (ICC) received the incident notification, it immediately requested commercial imagery collection over the impacted area. The timely collection, exploitation, and dissemination of this imagery provided by ICC enhanced situational awareness for the operational command and confirmed that there was no marine pollution. The ICC's products saved the Coast Guard from having to launch an air asset to monitor the situation, while expediting the remediation of the incident and the re-opening of this critical waterway.



Racine Lock area showing position of the Sattoon casualty. (U.S. Coast Guard photo.)

**Stopping Smuggling Worldwide.** Spanish Customs, through U.S. Customs and Border Protection (CBP), requested Coast Guard support for a potential narcotics smuggling event from Colombia destined for Spain. Specifically, CBP requested historical track lines of the vessel's movements and cargo onboard for the last 180 days to identify a nexus to known smuggling ports. Additionally, Coast Guard Coastwatch screened approximately 2,000 manifests and vetted approximately 1,750 containers for potential links to transnational organized crime by the shipping companies, consignees, notifying parties, and receiving parties that resulted in negative results. Furthermore, Coastwatch monitored cargo movements from the target vessel's departure from Colombia to its arrival in Spain. The vessel and its cargo were cued for targeting upon its arrival. The search led to the seizure of 108 kilograms of cocaine valued at \$8.3 million.



Drugs seized. (U.S. Coast Guard Coastwatch photo.)

# INTERNATIONAL AFFAIRS

The Coast Guard is a unique instrument of national power that promotes global maritime governance in support of U.S. national security, homeland security, and foreign policy objectives. The Coast Guard also pursues meaningful international engagement activities that enhance its own operations. This is accomplished through a robust foreign visits program, key leader engagements with senior maritime and government officials from around the world, and subject matter expert exchanges with partner nations. The Coast Guard conducts maritime assessments of partner nations and provides a diverse set of training and technical services. Using resident training programs at training facilities and exportable Mobile Training Teams, the Coast Guard assists partner nations in strengthening their maritime service capacity and professionalism. Through the Excess Defense Articles and Foreign Military Sales programs, the Coast Guard transfers assets, associated sustainment, and training to partner nations to support their maritime missions.



Members of Maritime Safety and Security Teams Los Angeles and New York take a photo with Belize Defense Force Special Boat Unit after conducting 19 days of mobile training in Ladyville, Belize. (U.S. Coast Guard photo by Chief Warrant Officer John Rose.)

## ***FY 2017 Performance Highlights***

- Hosted 3,225 visits from 165 countries.
- Provided resident technical and professional military education and training to 249 international; military students from over 75 countries.
- 67 Mobile Training Teams provided training to 32 countries.

## ***Success Stories***

### **Comprehensive Security Sector Assistance Priority Engagements.**

In FY 2017, the Coast Guard advanced United States' national interests and Coast Guard operational equities in seven comprehensive security sector assistance countries with the goal of strengthening maritime governance and security. The countries were El Salvador, Honduras, Indonesia, Liberia, Philippines, Saudi Arabia, and Vietnam.

#### *Vietnam*

The Coast Guard relationship continued to be the centerpiece of the U.S. military-to-military relationship with Vietnam. In May 2017, the U.S. Coast Guard transferred the first 378-foot high endurance cutter to the Vietnam Coast Guard. This was the first of a defense article to Vietnam

since the lifting of the lethal weapons ban in 2016. Further, the Coast Guard hosted the Vietnam Minister of Defense along with the Commander of the Vietnam Coast Guard at U.S. Coast Guard Headquarters to affirm the strong collaboration between the U.S. Coast Guard and Vietnam Coast Guard. The Coast Guard continued its technical assistance programs to Vietnam with the delivery of the first tranche of Metal Shark boats and Coast Guard mobile and in-residence training courses.

### *Philippines*

The Coast Guard continued to develop training and technical assistance solutions to support the 2016 transfer of the third High Endurance Cutter to the Philippines. The Coast Guard also began implementation of a \$4.6M interagency agreement with the Philippines Bureau of International Narcotics and Law Enforcement Affairs (INL). Throughout FY 2017, the Coast Guard sent 34 Philippine students to Training Center Yorktown at various “A” schools and assisted with an organizational development plan to grow the INL from 10,000 to 14,500 over the next five years. Finally, three candidates from Philippines were offered appointments to the U.S. Coast Guard Academy for the Class of 2021.

### *El Salvador*

The Coast Guard began training efforts in El Salvador to increase their maritime law enforcement and interdiction capabilities. The Coast Guard also selected and trained a Maritime Advisor to support these efforts.

## **Western Hemisphere**

### *Mexico*

The Coast Guard advanced its relationship with the Mexican Secretaría de Marina (SEMAR) via key leader engagements and the Coast Guard–SEMAR Summit. The Commandant visited Mexico in July 2017, and set the foundation for the Coast Guard–SEMAR staff talks, hosted by the Coast Guard in Alameda, CA, in November 2017. Progress on mutual goals included: a Captain of the Port and “Coast Guard-like functions” development plan; agreements on planned operations, communications, and protocols for law enforcement activity; proposals for implementing the Coast Guard–SEMAR Information Sharing memorandum of understanding; a roadmap for delimiting Mexico’s Search and Rescue regions; and a plan for wide ranging initiatives for training, education, exercises, and subject matter expert exchanges.

### *Central America (CENTAM) Plan*

A Coast Guard Integrated Planning Team (IPT) was established to develop a whole-of-Coast Guard CENTAM Plan. The purpose of the plan is to implement the Coast Guard’s Western Hemisphere Strategy in Central America and to leverage all tools at the Coast Guard’s disposal to combat transnational criminal networks. In FY 2017, the CENTAM IPT developed and received approval

on the CENTAM Plan Mission Statement, End-States, Lines of Effort, and most importantly, country prioritization.

## **Europe**

### *Republic of Georgia*

With the assistance of Department of State, Bureau of Export Control, and the Coast Guard, the Republic of Georgia achieved full operational capability of their Joint Maritime Operations Center (JMOC) located in Supsa. The JMOC supports Georgian security by integrating the efforts of several ministries at all phases of the maritime threat identification and response spectrum. Activities now occur daily at the JMOC to track vessels, examine anomalies, and identify threats. As of September 2017, the JMOC staff includes officials from six ministries/agencies.

### *Ukraine*

Following almost two years of effort and hampered by ongoing conflict in Crimea, the Coast Guard initiated implementation of a multi-year plan (outlined in a maritime needs assessment funded by Department of State) to assist the Ukraine Coast Guard (UACG) with its modernization efforts. In June 2017, a senior delegation from the State Border Guard Service (UACG is a component), visited Coast Guard Headquarters, Coast Guard Training Center Yorktown, Coast Guard Sector Hampton Roads, and Coast Guard Station Milford Haven. The Coast Guard demonstrated to Ukrainian leadership how to effectively build an enhanced maritime entity to support new realities in the Black Sea region. As detailed in the multi-year plan and as a result of the visit, the Coast Guard will further its effort to assist the UACG with human resources development, training, fleet maintenance, and infrastructure development.

## **International Forums.**

### *Arctic Coast Guard Forum*

In March 2017, and in furtherance of the Coast Guard's Arctic Strategy, the Coast Guard hosted the Arctic Coast Guard Forum in Boston and transferred the chair to Finland. Principals from Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, and Sweden, representing agencies that serve similar functions in the Arctic region, met in Boston in March 2017, to advance their practical cooperation in the Arctic. In September 2017, the Forum held its first ever search and rescue exercise in Iceland. The exercise included five ships, two helicopters, and one U.S. Navy



ADM Zukunft and Lieutenant General Jaakko Kaukanen, Chief of the Finnish Border Guard at the conclusion of the last Arctic Coast Guard Forum Meeting. (U.S. Coast Guard photo.)

P-8. In three years, the Forum has become the most effective, strategically and operationally focused environment for the Coast Guard with the eight Arctic nations.

#### *North Pacific Coast Guard Forum and Coast Guard Global Summit*

The Japan Coast Guard hosted the 18th annual North Pacific Coast Guard Forum in September



Participants at the 18<sup>th</sup> Annual North American Coast Guard Forum held in Japan, September 2017. (U.S. Coast Guard photo.)

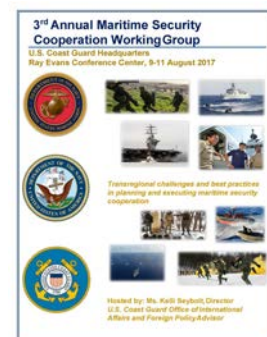
2017, in Tokyo, Japan. Vice Admiral Fred Midgette, U.S. Coast Guard Pacific Area Commander, served as the Coast Guard Head of Delegation. He met with the other heads of delegations during the Forum and separately in bilateral meetings to discuss mutual interests like fisheries enforcement, search and rescue, environmental response, joint training opportunities, and Arctic operations. The North Pacific Coast Guard Forum Working Groups convened simultaneously and discussed priorities and progress, and out-briefed at the Plenary.

The Coast Guard spearheaded and promoted changes to the North Pacific Coast Guard Forum Memorandum of Cooperation Organizational Framework Annex to shift the order of meetings and the structure of correspondence at future Summits and Experts meetings. The shift will provide opportunities for reporting and feedback between Heads of Delegation and Working Groups to increase visibility of efforts and accountability of progress. This proposal was well received by the Heads of Delegation at the Plenary and was implemented in Working Group plans.

The first Coast Guard Global Summit took place on the heels of the Forum and showcased multi-national operations around the world while highlighting the value of maritime service cooperation.

#### *Maritime Security Cooperation Working Group*

In August 2017, the Coast Guard hosted over 150 participants, including senior executives from the Department of Defense, and Department of State for the third annual Maritime Security Cooperation Working Group. Hosted at Coast Guard Headquarters, the theme was “Transregional challenges and best practices in planning and executing maritime security cooperation,” which highlighted seams, gaps, and opportunities regarding the challenges outlined in the 2016 National Military Strategy. The Working Group also brought together maritime security cooperation practitioners from the Coast Guard, U.S. Navy, and U.S. Marine Corps regional components, headquarters staff, and other maritime stakeholder organizations in order to facilitate an integrated maritime approach to security cooperation



as outlined in the 2013 Maritime Security Cooperation Policy. This working group is a critical coordination mechanism among the three sea services, driving meaningful recommendations and solutions to security cooperation challenges in the maritime domain.

# Appendix – PERFORMANCE MEASURE DEFINITIONS

## MARITIME SECURITY OPERATIONS

Percent reduction of all maritime security risk subject to USCG influence	A-2
Percent reduction of maritime security risk—USCG consequence management	A-3
Percent reduction of maritime security risk —USCG terrorist entry prevention	A-4
Percent reduction of maritime security risk—USCG WMD entry prevention	A-5

## MARITIME LAW ENFORCEMENT

Number of undocumented migrants attempting to enter U.S. by maritime routes	A-6
Number of undocumented migrants attempting to enter U.S. by maritime routes interdicted	A-7
Migrant interdiction effectiveness in the maritime environment	A-8
Percent undocumented migrants attempting to enter U.S. by maritime routes interdicted by USCG	A-9
Metric tons of cocaine removed	A-10
Removal rate for cocaine from non-commercial vessels in maritime transit zone	A-11
Fishing regulation compliance rate	A-12
Percent of federal fisheries found in compliance with laws and regulations	A-13
Number of detected incursions of foreign fishing vessels violating U.S. waters	A-14
Interdiction rate of foreign fishing vessels violating U.S. waters	A-15

## MARITIME PREVENTION

Annual MTSA facility compliance rate with transportation worker ID credential regulations	A-16
Security compliance rate for high risk maritime facilities	A-17
Annual number of breaches at high risk maritime facilities	A-18
Annual number of serious marine incidents	A-19
3-yr average number of serious marine incidents	A-20
Annual number of commercial mariner deaths and critical, serious & severe injuries	A-21
3-yr average number of commercial mariner deaths and critical, serious & severe injuries	A-22
Annual number of commercial passenger deaths and critical, serious & severe injuries	A-23
3-yr average number of commercial passenger deaths and critical, serious & severe injuries	A-24
Annual number of recreational boating deaths	A-25
3-yr average number of recreational boating deaths	A-26
Annual number of recreational boating deaths and injuries	A-27
3-yr average number of recreational boating deaths and injuries	A-28
Annual number of chemical discharge incidents	A-29
3-yr average number of chemical discharge incidents in the maritime environment per 100 million tons shipped	A-30
Annual number of oil spills>100 gallons	A-31
3-yr average number of oil spills in the maritime environment per 100 million tons shipped	A-32

## MARITIME RESPONSE

Percent of people in imminent danger saved in the maritime environment	A-33
Percent of time rescue assets are on-scene within 2 hours	A-34
Percentage of property “in danger of loss” saved	A-35

## DEFENSE OPERATIONS

Defense readiness of major cutters for DoD contingency planning	A-36
Defense readiness of patrol boats for contingency planning	A-37
Defense readiness of port security units (deployed)	A-38
Defense readiness of port security units (ready to deploy)	A-39

