



September 2021

# COAST GUARD

## A More Systematic Process to Resolve Recommended Actions Could Enhance Future Surge Operations

Accessible Version

# GAO Highlight

Highlights of [GAO-21-584](#), a report to congressional committees

## Why GAO Did This Study

The U.S. Coast Guard has multimission responsibilities to support response efforts and help protect life, property, and the environment. The Coast Guard must often rely on surge operations to reduce the impacts of catastrophic events, such as the Deepwater Horizon oil spill in 2010 and Hurricanes Harvey, Irma, and Maria in 2017.

The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 includes a provision for GAO to review the Coast Guard's surge capacity to respond to catastrophic events. This report addresses (1) the number of major surge operations the Coast Guard conducted from 2007 through 2020, and what personnel and assets it used to support these operations; (2) the extent the Coast Guard documents lessons learned and best practices from its major surge operations and resolves related recommended actions; and (3) how surge operations have affected the Coast Guard's ability to conduct its statutory missions. GAO reviewed, among other things, documentation from Coast Guard surge operations from 2007 through 2020; analyzed after-action reports and performance metrics; and interviewed Coast Guard officials.

## What GAO Recommends

GAO recommends that the Coast Guard establish a more systematic process for ensuring that recommended actions are tracked, updated, and resolved in line with Coast Guard goals. The Department of Homeland Security concurred with this recommendation.

View [GAO-21-584](#). For more information, contact Heather MacLeod at (202) 512-8777 or [macleodh@gao.gov](mailto:macleodh@gao.gov).

September 2021

## COAST GUARD

### A More Systematic Process to Resolve Recommended Actions Could Enhance Future Surge Operations

## What GAO Found

From 2007 through 2020, the Coast Guard conducted 23 major surge operations—high-intensity, short-notice efforts to respond to catastrophic events or emergencies, such as hurricanes, oil spills, and humanitarian events. To support these surge operations, the Coast Guard deployed varying levels of personnel, aircraft, and vessels according to the events' severity and duration.

Photo of Coast Guard Personnel Responding to Hurricane Harvey (2017)



Source: U.S. Coast Guard. | GAO-21-584

The Coast Guard documents lessons learned and best practices from its major surge operations and develops recommended actions to help improve future operations. The Coast Guard also has processes for assigning recommended actions to appropriate headquarters offices and field units. However, GAO's analysis of Coast Guard data on major surge operations shows that it has not met its goals of (1) resolving 80 percent of recommended actions or (2) resolving the actions within 18 months of being assigned. GAO analysis also found that Coast Guard headquarters offices have a higher proportion of unresolved recommended actions compared with field units. The *Coast Guard Strategic Plan for 2018-2022* calls for acting on lessons learned and best practices from surge events as important factors for improving emergency management. However, the Coast Guard lacks assurance that recommended actions to address surge operation deficiencies are tracked, updated, and resolved in line with program goals. Without a more systematic process to help ensure that this occurs, the Coast Guard may not address identified issues that could affect its ability to effectively conduct future surge operations.

The Coast Guard was generally able to meet statutory mission performance targets in years that it also conducted surge operations. While Coast Guard data showed variation in mission activities in years with concurrent or back-to-back surge operations, GAO was not able to determine the effect that surge operations had on mission activities because of multiple factors beyond surge operations, such as personnel transfers, that can also affect mission activities. Additionally, Coast Guard officials did not identify any statutory or regulatory impediments to the Coast Guard's ability to conduct surge operations.

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A Century of Non-Partisan Fact-Based Work

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# Contents

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GAO Highlight	2
Why GAO Did This Study	2
What GAO Recommends	2
What GAO Found	2
Letter	1
Background	4
The Number of Coast Guard Surge Operations Fluctuates Each Year and Requires Deployments of Varying Levels of Resources	10
The Coast Guard Documents Lessons Learned and Best Practices but Does Not Systematically Track and Resolve Recommended Actions	13
Mission Performance Targets Are Generally Met, Despite Surge Operations	23
Conclusions	27
Recommendation for Executive Action	28
Agency Comments and Our Evaluation	28
Appendix I: Objectives, Scope, and Methodology	30
Appendix II: Information on Major Events and the Coast Guard's Surge Operations, Calendar Years 2007 through 2020	35
Appendix III: Comments from the Department of Homeland Security	39
Agency Comment Letter	42
Appendix IV: GAO Contact and Staff Acknowledgments	45
Tables	
Table 1: The U.S. Coast Guard's 11 Statutory Missions	6
Table 2: U.S. Coast Guard Workforce, by Personnel Type, as of April 30, 2021	7
Table 3: Examples of Lessons Learned from U.S. Coast Guard After-Action Reports for Surge Operations, 2007 through 2020	15
Table 4: Information on Major Events and the Resulting U.S. Coast Guard Surge Operations, Calendar Years 2007 through 2020	35