## MARINE TRANSPORTATION SYSTEM MANAGEMENT

Availability of maritime navigation aids	A-40
Percent of time high-priority waterways in Great Lakes and Eastern Seaboard open during ice season	A-41
Annual number of navigational accidents	A-42
5-yr average number of navigational accidents	A-43

## PERCENT REDUCTION OF ALL MARITIME SECURITY RISK SUBJECT TO USCG INFLUENCE

MEASURE DESCRIPTION	<p>A proxy measure of Coast Guard effectiveness in reducing maritime security risk, where residual risk after Coast Guard intervention is reported as a percent reduction of what otherwise would be the raw risk. It is based on an assessment of threat, vulnerability and potential consequences for sixteen of the most significant maritime attack scenarios, and the expected impact of all relevant Coast Guard maritime security efforts.</p>
USCG PROGRAM	Maritime Security Operations
USCG MISSION	Ports, Waterways and Coastal Security—Response Activities
DHS ALIGNMENT	<p>Mission Area 1 - Prevent Terrorism and Enhance Security</p> <p>Goal 1.1 - Prevent Terrorist Attacks</p> <p>Sub-Goal 1.1.2 – Deter and Disrupt Operations</p>
SCOPE	<p>Annually, experienced facilitators guide Subject Matter Experts from representative Coast Guard Commands and ports in using the Maritime Security Risk Analysis Model (MSRAM) to assess raw threat, vulnerability and potential consequences for sixteen of the most-significant terrorist attack scenarios and the residual risk remaining after all relevant Coast Guard maritime security efforts.</p>
DATA SOURCE	<p>The Maritime Security Risk Analysis Model (MSRAM) tool is used to score threat, vulnerability and consequences associated with the defined target and attach scenarios. Coast Guard resource employment and capacity information is taken from the Service's AOPS, ALMIS and MISLE data systems.</p>
METHODOLOGY	<p>Workshops comprised of Subject Matter Experts are convened to assess raw threat, vulnerability and potential consequences for particular terrorist attack scenarios and to determine residual risk remaining after all relevant Coast Guard maritime security efforts. Round-table discussions are guided by experienced facilitators and informed by operational and regulatory activity data, which is extracted from AOPS, ALMIS and other authoritative information systems. Consensus determinations of raw risk and likely risk reduction resulting from Coast Guard maritime security efforts are compiled within the Maritime Security Risk Analysis Model (MSRAM), and validated by Coast Guard leadership.</p>
VERIFICATION & VALIDATION	<p>To ensure consistency in the calculation of risk, an explicit and conceptually appropriate methodology is designed into the Maritime Security Risk Assessment Model (MSRAM). To ensure consistency in the assessment of risk factors, uniform definitions and concepts are established and structured training is provided to subject matter experts participating in elicitation workshops. Fidelity is assured for data entered in the AOPS, ALMIS and Marine Information for Safety and Law Enforcement (MISLE) information systems through program logic and pull-down menus that require key elements, prohibit inappropriate entries, and limit choices to pre-determined options. Results are also checked for reliability by comparing them to prior assessments and comparable benchmarks; any inconsistencies are identified and resolved or documented.</p>
LIMITATIONS	<p>This measure is a proxy indicator; it is an assessment of sixteen of the most significant maritime attack scenarios and not a compilation of total risk for all conceivable attack scenarios. The assessment is an estimate of potential consequences extrapolated from known data; it is an approximation determined in the absence of actual security attacks. The measure encompasses performance of multiple Coast Guard programs; it reflects the risk reduction impacts of Maritime Security Operations Program activities as well as the contributions of Maritime Prevention Program efforts.</p>

## PERCENT REDUCTION OF MARITIME SECURITY RISK—USCG CONSEQUENCE MANAGEMENT

<b>MEASURE DESCRIPTION</b>	A proxy measure of Coast Guard effectiveness in reducing maritime security risk through consequence mitigation, where residual risk after Coast Guard mitigation efforts is reported as a percent reduction of what otherwise would be the raw risk. It is based on an assessment of threat, vulnerability and potential consequences for sixteen of the most significant maritime attack scenarios, and the expected impact of all relevant Coast Guard consequence mitigation efforts.
<b>USCG PROGRAM</b>	Maritime Security Operations
<b>USCG MISSION</b>	Ports, Waterways and Coastal Security—Response Activities
<b>DHS ALIGNMENT</b>	Mission Area 1 - Prevent Terrorism and Enhance Security Goal 1.1 - Prevent Terrorist Attacks Sub-Goal 1.1.2 – Deter and Disrupt Operations
<b>SCOPE</b>	Annually, experienced facilitators guide Subject Matter Experts from representative Coast Guard Commands and ports in using the Maritime Security Risk Analysis Model (MSRAM) to assess raw threat, vulnerability and potential consequences for sixteen of the most-significant terrorist attack scenarios and the residual risk remaining after all relevant Coast Guard maritime security consequence mitigation.
<b>DATA SOURCE</b>	The Maritime Security Risk Analysis Model (MSRAM) tool is used to score threat, vulnerability and consequences associated with the defined target and attach scenarios. Coast Guard resource employment and capacity information is taken from the Service's AOPS, ALMIS and MISLE data systems.
<b>METHODOLOGY</b>	Workshops comprised of Subject Matter Experts are convened to assess raw threat, vulnerability and potential consequences for particular terrorist attack scenarios and to determine residual risk remaining after all relevant Coast Guard maritime security consequence mitigation. Round-table discussions are guided by experienced facilitators and informed by operational and regulatory activity data, which is extracted from AOPS, ALMIS and other authoritative information systems. Consensus determinations of raw risk and likely risk reduction resulting from Coast Guard maritime security consequence mitigation are compiled within the Maritime Security Risk Analysis Model (MSRAM), and validated by Coast Guard leadership.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency in the calculation of risk, an explicit and conceptually appropriate methodology is designed into the Maritime Security Risk Assessment Model (MSRAM). To ensure consistency in the assessment of risk factors, uniform definitions and concepts are established and structured training is provided to subject matter experts participating in elicitation workshops. Fidelity is assured for data entered in the AOPS, ALMIS and Marine Information for Safety and Law Enforcement (MISLE) information systems through program logic and pull-down menus that require key elements, prohibit inappropriate entries, and limit choices to pre-determined options. Results are also checked for reliability by comparing them to prior assessments and comparable benchmarks; any inconsistencies are identified and resolved or documented.
<b>LIMITATIONS</b>	This measure is a proxy indicator; it is an assessment of sixteen of the most significant maritime attack scenarios and not a compilation of total risk for all conceivable attack scenarios. The assessment is an estimate of potential consequences extrapolated from known data; it is an approximation determined in the absence of actual security attacks. The measure encompasses consequence mitigation performance of multiple Coast Guard programs; it reflects the consequence mitigation impacts of Maritime Security Operations Program activities as well as the contributions of Maritime Prevention Program efforts.

## PERCENT REDUCTION OF MARITIME SECURITY RISK —USCG TERRORIST ENTRY PREVENTION

<b>MEASURE DESCRIPTION</b>	A proxy measure of Coast Guard effectiveness in reducing maritime security risk by stopping terrorist entry into the U.S. by maritime means, where residual risk after considering Coast Guard entry prevention efforts is reported as a percent reduction of what otherwise would be the raw risk. It is based on an assessment of threat, vulnerability and potential consequences for sixteen of the most significant maritime attack scenarios and expected risk reduction impact of all relevant Coast Guard entry prevention efforts.
<b>USCG PROGRAM</b>	Maritime Security Operations
<b>USCG MISSION</b>	Ports, Waterways and Coastal Security—Response Activities
<b>DHS ALIGNMENT</b>	Mission Area 1 - Prevent Terrorism and Enhance Security Goal 1.1 - Prevent Terrorist Attacks Sub-Goal 1.1.2 – Deter and Disrupt Operations
<b>SCOPE</b>	Annually, experienced facilitators guide Subject Matter Experts from representative Coast Guard Commands and ports in using the Maritime Security Risk Analysis Model (MSRAM) to assess raw threat, vulnerability and potential consequences for sixteen of the most-significant terrorist attack scenarios and the residual risk remaining after all relevant Coast Guard efforts to prevent terrorist entry into the U.S. by maritime means.
<b>DATA SOURCE</b>	The Maritime Security Risk Analysis Model (MSRAM) tool is used to score threat, vulnerability and consequences associated with the defined target and attach scenarios. Coast Guard resource employment and capacity information is taken from the Service's AOPS, ALMIS and MISLE systems.
<b>METHODOLOGY</b>	Workshops comprised of Subject Matter Experts are convened to assess raw threat, vulnerability and potential consequences for particular terrorist attack scenarios and to determine residual risk remaining after all relevant Coast Guard maritime security efforts to prevent terrorist entry into the U.S. by maritime means. Round-table discussions are guided by experienced facilitators and informed by operational and regulatory activity data, which is extracted from AOPS, ALMIS and other authoritative information systems. Consensus determinations of raw risk and likely risk reduction resulting from Coast Guard entry prevention efforts are compiled within the Maritime Security Risk Analysis Model (MSRAM), and validated by Coast Guard leadership.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency in the calculation of risk, an explicit and conceptually appropriate methodology is designed into the Maritime Security Risk Assessment Model (MSRAM). To ensure consistency in the assessment of risk factors, uniform definitions and concepts are established and structured training is provided to subject matter experts participating in elicitation workshops. Fidelity is assured for data entered in the AOPS, ALMIS and Marine Information for Safety and Law Enforcement (MISLE) information systems through program logic and pull-down menus that require key elements, prohibit inappropriate entries, and limit choices to pre-determined options. Results are also checked for reliability by comparing them to prior assessments and comparable benchmarks; any inconsistencies are identified and resolved or documented.
<b>LIMITATIONS</b>	This measure is a proxy indicator; it is an assessment of sixteen of the most significant maritime attack scenarios and not a compilation of total risk for all conceivable attack scenarios. The assessment is an estimate of potential consequences extrapolated from known data; it is an approximation determined in the absence of actual security attacks. The measure encompasses terrorist entry prevention performance of multiple Coast Guard programs; it reflects the entry prevention impact of Maritime Security Operations Program activities as well as the contributions of Maritime Prevention Program efforts.

## PERCENT REDUCTION OF MARITIME SECURITY RISK—USCG WMD ENTRY PREVENTION

<b>MEASURE DESCRIPTION</b>	A proxy measure of Coast Guard effectiveness in reducing maritime security risk by stopping entry of a Weapon of Mass Destruction (WMD) into the U.S. by maritime means, where residual risk after Coast Guard WMD entry prevention efforts is reported as a percent reduction of what otherwise would be the raw risk. It is based on an assessment of threat, vulnerability and potential consequences for sixteen of the most significant maritime attack scenarios and expected risk reduction impact of all relevant Coast Guard WMD entry prevention efforts.
<b>USCG PROGRAM</b>	Maritime Security Operations
<b>USCG MISSION</b>	Ports, Waterways and Coastal Security—Response Activities
<b>DHS ALIGNMENT</b>	Mission Area 1 - Prevent Terrorism and Enhance Security Goal 1.2 – Prevent/Protect Against Unauthorized Acquisition or Use of CBRN Materials & Capabilities Sub-Goal 1.2.2 – Identify/Interdict Unlawful Acquisition & Movement of CBRN Precursors & Materials
<b>SCOPE</b>	Annually, experienced facilitators guide Subject Matter Experts from representative Coast Guard Commands and ports in using the Maritime Security Risk Analysis Model (MSRAM) to assess raw threat, vulnerability and potential consequences for sixteen of the most-significant terrorist attack scenarios and the residual risk remaining after all relevant Coast Guard efforts to prevent entry of a WMD into the U.S. by maritime means.
<b>DATA SOURCE</b>	The Maritime Security Risk Analysis Model (MSRAM) tool is used to score threat, vulnerability and consequences associated with the defined target and attach scenarios. Coast Guard resource employment and capacity information is taken from the Service's AOPS, ALMIS and Marine Information for Safety and Law Enforcement (MISLE) data systems.
<b>METHODOLOGY</b>	Workshops comprised of Subject Matter Experts are convened to assess raw threat, vulnerability and potential consequences for particular terrorist attack scenarios and to determine residual risk remaining after all relevant Coast Guard maritime security efforts to prevent WMD entry into the U.S. by maritime means. Round-table discussions are guided by experienced facilitators and informed by operational and regulatory activity data, which is extracted from AOPS, ALMIS and other authoritative information systems. Consensus determinations of raw risk and likely risk reduction resulting from Coast Guard WMD entry prevention efforts are compiled within the Maritime Security Risk Analysis Model (MSRAM), and validated by Coast Guard leadership.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency in the calculation of risk, an explicit and conceptually appropriate methodology is designed into the Maritime Security Risk Assessment Model (MSRAM). To ensure consistency in the assessment of risk factors, uniform definitions and concepts are established and structured training is provided to subject matter experts participating in elicitation workshops. Fidelity is assured for data entered in the AOPS, ALMIS and MISLE information systems through program logic and pull-down menus that require key elements, prohibit inappropriate entries, and limit choices to pre-determined options. Results are also checked for reliability by comparing them to prior assessments and comparable benchmarks; any inconsistencies are identified and resolved or documented.
<b>LIMITATIONS</b>	This measure is a proxy indicator; it is an assessment of sixteen of the most significant maritime attack scenarios and not a compilation of total risk for all conceivable attack scenarios. The assessment is an estimate of potential consequences extrapolated from known data; it is an approximation determined in the absence of actual security attacks. The measure encompasses WMD entry prevention performance of multiple Coast Guard programs; it reflects the WMD entry prevention impact of Maritime Security Operations Program activities as well as the contributions of Maritime Prevention Program efforts.

## NUMBER OF UNDOCUMENTED MIGRANTS ATTEMPTING TO ENTER U.S. BY MARITIME ROUTES

<b>MEASURE DESCRIPTION</b>	The number of known undocumented migrants attempting to enter the U.S. by maritime means, which is comprised of those interdicted by the Coast Guard, plus those interdicted by other agencies or foreign entities in partnership with the Coast Guard, plus those who self-report their entry by maritime means or are apprehended by CBP after so entering.
<b>USCG PROGRAM</b>	Maritime Law Enforcement
<b>USCG MISSION</b>	Migrant Interdiction
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.1 - Secure U.S. Air, Land and Sea Borders and Approaches Sub-Goal 2.1.1 - Prevent Illegal Import and Entry
<b>SCOPE</b>	The measure includes all undocumented migrants of all nationalities who attempt direct entry by maritime means into the United States, its territories and possessions, who are interdicted by the Coast Guard or by other agencies or foreign entities in partnership with the Coast Guard. The measure also includes those undocumented migrants who self-report entry by maritime means or are apprehended by CBP after so entering the United States, its territories and possessions.
<b>DATA SOURCE</b>	Coast Guard Migrant interdiction data is extracted from Daily Operational Summaries compiled by the Coast Guard National Command Center from operational reports received from Coast Guard units. Additional interdiction data is compiled from notifications received from other agencies or foreign entities acting in partnership with the Coast Guard.
<b>METHODOLOGY</b>	Results for a given year are a compilation of all undocumented migrants of all nationalities who attempt direct entry by maritime means into the United States, its territories and possessions. It is the sum of interdictions during that period by the Coast Guard, plus any notifications of interdictions provided by other law enforcement agencies or foreign entities, plus self-reported entries or apprehensions reported by CBP of undocumented migrants entering by maritime means.
<b>VERIFICATION &amp; VALIDATION</b>	Coast Guard data are subject to review at multiple levels; discrepancies are reviewed and corrected as necessary. Data provided by other foreign entities acting in partnership with the Coast Guard are also reviewed and corrected as needed.
<b>LIMITATIONS</b>	Notifications received from other entities may be delayed in reaching the Coast Guard or not provided at all. The number of known undocumented migrants attempting to enter the U.S. by maritime means is not likely all who attempt entry—the total flow of undocumented migrants is difficult to determine, as the number not interdicted (who succeed, turn back or are lost in transit) is not directly measured.

## NUMBER OF UNDOCUMENTED MIGRANTS ATTEMPTING TO ENTER U.S. BY MARITIME ROUTES INTERDICTED

<b>MEASURE DESCRIPTION</b>	The number of undocumented migrants attempting to enter the U.S. by maritime means interdicted by the Coast Guard and other partners before reaching the U.S. land border—including maritime interdictions by Customs and Border Protection and other agencies or foreign entities in partnership with the Coast Guard for migrant interdiction operations.
<b>USCG PROGRAM</b>	Maritime Law Enforcement
<b>USCG MISSION</b>	Migrant Interdiction
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.1 - Secure U.S. Air, Land and Sea Borders and Approaches Sub-Goal 2.1.1 - Prevent Illegal Import and Entry
<b>SCOPE</b>	The measure includes all undocumented migrants of all nationalities who attempt direct entry by maritime means into the United States, its territories and possessions who are interdicted by the Coast Guard or by other agencies or foreign entities in partnership with the Coast Guard.
<b>DATA SOURCE</b>	Coast Guard Migrant interdiction data is extracted from Daily Operational Summaries compiled by the Coast Guard National Command Center from operational reports received from Coast Guard units. Additional interdiction data is compiled from notifications received from other agencies or foreign entities acting in partnership with the Coast Guard.
<b>METHODOLOGY</b>	Results for a given year are a compilation of all undocumented migrants of all nationalities who attempt direct entry by maritime means into the United States, its territories and possessions who are interdicted. It is the sum of interdictions during that period by the Coast Guard, plus apprehensions reported by CBP, plus any notifications of interdictions received from other law enforcement agencies or foreign entities.
<b>VERIFICATION &amp; VALIDATION</b>	Coast Guard data are subject to review at multiple levels; discrepancies are reviewed and corrected as necessary. Data provided by other foreign entities acting in partnership with the Coast Guard are also reviewed and corrected as needed.
<b>LIMITATIONS</b>	Notifications received from other entities may be delayed in reaching the Coast Guard or not provided at all. The number of undocumented migrants interdicted is best understood in the context of the flow of such migrants who are attempting to enter the U.S. by maritime means.

## MIGRANT INTERDICTION EFFECTIVENESS IN THE MARITIME ENVIRONMENT

MEASURE DESCRIPTION	The percentage of known undocumented migrants attempting to enter the U.S. by maritime means who are interdicted by the Coast Guard and other partners before reaching the land border, where the number of known migrants attempting entry is comprised of those interdicted by the Coast Guard and its partners plus undocumented migrants who self-report their entry by maritime means or are apprehended by CBP after so entering.
USCG PROGRAM	Maritime Law Enforcement
USCG MISSION	Migrant Interdiction
DHS ALIGNMENT	Mission Area 2 - Secure and Manage Our Borders Goal 2.1 - Secure U.S. Air, Land and Sea Borders and Approaches Sub-Goal 2.1.1 - Prevent Illegal Import and Entry
SCOPE	The measure includes all undocumented migrants of all nationalities who attempt direct entry by maritime means into the United States, its territories and possessions, who are interdicted by the Coast Guard or by other agencies or foreign entities in partnership with the Coast Guard. The determination of known flow includes undocumented migrants interdicted by the Coast Guard or by other agencies or foreign entities in partnership with the Coast Guard plus those undocumented migrants who self-report entry by maritime means or are apprehended by CBP after so entering the United States, its territories and possessions.
DATA SOURCE	Coast Guard Migrant interdiction data is extracted from Daily Operational Summaries compiled by the Coast Guard National Command Center from operational reports received from Coast Guard units. Additional interdiction data is compiled from notifications received from other agencies or foreign entities acting in partnership with the Coast Guard.
METHODOLOGY	Results for a given year are the sum of Coast Guard and partner interdictions divided by the known flow of undocumented migrants attempting to enter the U.S. by maritime means, expressed as a percentage. It is Coast Guard interdictions plus maritime apprehensions by CBP plus notifications of interdictions by other agencies or foreign entities, divided by and expressed as a percentage of these interdictions plus any entries by maritime means that are self-reported or afterwards apprehended and reported by CBP.
VERIFICATION & VALIDATION	Coast Guard data are subject to review at multiple levels; discrepancies are reviewed and corrected as necessary. Data provided by other foreign entities acting in partnership with the Coast Guard are also reviewed and corrected as needed.
LIMITATIONS	Notifications received from other entities may be delayed in reaching the Coast Guard or not provided at all. The number of undocumented migrants interdicted is best understood in the context of migrant flow; but the number of known undocumented migrants is not likely all who make the attempt—the total flow is difficult to determine, as the number not interdicted (who succeed, turn back or are lost in transit) is not directly measured.

## PERCENT UNDOCUMENTED MIGRANTS ATTEMPTING TO ENTER U.S. BY MARITIME ROUTES INTERDICTED BY USCG

<b>MEASURE DESCRIPTION</b>	The percentage of known undocumented migrants attempting to enter the U.S. by maritime means who are interdicted by the Coast Guard, where the number of known migrants attempting entry is comprised of those interdicted by the Coast Guard and its partners plus undocumented migrants who self-report their entry by maritime means or are apprehended by CBP after so entering.
<b>USCG PROGRAM</b>	Maritime Law Enforcement
<b>USCG MISSION</b>	Migrant Interdiction
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.1 - Secure U.S. Air, Land and Sea Borders and Approaches Sub-Goal 2.1.1 - Prevent Illegal Import and Entry
<b>SCOPE</b>	The measure includes all undocumented migrants of all nationalities who attempt direct entry by maritime means into the United States, its territories and possessions, who are interdicted by the Coast Guard. The determination of known flow includes undocumented migrants interdicted by the Coast Guard or by other agencies or foreign entities in partnership with the Coast Guard plus those undocumented migrants who self-report entry by maritime means or are apprehended by CBP after so entering the United States, its territories and possessions.
<b>DATA SOURCE</b>	Coast Guard Migrant interdiction data is extracted from Daily Operational Summaries compiled by the Coast Guard National Command Center from operational reports received from Coast Guard units. Additional interdiction data is compiled from notifications received from other agencies or foreign entities acting in partnership with the Coast Guard.
<b>METHODOLOGY</b>	Results for a given year are the sum of Coast Guard interdictions divided by the known flow of undocumented migrants attempting to enter the U.S. by maritime means, expressed as a percentage. It is Coast Guard interdictions for the period, divided by and expressed as a percentage of the sum of these interdictions plus maritime apprehensions by CBP plus notifications of interdictions by other agencies or foreign entities plus any entries by maritime means that are self-reported or afterwards apprehended and reported by CBP.
<b>VERIFICATION &amp; VALIDATION</b>	Coast Guard data are subject to review at multiple levels; discrepancies are reviewed and corrected as necessary. Data provided by other foreign entities acting in partnership with the Coast Guard are also reviewed and corrected as needed.
<b>LIMITATIONS</b>	Notifications provided by other entities may be delayed in reaching the Coast Guard or not provided at all. The number of undocumented migrants interdicted is best understood in the context of migrant flow; but the number of known undocumented migrants is not likely all who make the attempt—the total flow is difficult to determine, as the number not interdicted (who succeed, turn back or are lost in transit) is not directly measured.

## METRIC TONS OF COCAINE REMOVED

<b>MEASURE DESCRIPTION</b>	Metric tons of cocaine removed by the Coast Guard from non-commercial vessels in the maritime domain, which includes cocaine seized by the Service plus the estimated amount of unrecovered cocaine jettisoned or destroyed as a result of Coast Guard law enforcement efforts.
<b>USCG PROGRAM</b>	Maritime Law Enforcement
<b>USCG MISSION</b>	Drug Interdiction
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.1 - Secure U.S. Air, Land and Sea Borders and Approaches Sub-Goal 2.1.1 - Prevent Illegal Import and Entry
<b>SCOPE</b>	The measure includes the amount of cocaine physically seized by the Coast Guard from non-commercial vessels in the maritime domain, which is weighed and assigned a Federal Drug Identification Number. Also included is cocaine not physically recovered by the Service that is jettisoned or destroyed during interdiction operations, which is typically determined from pursuit video or other intelligence-analysis.
<b>DATA SOURCE</b>	Cocaine removal data is from the consolidated counter-drug database (CCDB) maintained by the United States Interdiction Coordinator, Office of National Drug Control Policy. CCDB source data includes interdiction reports of Coast Guard and other Joint Interagency Task Force South (JIATF-S) members, intelligence reports from Coast Guard LANT and PAC Maritime Intelligence Fusion Centers, and other authoritative sources for cocaine production, trafficking and consumption information.
<b>METHODOLOGY</b>	Results for a given year are the sum total metric tons of cocaine seized by the Service plus the amount of cocaine observed, reported or determined as having been jettisoned or destroyed by smugglers to avoid seizure by the Coast Guard.
<b>VERIFICATION &amp; VALIDATION</b>	Both the physically seized and jettisoned or destroyed components of this measure are tracked, collected, and analyzed by the Coast Guard Office of Maritime Law Enforcement (CG-MLE). Consolidated Counter-drug Database (CCDB) source data is verified and validated quarterly by representatives from the agencies involved in transit zone interdiction, who meet and review the data for each source event and resolve any discrepancies. Coast Guard seizure data is also tracked and verified by Federal Drug Identification Numbers.
<b>LIMITATIONS</b>	This measure reflects Coast Guard efforts, and is focused on cocaine removed from non-commercial vessels in the maritime domain. The amount of cocaine jettisoned or destroyed is a good estimate based on empirical evidence; it is not an absolutely certain quantity. The amount of cocaine removed is best understood in the context of total flow; but even the most authoritative transit information available from the CCDB remains an estimate.

## REMOVAL RATE FOR COCAINE FROM NON-COMMERCIAL VESSELS IN MARITIME TRANSIT ZONE

<b>MEASURE DESCRIPTION</b>	Percentage of cocaine removed by the Coast Guard, where the amount removed includes cocaine seized plus the estimated amount jettisoned or destroyed in the course of interdiction efforts, expressed as a percentage of total maritime flow of cocaine on non-commercial vessels.
<b>USCG PROGRAM</b>	Maritime Law Enforcement
<b>USCG MISSION</b>	Drug Interdiction
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.1 - Secure U.S. Air, Land and Sea Borders and Approaches Sub-Goal 2.1.1 - Prevent Illegal Import and Entry
<b>SCOPE</b>	The measure includes the amount of cocaine physically seized by the Coast Guard from non-commercial vessels in the maritime domain, which is weighed and assigned a Federal Drug Identification Number. Also included is cocaine not physically recovered that is jettisoned or destroyed during interdiction operations, which is typically determined from pursuit video or other intelligence-analysis.
<b>DATA SOURCE</b>	Cocaine flow and removal data is from the consolidated counter-drug database (CCDB) maintained by the United States Interdiction Coordinator, Office of National Drug Control Policy. CCDB source data includes interdiction reports of Coast Guard and other Joint Interagency Task Force South (JIATF-S) members, intelligence reports from Coast Guard LANT and PAC Maritime Intelligence Fusion Centers, and other authoritative sources for cocaine production, trafficking and consumption information.
<b>METHODOLOGY</b>	Results for a given year are the sum total metric tons of cocaine seized by the Service and other partners plus the amount of cocaine observed, reported, or determined as having been jettisoned or destroyed by smugglers to avoid seizure, which is expressed as a percentage of the total maritime flow of cocaine on non-commercial vessels.
<b>VERIFICATION &amp; VALIDATION</b>	Both the physically seized and jettisoned or destroyed components of this measure are tracked, collected, and analyzed by the Coast Guard Office of Maritime Law Enforcement (CG-MLE). Consolidated Counter-drug Database (CCDB) source data is verified and validated quarterly by representatives from the agencies involved in transit zone interdiction, who meet and review the data for each source event and resolve any discrepancies. Seizure data is also tracked and verified by Federal Drug Identification Numbers.
<b>LIMITATIONS</b>	This measure is focused on cocaine removed from non-commercial vessels in the maritime domain. The amount of cocaine jettisoned or destroyed is a good estimate based on empirical evidence; it is not an absolutely certain quantity. The amount of cocaine removed is best understood in the context of total flow; but even the most authoritative transit information available from the CCDB remains an estimate.

## FISHING REGULATION COMPLIANCE RATE

MEASURE DESCRIPTION	Percent of all fishing vessels boarded and inspected at sea by the Coast Guard found to have no significant violations of domestic fisheries regulations.
USCG PROGRAM	Maritime Law Enforcement
USCG MISSION	Living Marine Resources Law Enforcement
DHS ALIGNMENT	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.3 - Maximize Compliance with U.S. Trade Laws
SCOPE	The measure includes boardings and inspections of U.S. commercial and recreational fishing vessels inside the portion of state waters that extend from three to nine nautical miles seaward of the state boundary line; U.S. commercial and recreational fishing vessels in the U.S. Exclusive Economic Zone (EEZ); foreign fishing vessels permitted inside the U.S. EEZ; and U.S. commercial and recreational fishing vessels outside the U.S. EEZ. Significant violations are those that result in significant damage or impact to a resource or fishery management plan, result in significant monetary advantage over competitors, and/or have high regional or national interest.
DATA SOURCE	Boardings and violations are documented by Coast Guard Boarding Forms and entered into the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
METHODOLOGY	Results for a given year are the number of fishing vessels found to have no significant violations of domestic fisheries regulations divided by and expressed as a percentage of all fishing vessels boarded and inspected at sea by the Coast Guard.
VERIFICATION & VALIDATION	MISLE data consistency and integrity is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Reliability is further ensured by comprehensive training and user guides, and the application itself has embedded Help screens. District, Area and Headquarters staffs review, validate and assess the data on a quarterly basis as part of the Coast Guard's Standard Operational Planning Process; and Program managers review and compare MISLE data to after-action reports, message traffic and other sources of information.
LIMITATIONS	Fishing regulation compliance is relevant in terms of Coast Guard enforcement of other-agency established regulations; it is an intermediate outcome and not the ultimate fishery health outcome these regulations are intended to influence. Observed compliance rates are determined from that portion of fishing vessels boarded and inspected; these may not be representative of the total population of fishers. It is also an average across all fisheries that is not indicative of compliance within a specific fishery. It is also important to note that ' <i>significant violations</i> ' is a qualitative standard that requires uniform application to ensure consistent results.

## PERCENT OF FEDERAL FISHERIES FOUND IN COMPLIANCE WITH LAWS AND REGULATIONS

<b>MEASURE DESCRIPTION</b>	The percentage of federal fisheries where an acceptable Level of Effective Enforcement was attained, where individual fishery components are considered acceptable if their observed compliance rates—discounted by their ratio of actual versus targeted enforcement effort—is 97% or better.
<b>USCG PROGRAM</b>	Maritime Law Enforcement
<b>USCG MISSION</b>	Living Marine Resources Law Enforcement
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.3 - Maximize Compliance with U.S. Trade Laws
<b>SCOPE</b>	A List of Fisheries is compiled annually, designating each as high or low precedence based upon relevant economic, biological, environmental or other factors. The number of active fishing vessels is determined for each fishery component and targets established for boarding 20% of these in high-precedence fisheries and 10% in low-precedence fisheries. Actual boardings are determined and enforcement effort expressed as the ratio of actual to target boardings. Associated compliance rates are determined, which are the percentage of boardings where no significant violations were found. Significant violations are those that result in significant damage or impact to a resource or fishery management plan, result in significant monetary advantage over competitors, and/or have high regional or national interest.
<b>DATA SOURCE</b>	A List of Fisheries and associated tally of Active Fishing Vessels is compiled by the Coast Guard Office of Maritime Law Enforcement (CG-MLE), based on annual Coast Guard District submissions. Boardings and violations are documented by Coast Guard Report of Boarding Forms and entered into the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the number of fisheries that attain an acceptable level of enforcement, expressed as a percentage of the total List of Fisheries. Individual fisheries are considered acceptable if they attain a Level of Effective Enforcement that is 97% or better. The Level of Effective Enforcement is the Observed Compliance Rate discounted by the ratio of actual versus targeted enforcement effort. It is the number of boardings where no significant violations were found expressed as a percentage of the total conducted, multiplied by the ratio of actual versus targeted boardings for that fishery.
<b>VERIFICATION &amp; VALIDATION</b>	MISLE data consistency and integrity is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Reliability is further ensured by comprehensive training and user guides, and the application itself has embedded Help screens. District, Area and Headquarters staffs review, validate and assess the data on a quarterly basis as part of the Coast Guard's Standard Operational Planning Process; and Program managers review and compare MISLE data to after-action reports, message traffic and other sources of information.
<b>LIMITATIONS</b>	Fishing regulation compliance is relevant in terms of Coast Guard enforcement of other-agency established regulations; it is an intermediate outcome and not the ultimate fishery health outcome these regulations are intended to influence. Observed compliance rates are determined from that portion of fishing vessels boarded and inspected; these may not be representative of the total population of fishers. The percent of fisheries found in compliance is an assessment across all fisheries, which is not indicative of compliance within a specific fishery. It is also important to note that ' <i>significant violations</i> ' is a qualitative standard that requires uniform application to ensure consistent results.

## NUMBER OF DETECTED INCURSIONS OF FOREIGN FISHING VESSELS VIOLATING U.S. WATERS

<b>MEASURE DESCRIPTION</b>	The number of incursions into the U.S. Exclusive Economic Zone (EEZ) by foreign fishing vessels detected by the Coast Guard, or reported by other sources and judged by operational commanders as valid enough to order a response.
<b>USCG PROGRAM</b>	Maritime Law Enforcement
<b>USCG MISSION</b>	Other Law Enforcement
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.3 - Maximize Compliance with U.S. Trade Laws
<b>SCOPE</b>	The measure includes foreign vessels illegally fishing inside the U.S. Exclusive Economic Zone (EEZ) detected by the Coast Guard and incursions by foreign fishing vessels reported by other sources, which reports or intelligence are judged by Coast Guard operational commanders as valid enough to order a response. The Magnuson-Stevens Act, Title 16 of the U.S. Code defines terms necessary for identifying an incursion—such as fishing, fishing vessel, foreign fishing, etc—and establishes an exemption for recreational fishing.
<b>DATA SOURCE</b>	Source data is collected from Living Marine Resource Enforcement Summary Reports and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the total number of incursions into the U.S. Exclusive Economic Zone (EEZ) by foreign fishing vessels detected by the Coast Guard, or reported by other sources and judged by operational commanders as valid enough to order a response.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. The LMR Enforcement Summary Report purpose, format and submission requirements, and guidance on the use of MISLE, are provided in the Maritime Law Enforcement Manual. Comprehensive training and these user guides help ensure reliability, and the application itself contains embedded Help screens. Additionally, District summaries of EEZ cases are reviewed monthly by Areas and submitted to the Coast Guard Office of Maritime Law Enforcement (CG-MLE), and these and other sources of information are used to assess the reliability of the MISLE system.
<b>LIMITATIONS</b>	The number of vessels detected is dependent on actual sightings by Coast Guard assets and other reports of incursions or intelligence judged by operational commanders as being of sufficient validity to order available resources to respond. Standard rules of evidence do not apply; an incursion is counted if it is reasonably believed to have occurred. The result is a generally consistent sub-sample of EEZ foreign fishing violations, which is not presumed to be the total number that actually occurred. The measure is useful in assessing if such incursions are increasing or remain sufficiently deterred. Different types of incursions are not distinguished by this measure—whether large fishing factory ship or small lancha, one-time incursion or repeat offender.

## INTERDICTION RATE OF FOREIGN FISHING VESSELS VIOLATING U.S. WATERS

<b>MEASURE DESCRIPTION</b>	The percentage of detected incursions into the U.S. Exclusive Economic Zone (EEZ) by foreign fishing vessels that are interdicted by the Coast Guard.
<b>USCG PROGRAM</b>	Maritime Law Enforcement
<b>USCG MISSION</b>	Other Law Enforcement
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.3 - Maximize Compliance with U.S. Trade Laws
<b>SCOPE</b>	The measure includes foreign vessels illegally fishing inside the U.S. Exclusive Economic Zone (EEZ) detected by the Coast Guard and incursions by foreign fishing vessels reported by other sources, which reports or intelligence are judged by Coast Guard operational commanders as valid enough to order a response. The Magnuson-Stevens Act, Title 16 of the U.S. Code defines terms necessary for identifying an incursion—such as fishing, fishing vessel, foreign fishing, etc—and establishes an exemption for recreational fishing.
<b>DATA SOURCE</b>	Source data is collected from Living Marine Resource Enforcement Summary Reports and recorded in the Coast Guard’s Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the number of Coast Guard interdictions of foreign fishing vessels expressed as a percentage of the total number of incursions into the U.S. Exclusive Economic Zone (EEZ) by foreign fishing vessels detected by the Coast Guard, or reported by other sources and judged by operational commanders as valid enough to order a response.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. The LMR Enforcement Summary Report purpose, format and submission requirements, and guidance on the use of MISLE, are provided in the Maritime Law Enforcement Manual. Comprehensive training and these user guides help ensure reliability, and the application itself contains embedded Help screens. Additionally, District summaries of EEZ cases are reviewed monthly by Areas and submitted to the Coast Guard Office of Maritime Law Enforcement (CG-MLE), and these and other sources of information are used to assess the reliability of the MISLE system.
<b>LIMITATIONS</b>	The number of vessels detected is dependent on actual sightings by Coast Guard assets and other reports of incursions or intelligence judged by operational commanders as being of sufficient validity to order available resources to respond. Standard rules of evidence do not apply; an incursion is counted if it is reasonably believed to have occurred. The measure is useful in assessing relative level of effort devoted to EEZ enforcement, as the number of interdictions is dependent on Coast Guard asset availability and employment. Different types of incursions and subsequent interdictions are not distinguished by this measure—whether large fishing factory ship or small lancha, one-time incursion or repeat offender.

## ANNUAL MTSA FACILITY COMPLIANCE RATE WITH TRANSPORTATION WORKER ID CREDENTIAL REGULATIONS

<b>MEASURE DESCRIPTION</b>	The percentage of the more than 3,400 maritime facilities subject to Maritime Transportation Security Act regulation, which are determined to be in compliance with Transportation Worker Identification Card regulations.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Ports, Waterways and Coastal Security—Prevention Activities
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.1 - Safeguard Key Nodes, Conveyances and Pathways
<b>SCOPE</b>	This measure reports results of Coast Guard inspections of maritime facilities subject to the Maritime Transportation Security Act (MTSA), where a notice of violation or civil penalty is recorded for Transportation Worker Identification Card (TWIC) infractions—workers subject to the regulation who do not have and display a valid TWIC card. MTSA regulated facilities constitute a more than 3,400 high-risk subset of all waterfront facilities. They are facilities that handle certain dangerous cargoes, liquid natural gas or transfer oil or hazardous materials in bulk; or receive foreign cargo vessels greater than 100 gross tons, U.S. cargo vessels greater than 100 gross tons carrying certain dangerous cargoes, or vessels carrying more than 150 passengers.
<b>DATA SOURCE</b>	The Security and Accountability for Every (SAFE) Port Act requires the Coast Guard to conduct at least two security inspections each year of maritime facilities subject to the Maritime Transportation Security Act (MTSA); one announced and one unannounced. Inspections include random sampling of workers subject to the TWIC regulation. These inspections, and any notices of violation or civil penalties issued, are documented in the Coast Guard’s Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the number of MTSA facilities that have not received notices of violation or civil penalties for Transportation Worker Identification Card (TWIC) infractions in the reporting period, expressed as a percentage of the total number of MTSA regulated facilities.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability and the MISLE application itself contains embedded Help screens. Data verification and validation is also affected through regular records review by the Coast Guard Office of Investigations and Casualty Analysis (CG-INV) and Coast Guard Program managers. To ensure random sampling of workers subject to the TWIC regulation, statistical guidelines based on the size of the facility have been developed to aid inspectors.
<b>LIMITATIONS</b>	The measure is a proxy indicator of maritime security risk; it provides insight into the level of adherence to the TWIC requirement. It does not encompass facilities that have a waiver or exemption, including shipyards, public access facilities, military facilities and facilities that do not store minimum established amounts of dangerous cargoes. It is based on random sampling and the observed TWIC compliance or non-compliance at that point in time; some non-compliance may be unobserved or may emerge and be resolved in between scheduled inspections or unscheduled spot checks. Some infractions can be corrected on the spot, and issuance of a notice of violation or civil penalty will depend on inspector or Captain of the Port judgment of violation severity.

## SECURITY COMPLIANCE RATE FOR HIGH RISK MARITIME FACILITIES

<b>MEASURE DESCRIPTION</b>	The percentage of the more than 3,400 maritime facilities subject to Maritime Transportation Security Act regulation, which are determined to be in compliance with the Act.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Ports, Waterways and Coastal Security—Prevention Activities
<b>DHS ALIGNMENT</b>	Mission Area 1 - Prevent Terrorism and Enhance Security Goal 1.3 - Reduce Risk to Critical Infrastructure, Key Leadership and Events Sub-Goal 1.3.1 - Enhance Security for Critical Infrastructure from Terrorism & Criminal Activity
<b>SCOPE</b>	This measure reports the results of Coast Guard inspections of maritime facilities subject to the Maritime Transportation Security Act (MTSA), where proved, default or unspecified but paid civil penalty enforcement actions are registered for infractions of the MTSA. MTSA regulated facilities constitute a more than 3,400 high-risk subset of all waterfront facilities. They are facilities that handle certain dangerous cargoes, liquid natural gas or transfer oil or hazardous materials in bulk; or receive foreign cargo vessels greater than 100 gross tons, U.S. cargo vessels greater than 100 gross tons carrying certain dangerous cargoes, or vessels carrying more than 150 passengers.
<b>DATA SOURCE</b>	The Security and Accountability for Every (SAFE) Port Act requires the Coast Guard to conduct at least two security inspections each year of maritime facilities subject to the Maritime Transportation Security Act (MTSA); one announced and one unannounced. These inspections, and any notices of violation or civil penalties issued, are documented in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the number of MTSA facilities with no proved, default or unspecified but paid civil penalty enforcement actions for MTSA infractions in the reporting period, expressed as a percentage of the total number of MTSA regulated facilities.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability and the MISLE application itself contains embedded Help screens. Data verification and validation is also affected through regular records review by the Coast Guard Office of Investigations and Casualty Analysis (CG-INV) and Coast Guard Program managers.
<b>LIMITATIONS</b>	The measure is a proxy indicator of maritime security risk; it provides insight into the level of adherence to approved plans and procedures to prevent and react to security threats. It does not encompass facilities that have a waiver or exemption, including shipyards, public access facilities, military facilities and facilities that do not store minimum established amounts of dangerous cargoes. It does not include deficiencies that do not result in proved, default or unspecified but paid civil penalty enforcement actions. It is based on observed compliance or non-compliance at points in time; some non-compliance may be unobserved or may emerge and be resolved in between scheduled inspections or unscheduled spot checks.

## ANNUAL NUMBER OF BREACHES AT HIGH RISK MARITIME FACILITIES

<b>MEASURE DESCRIPTION</b>	The annual number of breaches of security at any of the more than 3,400 maritime facilities subject to Maritime Transportation Security Act regulation, which are investigated and confirmed incidents where no Transportation Security Incident has occurred, but established security measures have been circumvented, eluded or violated.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Ports, Waterways and Coastal Security—Prevention Activities
<b>DHS ALIGNMENT</b>	Mission Area 1 - Prevent Terrorism and Enhance Security Goal 1.3 - Reduce Risk to Critical Infrastructure, Key Leadership and Events Sub-Goal 1.3.1 - Enhance Security for Critical Infrastructure from Terrorism & Criminal Activity
<b>SCOPE</b>	This measure reports breach of security incidents at facilities subject to the Maritime Transportation Security Act (MTSA) where no Transportation Security Incident has occurred, but established security measures have been circumvented, eluded or violated. MTSA facilities that discover such security incidents must report them to the National Response Center. MTSA regulated facilities constitute a more than 3,400 high-risk subset of all waterfront facilities. They are facilities that handle certain dangerous cargoes, liquid natural gas or transfer oil or hazardous materials in bulk; or receive foreign cargo vessels greater than 100 gross tons, U.S. cargo vessels greater than 100 gross tons carrying certain dangerous cargoes, or vessels carrying more than 150 passengers.
<b>DATA SOURCE</b>	Qualified Coast Guard Inspectors investigate incidents reported to the National Response Center by MTSA regulated facilities where security measures have been circumvented, eluded or violated. Verified incidents are documented in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system as a Breach of Security Investigation.
<b>METHODOLOGY</b>	Results for a given year are the total number of confirmed breaches of security that occurred over the past 12-months at any of the more than 3,400 MTSA regulated facilities.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability and the MISLE application itself contains embedded Help screens. Data verification and validation is also affected through regular records review by the Coast Guard Office of Investigations and Casualty Analysis (CG-INV) and Coast Guard Program managers.
<b>LIMITATIONS</b>	The measure is a proxy indicator of maritime security risk, which Coast Guard inspectors and facility owners use to collaboratively assess and strengthen security regimes. Reporting requirements are not applicable to facilities that have a waiver or exemption, including shipyards, public access facilities, military facilities and facilities that do not store minimum established amounts of dangerous cargoes. Some reportable incidents may not be reported and some reports are delayed in reaching the Coast Guard; current results are therefore likely to be understated and revised upwards in the future, with the greatest impact affecting recent quarters.

## ANNUAL NUMBER OF SERIOUS MARINE INCIDENTS

MEASURE DESCRIPTION	The annual number of Serious Marine Incidents, which are defined by 46 CFR 4.03-2 as any marine casualties or accidents that include death, injury requiring professional treatment beyond first aid, reportable property damage greater than \$100,000, actual or constructive loss of certain vessels, discharge of oil of 10,000 gallons or more, or a discharge of a reportable quantity of a hazardous substance.
USCG PROGRAM	Maritime Prevention
USCG MISSION	Marine Safety
DHS ALIGNMENT	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
SCOPE	The measure reports the annual number of serious marine incidents. Owners, agents, masters, operators or persons in charge are required by Federal regulation to notify the nearest Coast Guard office of any serious marine incidents. These are defined in 46 CFR 4.03-2 as any marine casualty or accident that includes death, injury requiring professional treatment beyond first aid, reportable property damage greater than \$100,000, actual or constructive loss of certain vessels, discharge of oil of 10,000 gallons or more, or a discharge of a reportable quantity of a hazardous substance.
DATA SOURCE	Reports of Serious Marine Incidents received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
METHODOLOGY	Results for a given year are the total serious marine incidents over the past 12-months.
VERIFICATION & VALIDATION	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability and the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is affected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
LIMITATIONS	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. Deaths and injuries include crewmembers or employees aboard U.S. commercial vessels, but not those aboard foreign flag vessels; and commercial passengers on U.S. vessels operating in any waters and foreign vessels in U.S. waters. Deaths, disappearances or injuries determined to be the result of natural causes or intentional acts—such as heart attack, altercation, or the like—are excluded. Passenger casualties associated with diving are excluded as well. Serious marine incidents arising from recreational craft, government vessels, fixed platforms, pipelines or other non-Coast Guard regulated facilities are also excluded.

### 3-YR AVERAGE NUMBER OF SERIOUS MARINE INCIDENTS

<b>MEASURE DESCRIPTION</b>	The 3-year average number of Serious Marine Incidents, which are defined by 46 CFR 4.03-2 as any marine casualties or accidents that include death, injury requiring professional treatment beyond first aid, reportable property damage greater than \$100,000, actual or constructive loss of certain vessels, discharge of oil of 10,000 gallons or more, or a discharge of a reportable quantity of a hazardous substance.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Marine Safety
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
<b>SCOPE</b>	The measure reports the 3-year average number of serious marine incidents. Owners, agents, masters, operators or persons in charge are required by Federal regulation to notify the nearest Coast Guard office of any serious marine incidents. These are defined in 46 CFR 4.03-2 as any marine casualty or accident that includes death, injury requiring professional treatment beyond first aid, reportable property damage greater than \$100,000, actual or constructive loss of certain vessels, discharge of oil of 10,000 gallons or more, or a discharge of a reportable quantity of a hazardous substance.
<b>DATA SOURCE</b>	Reports of Serious Marine Incidents received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the annualized average of total serious marine incidents for the most recent three years.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability and the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is affected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. Deaths and injuries include crewmembers or employees aboard U.S. commercial vessels, but not those aboard foreign flag vessels; and commercial passengers on U.S. vessels operating in any waters and foreign vessels in U.S. waters. Deaths, disappearances or injuries determined to be the result of natural causes or intentional acts—such as heart attack, altercation, or the like—are excluded. Passenger casualties associated with diving are excluded as well. Serious marine incidents arising from recreational craft, government vessels, fixed platforms, pipelines or other non-Coast Guard regulated facilities are also excluded. A 3-year average is used to mitigate year-to-year variation and ensure any near-term trend is more apparent.

## ANNUAL NUMBER OF COMMERCIAL MARINER DEATHS AND CRITICAL, SERIOUS & SEVERE INJURIES

<b>MEASURE DESCRIPTION</b>	The annual number of commercial mariner fatalities and critical, serious or severe injuries.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Marine Safety
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
<b>SCOPE</b>	The measure reports the annual number of commercial mariner fatalities and critical, serious or severe injuries. Owners, agents, masters, operators or persons in charge are required by Federal regulation to notify the nearest Coast Guard office of any loss of life or injury that requires professional medical treatment beyond first aid. Included are casualties of crewmembers or employees aboard U.S. commercial vessels. Casualties of commercial passengers, crewmembers or employees aboard foreign vessels, and those from recreational craft, government vessels, fixed platforms and facilities are excluded. Minor and moderate injuries, and deaths, disappearances or injuries determined to be a result of natural causes or intentional acts—such as heart attack, altercation, or the like—are also excluded.
<b>DATA SOURCE</b>	Notices of mariner casualties received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the sum total of all applicable commercial mariner deaths, disappearances and critical, serious and severe injuries for the previous four quarters.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters.

### 3-YR AVERAGE NUMBER OF COMMERCIAL MARINER DEATHS AND CRITICAL, SERIOUS & SEVERE INJURIES

<b>MEASURE DESCRIPTION</b>	The 3-year average annual number of commercial mariner fatalities and critical, serious or severe injuries.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Marine Safety
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
<b>SCOPE</b>	The measure reports the 3-year average annual number of commercial mariner fatalities and critical, serious or severe injuries. Owners, agents, masters, operators or persons in charge are required by Federal regulation to notify the nearest Coast Guard office of any loss of life or injury that requires professional medical treatment beyond first aid. Included are casualties of crewmembers or employees aboard U.S. commercial vessels. Casualties of commercial passengers, crewmembers or employees aboard foreign vessels, and those from recreational craft, government vessels, fixed platforms and facilities are excluded. Minor and moderate injuries, and deaths, disappearances or injuries determined to be a result of natural causes or intentional acts—such as heart attack, altercation, or the like—are also excluded.
<b>DATA SOURCE</b>	Notices of mariner casualties received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the annualized average number of applicable commercial mariner deaths, disappearances and critical, serious and severe injuries for the most recent three years.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. A 3-year average is used to mitigate year-to-year variation and ensure any near-term trend is more apparent.

## ANNUAL NUMBER OF COMMERCIAL PASSENGER DEATHS AND CRITICAL, SERIOUS & SEVERE INJURIES

MEASURE DESCRIPTION	The annual number of commercial passenger fatalities and critical, serious or severe injuries.
USCG PROGRAM	Maritime Prevention
USCG MISSION	Marine Safety
DHS ALIGNMENT	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
SCOPE	The measure reports the annual number of commercial passenger fatalities and critical, serious or severe injuries. Owners, agents, masters, operators or persons in charge are required by Federal regulation to notify the nearest Coast Guard office of any loss of life or injury that requires professional medical treatment beyond first aid. Included are commercial passengers on U.S. vessels operating in any waters and foreign vessels in U.S. waters. Casualties of crewmembers or employees, and those from recreational craft, government vessels, fixed platforms and facilities are excluded. Minor and moderate injuries, and deaths, disappearances or injuries determined to be a result of natural causes or intentional acts—such as heart attack, altercation, or the like—are also excluded. Passenger casualties associated with diving are excluded as well.
DATA SOURCE	Notices of passenger casualties received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
METHODOLOGY	Results for a given year are the sum total of all applicable commercial passenger deaths, disappearances and critical, serious and severe injuries for the previous four quarters.
VERIFICATION & VALIDATION	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
LIMITATIONS	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters.

### 3-YR AVERAGE NUMBER OF COMMERCIAL PASSENGER DEATHS AND CRITICAL, SERIOUS & SEVERE INJURIES

<b>MEASURE DESCRIPTION</b>	The 3-year average annual number of commercial passenger fatalities and critical, serious or severe injuries.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Marine Safety
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
<b>SCOPE</b>	The measure reports the 3-year average annual number of commercial passenger fatalities and critical, serious or severe injuries. Owners, agents, masters, operators or persons in charge are required by Federal regulation to notify the nearest Coast Guard office of any loss of life or injury that requires professional medical treatment beyond first aid. Included are commercial passengers on U.S. vessels operating in any waters and foreign vessels in U.S. waters. Casualties of crewmembers or employees, and those from recreational craft, government vessels, fixed platforms and facilities are excluded. Minor and moderate injuries, and deaths, disappearances or injuries determined to be a result of natural causes or intentional acts—such as heart attack, altercation, or the like—are also excluded. Passenger casualties associated with diving are excluded as well.
<b>DATA SOURCE</b>	Notices of passenger casualties received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the annualized average number of applicable commercial passenger deaths, disappearances and critical, serious and severe injuries for the most recent three years.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. A 3-year average is used to mitigate year-to-year variation and ensure any near-term trend is more apparent.

## ANNUAL NUMBER OF RECREATIONAL BOATING DEATHS

MEASURE DESCRIPTION	The annual number of recreational boating fatalities.
USCG PROGRAM	Maritime Prevention
USCG MISSION	Marine Safety
DHS ALIGNMENT	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
SCOPE	The measure reports the annual number of recreational boating deaths. 33 CFR 173.55 requires operators of vessels used for recreational purposes to file a Boating Accident Report when a person dies. Included are casualties caused by or attributed to a vessel, its equipment or appendages. Also included are swimming deaths due to carbon monoxide exposure; electrocution due to improper connection to shore power; a swimmer unable to get back to a drifting vessel not properly anchored, moored or docked; and persons struck by a vessel or associated equipment. Deaths or disappearances determined to be the result of natural causes or intentional acts are excluded.
DATA SOURCE	Boating Accident Reports are recorded in the Coast Guard's Boating Accident Report Database (BARD) System.
METHODOLOGY	Results for a given fiscal year are the sum total of all applicable recreational boating deaths for the previous four quarters. Only casualties recorded in the BARD database are counted.
VERIFICATION & VALIDATION	To ensure boating casualties are accurately captured, the Coast Guard Office of Auxiliary and Boating Safety (CG-BSX) crosschecks BARD data with incidents reported in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system and recreational boating casualties reported in media announcements and articles provided by a news clipping service.
LIMITATIONS	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters.

### 3-YR AVERAGE NUMBER OF RECREATIONAL BOATING DEATHS

MEASURE DESCRIPTION	The 3-year average annual number of recreational boating fatalities.
USCG PROGRAM	Maritime Prevention
USCG MISSION	Marine Safety
DHS ALIGNMENT	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
SCOPE	The measure reports the 3-year average annual number of recreational boating deaths. 33 CFR 173.55 requires operators of vessels used for recreational purposes to file a Boating Accident Report when a person dies. Included are casualties caused by or attributed to a vessel, its equipment or appendages. Also included are swimming deaths due to carbon monoxide exposure; electrocution due to improper connection to shore power; a swimmer unable to get back to a drifting vessel not properly anchored, moored or docked; and persons struck by a vessel or associated equipment. Deaths or disappearances determined to be the result of natural causes or intentional acts are excluded.
DATA SOURCE	Boating Accident Reports are recorded in the Coast Guard's Boating Accident Report Database (BARD) System.
METHODOLOGY	Results for a given fiscal year are the average number of all applicable recreational boating deaths and injuries for the most recent three years. Only casualties recorded in the BARD database are counted.
VERIFICATION & VALIDATION	To ensure boating casualties are accurately captured, the Coast Guard Office of Auxiliary and Boating Safety (CG-BSX) crosschecks BARD data with incidents reported in the Coast Guard Marine Information for Safety and Law Enforcement (MISLE) system and recreational boating casualties reported in media announcements and articles provided by a news clipping service.
LIMITATIONS	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. A 3-year average is used to mitigate year-to-year variation and ensure any near-term trend is more apparent.

## ANNUAL NUMBER OF RECREATIONAL BOATING DEATHS AND INJURIES

MEASURE DESCRIPTION	The annual number of recreational boating fatalities and injuries.
USCG PROGRAM	Maritime Prevention
USCG MISSION	Marine Safety
DHS ALIGNMENT	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
SCOPE	The measure reports the annual number of recreational boating deaths and injuries. 33 CFR 173.55 requires operators of vessels used for recreational purposes to file a Boating Accident Report when a person dies, is injured and requires medical treatment beyond first aid or disappears under circumstances that indicate death or injury. Included are casualties caused by or attributed to a vessel, its equipment or appendages. Also included are swimming deaths due to carbon monoxide exposure; electrocution due to improper connection to shore power; a swimmer unable to get back to a drifting vessel not properly anchored, moored or docked; and persons struck by a vessel or associated equipment. Deaths, disappearances or injuries determined to be the result of natural causes or intentional acts are excluded as well.
DATA SOURCE	Boating Accident Reports are recorded in the Coast Guard's Boating Accident Report Database (BARD) System.
METHODOLOGY	Results for a given fiscal year are the sum total of all applicable recreational boating deaths and injuries for the previous four quarters. Only casualties recorded in the BARD database are counted.
VERIFICATION & VALIDATION	To ensure boating casualties are accurately captured, the Coast Guard Office of Auxiliary and Boating Safety (CG-BSX) crosschecks BARD data with incidents reported in the Coast Guard Marine Information for Safety and Law Enforcement (MISLE) system and recreational boating casualties reported in media announcements and articles provided by a news clipping service.
LIMITATIONS	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters.

### 3-YR AVERAGE NUMBER OF RECREATIONAL BOATING DEATHS AND INJURIES

MEASURE DESCRIPTION	The 3-year average annual number of recreational boating fatalities and injuries.
USCG PROGRAM	Maritime Prevention
USCG MISSION	Marine Safety
DHS ALIGNMENT	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
SCOPE	The measure reports the 3-year average annual number of recreational boating deaths and injuries. 33 CFR 173.55 requires operators of vessels used for recreational purposes to file a Boating Accident Report when a person dies, is injured and requires medical treatment beyond first aid or disappears under circumstances that indicate death or injury. Included are casualties caused by or attributed to a vessel, its equipment or appendages. Also included are swimming deaths due to carbon monoxide exposure; electrocution due to improper connection to shore power; a swimmer unable to get back to a drifting vessel not properly anchored, moored or docked; and persons struck by a vessel or associated equipment. Deaths, disappearances or injuries determined to be the result of natural causes or intentional acts are excluded.
DATA SOURCE	Boating Accident Reports are recorded in the Coast Guard's Boating Accident Report Database (BARD) System.
METHODOLOGY	Results for a given fiscal year are the average number of all applicable recreational boating deaths and injuries for the most recent three years. Only casualties recorded in the BARD database are counted.
VERIFICATION & VALIDATION	To ensure boating casualties are accurately captured, the Coast Guard Office of Auxiliary and Boating Safety (CG-BSX) crosschecks BARD data with incidents reported in the Coast Guard Marine Information for Safety and Law Enforcement (MISLE) system and recreational boating casualties reported in media announcements and articles provided by a news clipping service.
LIMITATIONS	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. A 3-year average is used to mitigate year-to-year variation and ensure any near-term trend is more apparent.

## ANNUAL NUMBER OF CHEMICAL DISCHARGE INCIDENTS

<b>MEASURE DESCRIPTION</b>	The annual number of chemical discharge incidents where a reportable quantity of a hazardous substance is discharged into navigable waters of the United States.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Marine Environmental Protection—Prevention Activities
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
<b>SCOPE</b>	The measure reports the annual number of chemical discharge incidents where a reportable quantity of a hazardous substance is discharged into U.S. navigable waters. 40 CFR 300 requires vessel or facility operators to report discharges of any hazardous substance that equals or exceeds reportable quantities listed in 40 CFR 302. Discharges onto land, into the air, or into enclosed spaces are excluded. Discharges from non-maritime sources such as aircraft, trucks and other vehicles, rail cars and rail equipment, U.S. Navy and other public vessels, fixed platforms and pipelines are also excluded. Discharges from unspecified, unclassified and unknown sources are excluded as well.
<b>DATA SOURCE</b>	Notices of chemical discharge incidents received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given fiscal year are the sum total of all applicable chemical discharge incidents for the previous four quarters where a reportable quantity of a hazardous substance is discharged into navigable waters of the United States.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters.

### 3-YR AVERAGE NUMBER OF CHEMICAL DISCHARGE INCIDENTS IN THE MARITIME ENVIRONMENT PER 100 MILLION TONS SHIPPED

<b>MEASURE DESCRIPTION</b>	The 3-year average annual number of chemical discharge incidents where a reportable quantity of a hazardous substance is discharged into navigable waters of the United States per 100 million short tons of Chemical and Chemical Products shipped in U.S. waters.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Marine Environmental Protection—Prevention Activities
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
<b>SCOPE</b>	The measure reports the 3-year average annual number of chemical discharge incidents, where a reportable quantity of a hazardous substance is discharged into U.S. navigable waters, per 100 million short tons of Chemical and Chemical Products shipped. 40 CFR 300 requires vessel or facility operators to report discharges of any hazardous substance that equals or exceeds reportable quantities listed in 40 CFR 302. Discharges onto land, into the air, or into enclosed spaces are excluded. Discharges from non-maritime sources such as aircraft, trucks and other vehicles, rail cars and rail equipment, U.S. Navy and other public vessels, fixed platforms and pipelines are also excluded. Discharges from unspecified, unclassified and unknown sources are excluded as well.
<b>DATA SOURCE</b>	Notices of chemical discharge incidents received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system. Data on chemical and chemical products shipped in U.S. waters is obtained from the Army Corps of Engineers, Waterborne Commerce of the United States. Shipping statistics for a given year are not generally available until December of the following year; the measure uses a simple least-squares projection of the most recent three years of data.
<b>METHODOLOGY</b>	Results for a given fiscal year are the average over the most recent three years of the number of chemical discharge incidents per 100 million short tons of Chemical and Chemical Products shipped.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. A 3-year average is used to mitigate year-to-year variation and ensure any near-term trend is more apparent. Current year shipping statistics are derived from a simple least-squares projection of recent past data and likely differs from actual levels. The number of chemical discharge incidents is reported as proportionate to chemical and chemical product shipping, but not all chemical discharges are transit related.

## ANNUAL NUMBER OF OIL SPILLS >100 GALLONS

<b>MEASURE DESCRIPTION</b>	The annual number of oil spills greater than 100 gallons discharged into navigable waters of the United States.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Marine Environmental Protection—Prevention Activities
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
<b>SCOPE</b>	The measure reports the annual number of oil spills greater than 100 gallons discharged into U.S. navigable waters. 40 CFR 300 requires vessel or facility operators to report any discharge of oil or oil products that cause a sheen, discoloration, sludge, or emulsion. Discharges onto land, into the air, or into enclosed spaces are excluded. Discharges from non-maritime sources such as aircraft, trucks and other vehicles, rail cars and rail equipment, U.S. Navy and other public vessels, fixed platforms and pipelines are also excluded. Discharges from unspecified, unclassified and unknown sources are excluded as well.
<b>DATA SOURCE</b>	Notices of reportable oil discharge incidents received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given fiscal year are the sum total of all applicable oil spills for the previous four quarters where more than 100 gallons is discharged into navigable waters of the United States.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters.

### 3-YR AVERAGE NUMBER OF OIL SPILLS IN THE MARITIME ENVIRONMENT PER 100 MILLION TONS SHIPPED

<b>MEASURE DESCRIPTION</b>	The 3-year average annual number of oil spills greater than 100 gallons discharged into navigable waters of the United States per 100 million short tons of Oil and Oil Products shipped in U.S. waters.
<b>USCG PROGRAM</b>	Maritime Prevention
<b>USCG MISSION</b>	Marine Environmental Protection—Prevention Activities
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.2 - Mitigate Hazards and Vulnerabilities Sub-Goal 5.2.3 - Prevent Maritime Incidents by Establishing and Ensuring Compliance
<b>SCOPE</b>	The measure reports the 3-year average annual number of oil spills greater than 100 gallons discharged into navigable waters of the United States per 100 million short tons of oil and oil products shipped in U.S. waters. 40 CFR 300 requires vessel or facility operators to report any discharge of oil or oil products that cause a sheen, discoloration, sludge, or emulsion. Discharges onto land, into the air, or into enclosed spaces are excluded. Discharges from non-maritime sources such as aircraft, trucks and other vehicles, rail cars and rail equipment, U.S. Navy and other public vessels, fixed platforms and pipelines are also excluded. Discharges from unspecified, unclassified and unknown sources are excluded as well.
<b>DATA SOURCE</b>	Notices of reportable oil spills received by Coast Guard offices are investigated and recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system. Data on oil and oil products shipped in U.S. waters is obtained from the Army Corps of Engineers, Waterborne Commerce of the United States. Shipping statistics for a given year are not generally available until December of the following year; the measure uses a simple least-squares projection of the most recent three years of data.
<b>METHODOLOGY</b>	Results for a given fiscal year are the average over the most recent three years of the number of oil spills greater than 100 gallons per 100 million short tons of oil and oil products shipped.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. A 3-year average is used to mitigate year-to-year variation and ensure any near-term trend is more apparent. Current year shipping statistics are derived from a simple least-squares projection of recent past data and likely differs from actual levels. The number of oil spills greater than 100 gallons is reported as proportionate to oil and oil product shipping, but not all oil spills are transit related.

## PERCENT OF PEOPLE IN IMMINENT DANGER SAVED IN THE MARITIME ENVIRONMENT

MEASURE DESCRIPTION	Lives saved by the Coast Guard expressed as a percentage of all notifications the Service receives of people in imminent danger on the oceans and other waterways. The measure excludes single incidents with eleven or more people whose lives were saved or lost, which if included might skew results and impede trend analysis.
USCG PROGRAM	Maritime Response
USCG MISSION	Search and Rescue
DHS ALIGNMENT	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.3 - Ensure Effective Emergency Response Sub-Goal 5.3.3 - Provide Timely and Appropriate Disaster Assistance
SCOPE	The measure encompasses all maritime distress incidents reported to the Coast Guard, which are judged by Coast Guard operational commanders as valid enough to order a response. The measure includes lives recorded as saved, lost before notification, lost after notification or unaccounted. Single incidents with eleven or more people saved, lost or unaccounted are excluded, so as not to skew results or impede trend analysis.
DATA SOURCE	All maritime distress incidents reported to the Coast Guard, which are judged by Coast Guard operational commanders as valid enough to order a response—and associated response data—are recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
METHODOLOGY	Results for a given fiscal year are the total number of lives recorded as saved in the period expressed as a percentage of the total number of lives recorded as saved, lost before notification, lost after notification or unaccounted. Single incidents with eleven or more people saved, lost or unaccounted are excluded from the calculation.
VERIFICATION & VALIDATION	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, limit choices to pre-determined options, and flag data not conforming to expectations. Comprehensive training and user guides help ensure reliability and the application itself contains embedded Help screens. Search and rescue data are also reviewed at multiple levels, and discrepancies reviewed and corrected as necessary.
LIMITATIONS	Some distress incidents may not be reported to the Coast Guard, and some reported incidents might not be judged by Coast Guard operational commanders as valid enough to order a response. Imminent danger is not always obvious; the determination that a life was saved and not merely assisted can be subjective. Factors beyond Coast Guard control can lead to tragic outcomes regardless of life saving efforts; some victims are lost or succumb to injuries before first responders are notified or before they can conceivably reach the scene. Single incidents with eleven or more people saved, lost or unaccounted are excluded so as not to skew measure results or impede trend analysis.

## PERCENT OF TIME RESCUE ASSETS ARE ON-SCENE WITHIN 2 HOURS

MEASURE DESCRIPTION	The percent of all maritime distress incidents reported to the Coast Guard where a Search and Rescue Unit arrives on scene within two hours.
USCG PROGRAM	Maritime Response
USCG MISSION	Search and Rescue
DHS ALIGNMENT	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.3 - Ensure Effective Emergency Response Sub-Goal 5.3.3 - Provide Timely and Appropriate Disaster Assistance
SCOPE	The measure encompasses all maritime distress incidents reported to the Coast Guard, which are judged by operational commanders as valid enough to order a response. Time on scene is the earliest time a Search and Rescue Unit is requested to proceed until the earliest time of an arrival on scene. It includes preparation time required for engine warm-up, underway checklist, risk management evaluation, mission planning, etc., and transit time from underway to on-scene.
DATA SOURCE	All maritime distress incidents reported to the Coast Guard, which are judged by Coast Guard operational commanders as valid enough to order a response—and associated response data—are recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
METHODOLOGY	Results for a given fiscal year are the number of distress incidents where the First Sortie On-Scene Time minus the First Resource Requested Time is less than or equal to two hours, expressed as a percentage all maritime distress incidents reported to the Coast Guard, which are judged by operational commanders as valid enough to order a response.
VERIFICATION & VALIDATION	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, limit choices to pre-determined options, and flag data not conforming to expectations. Comprehensive training and user guides help ensure reliability and the application itself contains embedded Help screens. Search and rescue data are also reviewed at multiple levels, and discrepancies reviewed and corrected as necessary.
LIMITATIONS	The time it takes to reach the scene of a distress call is a key performance factor. The 2-hour standard was established in the 1970's and revalidated in 1992 based on survival expectations in weighted-average water temperatures, which consider the varying number of incidents occurring regionally. The standard may not be a realistic benchmark for every circumstance. Adverse weather conditions, geographical proximity and asset availability may preclude arrival within the standard timeframe.

## PERCENT OF PROPERTY “IN DANGER OF LOSS” SAVED

<b>MEASURE DESCRIPTION</b>	Property saved by the Coast Guard expressed as a percentage of all property in danger of loss, which consists of saved, lost or unaccounted property associated with notifications the Service receives of people in imminent danger on the oceans and other waterways.
<b>USCG PROGRAM</b>	Maritime Response
<b>USCG MISSION</b>	Search and Rescue
<b>DHS ALIGNMENT</b>	Mission Area 5 - Strengthen National Preparedness and Resilience Goal 5.3 - Ensure Effective Emergency Response Sub-Goal 5.3.2 – Conduct Effective and Unified Incident Response Operations
<b>SCOPE</b>	The measure encompasses all maritime distress incidents reported to the Coast Guard, which are judged by Coast Guard operational commanders as valid enough to order a response. The measure includes property recorded as saved, lost and unaccounted for. Single incidents with property valuations in excess of \$2 million are excluded, so as not to skew results or impede trend analysis.
<b>DATA SOURCE</b>	All maritime distress incidents reported to the Coast Guard, which are judged by Coast Guard operational commanders as valid enough to order a response—and associated response data—are recorded in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given fiscal year are the total value of property recorded as saved in the period expressed as a percentage of the total value of property recorded as saved, lost and unaccounted. Single incidents with property valuations in excess of \$2 million are excluded from the calculation.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, limit choices to pre-determined options, and flag data not conforming to expectations. Comprehensive training and user guides help ensure reliability and the application itself contains embedded Help screens. Search and rescue data are also reviewed at multiple levels, and discrepancies reviewed and corrected as necessary.
<b>LIMITATIONS</b>	Some distress incidents may not be reported to the Coast Guard, and some reported incidents might not be judged by Coast Guard operational commanders as valid enough to order a response. Imminent danger is not always obvious; the determination that property was saved and not merely rendered assistance can be subjective. Factors beyond Coast Guard control such as weather, capabilities of responding units, and the priority necessarily given to saving lives can significantly impact the Service's ability to save property. Single incidents with property valuations in excess of \$2 million are excluded so as not to skew measure results or impede trend analysis.

## DEFENSE READINESS OF MAJOR CUTTERS FOR DOD CONTINGENCY PLANNING

MEASURE DESCRIPTION	The percentage of reporting period days designated Coast Guard Cutters are fully mission capable to meet Service commitments established in Department of Defense Global Force Management Implementation Guidance to conduct military activities necessary to reduce risk of terrorism, facilitate interoperability and jointly support national defense and homeland security.
USCG PROGRAM	Defense Operations
USCG MISSION	Defense Readiness
DHS ALIGNMENT	Mission Area 2 - Secure and Manage Our Borders Goal 2.1 - Secure U.S. Air, Land and Sea Borders and Approaches
SCOPE	The measure encompasses all Major Coast Guard Cutters capable of meeting commitments established in Department of Defense Global Force Management Implementation Guidance. The war fighting readiness of associated personnel, equipment, supplies and logistics are reported daily and compared to minimum standards. The measure reports the percentage of period days the Coast Guard is deemed capable of fully meeting established joint military contingency planning commitments for Major Cutters.
DATA SOURCE	All Coast Guard unit types designated in Department of Defense contingency plans use the Coast Guard Readiness and Assessment Evaluation (CG-RACE) system to report war-fighting readiness of unit personnel, equipment, supplies and logistics. CG-RACE information is reported to DOD via the Defense Readiness Reporting System (DRRS).
METHODOLOGY	Results for a given fiscal year are the number of days designated Coast Guard Cutters are fully mission-capable to meet Service commitments established in Department of Defense Global Force Management Implementation Guidance, expressed as a percentage of total period days.
VERIFICATION & VALIDATION	CG-RACE data entry is controlled through program logic and structured menus to ensure consistency and integrity. Credibility and consistency criteria are promulgated as enclosure 9 to COMDTINST 3501.2H, and comprehensive training and user guides help ensure reliability. Readiness reports must be approved by unit commanding officers, and any discrepancies are identified and corrected as necessary. CG-RACE information is transferred to the Defense Readiness Reporting System (DRRS), where the data is further reviewed by Department of Defense managers.
LIMITATIONS	The measure reports Coast Guard Major Cutter readiness to meet specific Service commitments to support established Department of Defense Global Force Management Implementation Guidance. It is not an indicator of Coast Guard capability to meet any greater level of military support, nor a measure of the Service's overall operational readiness or capability to perform any specific Coast Guard mission.

## DEFENSE READINESS OF PATROL BOATS FOR DOD CONTINGENCY PLANNING

MEASURE DESCRIPTION	The percentage of reporting period days Coast Guard Patrol Boats are fully mission capable to meet Service commitments established in Department of Defense Global Force Management Implementation Guidance to conduct military activities necessary to reduce risk of terrorism, facilitate interoperability and jointly support national defense and homeland security.
USCG PROGRAM	Defense Operations
USCG MISSION	Defense Readiness
DHS ALIGNMENT	Mission Area 2 - Secure and Manage Our Borders Goal 2.1 - Secure U.S. Air, Land and Sea Borders and Approaches
SCOPE	The measure encompasses all Coast Guard Patrol Boats capable of meeting commitments established in Department of Defense Global Force Management Implementation Guidance. The war fighting readiness of associated personnel, equipment, supplies and logistics are reported daily and compared to minimum standards. The measure reports the percentage of period days the Coast Guard is deemed capable of fully meeting established joint military contingency planning commitments for patrol boats.
DATA SOURCE	All Coast Guard unit types designated in Department of Defense contingency plans use the Coast Guard Readiness and Assessment Evaluation (CG-RACE) system to report war-fighting readiness of unit personnel, equipment, supplies and logistics. CG-RACE information is reported to DOD via the Defense Readiness Reporting System (DRRS).
METHODOLOGY	Results for a given fiscal year are the number of days designated Coast Guard Patrol Boats are fully mission capable to meet Service commitments established in Department of Defense Global Force Management Implementation Guidance, expressed as a percentage of total period days.
VERIFICATION & VALIDATION	CG-RACE data entry is controlled through program logic and structured menus to ensure consistency and integrity. Credibility and consistency criteria are promulgated as enclosure 9 to COMDTINST 3501.2H, and comprehensive training and user guides help ensure reliability. Readiness reports must be approved by unit commanding officers, and any discrepancies are identified and corrected as necessary. CG-RACE information is transferred to the Defense Readiness Reporting System (DRRS), where the data is further reviewed by Department of Defense managers.
LIMITATIONS	The measure reports Coast Guard Patrol Boat readiness to meet specific Service commitments to support established Department of Defense Global Force Management Implementation Guidance. It is not an indicator of Coast Guard capability to meet any greater level of military support, nor a measure of the Service's overall operational readiness or capability to perform any specific Coast Guard mission.

## DEFENSE READINESS OF PORT SECURITY UNITS (DEPLOYED)

MEASURE DESCRIPTION	The percentage of reporting period days currently deployed Coast Guard Port Security Units are fully mission capable to meet Service commitments to conduct military activities necessary to reduce risk of terrorism, facilitate interoperability and jointly support national defense and homeland security in support of the current DoD Global Force Management Allocation Plan (GFMAP).
USCG PROGRAM	Defense Operations
USCG MISSION	Defense Readiness
DHS ALIGNMENT	Mission Area 1 – Prevent Terrorism and Enhance Security Goal 1.3 - Reduce Risk to the Nation's Critical Infrastructure, Key Leadership and Events
SCOPE	The measure encompasses Coast Guard Port Security Units currently deployed in support of the DoD Global Force Management Allocation Plan (GFMAP). War fighting readiness of associated personnel, equipment, supplies and logistics are reported daily and compared to minimum standards. The measure reports the percentage of period days the Coast Guard is deemed capable of fully meeting established joint military commitments for Deployed Port Security Units.
DATA SOURCE	All Coast Guard unit types designated in Department of Defense contingency plans use the Coast Guard Readiness and Assessment Evaluation (CG-RACE) system to report war-fighting readiness of unit personnel, equipment, supplies and logistics. CG-RACE information is reported to DOD via the Defense Readiness Reporting System (DRRS).
METHODOLOGY	Results for a given fiscal year are the number of days Deployed Coast Guard Port Security Units are fully mission-capable of meeting Service commitments established in the current Department of Defense Global Force Management Allocation Plan (GFMAP), expressed as a percentage of total period days.
VERIFICATION & VALIDATION	CG-RACE data entry is controlled through program logic and structured menus to ensure consistency and integrity. Credibility and consistency criteria are promulgated as enclosure 9 to COMDTINST 3501.2H, and comprehensive training and user guides help ensure reliability. Readiness reports must be approved by unit commanding officers, and any discrepancies are identified and corrected as necessary. CG-RACE information is transferred to the Defense Readiness Reporting System (DRRS), where the data is further reviewed by Department of Defense managers.
LIMITATIONS	The measure reports the readiness of deployed Coast Guard Port Security Units to meet specific Service commitments in support of the current DoD Global Force Management Allocation Plan (GFMAP). It is not an indicator of Coast Guard capability to meet any greater level of military support, nor a measure of the Service's overall operational readiness or capability to perform any specific Coast Guard mission.

## DEFENSE READINESS OF PORT SECURITY UNITS (READY TO DEPLOY)

MEASURE DESCRIPTION	The percentage of reporting period days designated Coast Guard Port Security Units are fully mission capable of deploying and meeting Service commitments to conduct military activities necessary to reduce risk of terrorism, facilitate interoperability and jointly support national defense and homeland security in support of the current DoD Global Force Management Allocation Plan (GFMAP).
USCG PROGRAM	Defense Operations
USCG MISSION	Defense Readiness
DHS ALIGNMENT	Mission Area 1 – Prevent Terrorism and Enhance Security Goal 1.3 - Reduce Risk to the Nation's Critical Infrastructure, Key Leadership and Events
SCOPE	The measure encompasses all Coast Guard Port Security Units capable of deploying in support of the DoD Global Force Management Allocation Plan (GFMAP). War fighting readiness of associated personnel, equipment, supplies and logistics are reported daily and compared to minimum standards. The measure reports the percentage of period days the Coast Guard is deemed capable of fully meeting established joint military contingency planning commitments for deploying Port Security Units.
DATA SOURCE	All Coast Guard unit types designated in Department of Defense contingency plans use the Coast Guard Readiness and Assessment Evaluation (CG-RACE) system to report war-fighting readiness of unit personnel, equipment, supplies and logistics. CG-RACE information is reported to DOD via the Defense Readiness Reporting System (DRRS).
METHODOLOGY	Results for a given fiscal year are the number of days designated Coast Guard Port Security Units are fully mission-capable of deploying to meet Service commitments established in the current Department of Defense Global Force Management Allocation Plan (GFMAP), expressed as a percentage of total period days.
VERIFICATION & VALIDATION	CG-RACE data entry is controlled through program logic and structured menus to ensure consistency and integrity. Credibility and consistency criteria are promulgated as enclosure 9 to COMDTINST 3501.2H, and comprehensive training and user guides help ensure reliability. Readiness reports must be approved by unit commanding officers, and any discrepancies are identified and corrected as necessary. CG-RACE information is transferred to the Defense Readiness Reporting System (DRRS), where the data is further reviewed by Department of Defense managers.
LIMITATIONS	The measure reports Coast Guard Port Security Unit readiness to meet specific Service commitments in support of the current DoD Global Force Management Allocation Plan (GFMAP). It is not an indicator of Coast Guard capability to meet any greater level of military support, nor a measure of the Service's overall operational readiness or capability to perform any specific Coast Guard mission.

## AVAILABILITY OF MARITIME NAVIGATION AIDS

<b>MEASURE DESCRIPTION</b>	The percentage of time Federal Short-Range Aids to Navigation were available and performing their specified functions, where an aid to navigation is counted as not being available from the initial time a discrepancy is reported until the time the discrepancy is corrected.
<b>USCG PROGRAM</b>	Marine Transportation System Management
<b>USCG MISSION</b>	Aids to Navigation
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.2 – Manage the Risk of People and Goods in Transit
<b>SCOPE</b>	The measure reports the hours Federal Short Range Aids to Navigation were available as a percent of total hours they were expected to be available. Short-range aids to navigation are those intended for use within the visual, audible or radar range of the mariner; which term encompasses lighted and unlighted beacons, ranges, leading lights, buoys, and their associated sound signals. The measure includes all short-range aids to navigation in the Coast Guard inventory on the day a report is run.
<b>DATA SOURCE</b>	The Integrated Aids to Navigation Information System (I-ATONIS) is the official system used by the Coast Guard for information relating to short-range aids to navigation.
<b>METHODOLOGY</b>	Results for a given year are the total hours that all Federal Short Range Aids to Navigation were available, expressed as a percentage of total hours they were expected to be available. Expected availability is the total number of federal aids deployed on the day a report is run times the number of days in the reporting period, multiplied by 24 hours. Availability is determined by subtracting from expected hours, the total time any of these Aids were recorded as not available, which is the time between the initial reporting of a discrepancy until the time the discrepancy is corrected.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, data entry in the I-ATONIS system is limited to specially trained personnel in each District. I-ATONIS data is also subject to review by Unit and District personnel, and by Coast Guard and National Ocean Service managers in the process of generating local Notices to Mariners.
<b>LIMITATIONS</b>	This measure provides an overall assessment of availability across the entire system of Federal Short-Range Aids to Navigation; it does not distinguish any lack of availability by significance. An individual Aid to Navigation can be distinguished by its navigational significance, which is influenced by factors such as its position and function in a waterway, the waterway importance, traffic density, climate and the mix and coverage of other aids in the system. A temporary change to a short-range aid to navigation is not considered a discrepancy.

## PERCENT OF TIME HIGH-PRIORITY WATERWAYS IN GREAT LAKES AND EASTERN SEABOARD OPEN DURING ICE SEASON

<b>MEASURE DESCRIPTION</b>	The percent of time Tier One Waterways, in the Great Lakes and along the eastern seaboard, are open to vessel transits during the icebreaking season. Tier One waterways are those connecting waterways of the Marine Transportation System determined to be the highest-priority due to their geographical location or importance of cargo to public health and safety.
<b>USCG PROGRAM</b>	Marine Transportation System Management
<b>USCG MISSION</b>	Ice Operations
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.2 – Manage the Risk of People and Goods in Transit
<b>SCOPE</b>	The measure reports the percentage of time Tier One waterways in the Great Lakes and along the eastern seaboard are not closed to vessel transits due to ice-related conditions during the icebreaking season. Icebreaking operations in the Great Lakes and waterways along the eastern seaboard are generally conducted during a January to April season. Tier One waterways are those identified and categorized as such due to their geographical location or importance of cargo to public health and safety. A closure is defined as an event or condition preventing vessels from transiting a waterway, including ice-related waterway restrictions or Captain of the Port limitations.
<b>DATA SOURCE</b>	Data is obtained from end-of-season reports submitted to Coast Guard Headquarters by 01 July each year.
<b>METHODOLOGY</b>	Results for a given year are total hours Tier One Waterways are not closed due to ice-related conditions during the icebreaking season, expressed as a percentage of total waterway hours. Total waterway hours are determined by multiplying the number of Tier One Waterways by ice season days times 24 hours. Total hours Tier One Waterways were closed is ice-related closures reported in days times 24, plus ice-related waterway closures reported in hours, plus ice-related waterway restrictions or Captain of the Port limitations in hours.
<b>VERIFICATION &amp; VALIDATION</b>	Icebreaking and waterway closure data provided in end-of-season reports are reviewed for accuracy and consistency by Unit and District staff and by the Mobility and Ice Operations Division of the Coast Guard Office of Waterways and Oceans Policy (CG-WWM).
<b>LIMITATIONS</b>	The measure is a proxy gauge of navigational mobility on the Great Lakes and along the eastern seaboard during the winter icebreaking season; it records closures due to ice only for Tier One Waterways. Results are sensitive to the severity of winter weather, and do not necessarily reflect Coast Guard performance; an exceptionally severe winter may produce more closures despite impressive Coast Guard icebreaking performance.

## ANNUAL NUMBER OF NAVIGATIONAL ACCIDENTS

<b>MEASURE DESCRIPTION</b>	The annual number of distinct collision, allision and grounding events involving a commercial vessel, which includes marine casualties where two or more vessels collide, a vessel strikes a stationary vessel or object, or a vessel runs onto a shore, reef or bottom of a body of water.
<b>USCG PROGRAM</b>	Marine Transportation System Management
<b>USCG MISSION</b>	Aids to Navigation
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.2 – Manage the Risk of People and Goods in Transit
<b>SCOPE</b>	46 CFR 4.05-10 requires the owner, agent, master, operator, or person in charge to notify the U.S. Coast Guard of any occurrence involving a vessel that results in a Collision, Allision or Grounding. Only distinct incidents involving a commercial vessel are counted; incidents that involve only non-commercial or recreational vessels are excluded. A vessel striking one or more other vessels, at least one of which is a commercial vessel, is counted as a distinct Collision event. A commercial vessel striking one or more stationary vessels or a stationary object is counted as a distinct Allision event. A distinct Grounding event might include a tug and a perhaps several barges in tow running onto a shore, reef or bottom of a body of water.
<b>DATA SOURCE</b>	Marine casualties are recorded in the Coast Guard’s Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the annualized total number of distinct Collision, Allision and Grounding events.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. The number of collisions, allisions and groundings is a proxy indicator of adverse impacts to maritime mobility; they can result in waterway closures and disruptions to maritime commerce. They may also result in personnel casualties, pollution incidents and property losses. Minimizing their occurrence is an objective of the Coast Guard Marine Transportation System Management Program, though their cause is often not related to a navigation or waterways management concern.

## 5-YR AVERAGE NUMBER OF NAVIGATIONAL ACCIDENTS

<b>MEASURE DESCRIPTION</b>	The 5-year average annual number of distinct collision, allision and grounding events involving a commercial vessel, which includes marine casualties where two or more vessels collide, a vessel strikes a stationary vessel or object, or a vessel runs onto a shore, reef or bottom of a body of water.
<b>USCG PROGRAM</b>	Marine Transportation System Management
<b>MISSION</b>	Aids to Navigation
<b>DHS ALIGNMENT</b>	Mission Area 2 - Secure and Manage Our Borders Goal 2.2 – Safeguard and Expedite Lawful Trade and Travel Sub-Goal 2.2.2 – Manage the Risk of People and Goods in Transit
<b>SCOPE</b>	46 CFR 4.05-10 requires the owner, agent, master, operator, or person in charge to notify the U.S. Coast Guard of any occurrence involving a vessel that results in a Collision, Allision or Grounding. Only distinct incidents involving a commercial vessel are counted; incidents that involve only non-commercial or recreational vessels are excluded. A vessel striking one or more other vessels, at least one of which is a commercial vessel, is counted as a distinct Collision event. A commercial vessel striking one or more stationary vessels or a stationary object is counted as a distinct Allision event. A distinct Grounding event might include a tug and a perhaps several barges in tow running onto a shore, reef or bottom of a body of water.
<b>DATA SOURCE</b>	Marine casualties are recorded in the Coast Guard’s Marine Information for Safety and Law Enforcement (MISLE) system.
<b>METHODOLOGY</b>	Results for a given year are the annualized average number of distinct Collision, Allision and Grounding events for the most recent five years.
<b>VERIFICATION &amp; VALIDATION</b>	To ensure consistency and integrity, MISLE data entry is controlled through program logic and pull-down menus that require key elements, prohibit the inappropriate, and limit choices to pre-determined options. Comprehensive training and user guides help ensure reliability the application itself contains embedded Help screens. MISLE system quality control, and data verification and validation, is effected through regular review of records by the Coast Guard Office of Investigations and Analysis (CG-INV).
<b>LIMITATIONS</b>	Some incidents are never reported and some delayed in reaching the Coast Guard; previously published data is therefore subject to revision—with the greatest impact affecting recent quarters. The number of collisions, allisions and groundings is a proxy indicator of adverse impacts to maritime mobility; they can result in waterway closures and disruptions to maritime commerce. They may also result in personnel casualties, pollution incidents and property losses. Minimizing their occurrence is an objective of the Coast Guard Marine Transportation System Management Program, though their cause is often not related to a navigation or waterways management concern. A 5-year average is used to mitigate year-to-year variation and ensure any near-term trend is more apparent.