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## Figures

Figure 1: Map of the U.S. Coast Guard's Two Area Commands, Nine Districts, and 37 Sectors	5
Figure 2: Selected Images of the U.S. Coast Guard Conducting Surge Operations in Response to Catastrophic Events	12
Figure 3: Map Showing the Locations of U.S. Coast Guard Surge Operations Conducted from 2007 through 2020	13
Figure 4: U.S. Coast Guard Recommended Action Resolution Rates, Calendar Years 2011 to September 1, 2019, as of March 1, 2021	20
Figure 5: Coast Guard Recommended Action Resolution Rates, by Headquarters Program Offices and Field Units, Calendar Years 2011 to September 1, 2019, as of March 1, 2021	21

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### Abbreviations

AAR	after-action report
COVID-19	Coronavirus Disease 2019
OEM	Office of Emergency Management and Disaster Response

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September 21, 2021

Congressional Addressees

Catastrophic or emergency events—such as the Deepwater Horizon oil spill in 2010 and Hurricanes Harvey, Irma, and Maria in 2017—have shown that the U.S. Coast Guard and other federal entities must often rely on surge operations to help reduce the potentially devastating impacts of these events.<sup>1</sup> For example, the Coast Guard saved more than 11,000 people, recovered more than 58,000 gallons of oil, and removed more than 160 sunken vessels during its surge operation in response to Hurricane Harvey in 2017.

The Coast Guard, within the Department of Homeland Security, is an armed service with broad law enforcement authorities and maintains multimission capabilities to support response efforts and help protect life, property, and the environment. As such, the Coast Guard serves as a first responder and humanitarian service provider that aids those who have been impacted by natural and human-made disasters.

The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 includes a provision for us to report on the surge capacity of the Coast Guard to respond to catastrophic events.<sup>2</sup> This report addresses the following questions: (1) How many major surge operations has the Coast Guard conducted during calendar years 2007 through 2020, and what personnel and assets did it use to support these surge operations? (2) To what extent does the Coast Guard document lessons learned and best practices from its major surge operations and resolve the related recommended actions to improve future surge operations? (3) How have surge operations affected the Coast Guard's ability to conduct its statutory missions?

To address all three objectives, we reviewed relevant Coast Guard policy manuals, including *Publication 1, Doctrine for the U.S. Coast Guard*; the

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<sup>1</sup>The Coast Guard defines surge operations as high-intensity efforts launched on short notice in response to emergency situations. For the purposes of this report, we focused on major surge operations conducted in support of catastrophic incidents that occurred from 2007 through 2020.

<sup>2</sup>Pub. L. No. 116 -283, § 8256

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four-volume emergency management manuals; the *U.S. Coast Guard Incident Management Handbook*; and other relevant policies and guidance related to emergency management and disaster response.

To determine how many major surge operations the Coast Guard conducted during calendar years 2007 through 2020, we reviewed the *Coast Guard's Incident Typing Characteristics*, which the Coast Guard uses to determine the complexity of an incident.<sup>3</sup> For the purposes of this report, we focused on the Type 1 incidents, which are the most severe or complex events, and their related major surge operations, which took place from 2007 through 2020.<sup>4</sup> To compile the list of Type 1 incidents, we relied on the Coast Guard to provide us with a list of surge operations it had conducted during this period. While we could not verify whether the Coast Guard identified all Type 1 incidents from 2007 through 2020, the surge operations it identified provided sufficient information to review the Coast Guard's surge capacity and, therefore, was determined to be sufficiently reliable for the purposes of this review.

To determine what personnel the Coast Guard used to support these major surge operations, we analyzed data on personnel deployments from the Coast Guard's human resources information system of record, Direct Access Mobilization, which the Coast Guard started using in 2017. For major surge operations prior to 2017, we relied on after-action reports for determining the number of personnel deployed. To determine what assets (i.e., aircraft and vessels) the Coast Guard used to support surge operations, we analyzed data on vessel and aircraft hours used for each surge operation. To determine the reliability of these data, we interviewed Coast Guard officials and compared the data the Coast Guard provided us on personnel and asset deployments with the data it reported in after-action reports. Using this assessment, we determined that the data were sufficiently reliable for the purposes of reporting on the amount of

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<sup>3</sup>The Coast Guard uses the concept of incident typing, as it allows incident commanders and others to understand the general characteristics of an incident and to plan for potential resource needs, given the type of incident. Incidents can be categorized from Type 1 to Type 5. Type 1 is the most complex incident requiring national resources and is expected to go into multiple operational periods. See U.S. Coast Guard, *U.S. Coast Guard Emergency Management Manual Volume IV: Incident Management and Crisis Response*, COMDTINST M3010.24A (October 2020).

<sup>4</sup>The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 required that the review cover all catastrophic events after 2005 (see Pub. L. No. 116 -283, § 8256). However, according to the Coast Guard, the first identified Type 1 event after 2005 took place in calendar year 2007.

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resources the Coast Guard used to support its major surge operations from 2007 through 2020.

To examine the extent to which the Coast Guard documents lessons learned and best practices from its major surge operations and resolves the related recommended actions to improve future surge operations, we reviewed and analyzed after-action reports for the major surge operations identified from calendar years 2007 through 2020. We also gathered and analyzed Coast Guard data on the recommended actions generated from the after-action reports to determine—for both headquarters offices and field units—(1) the number of recommended actions that were assigned, (2) the rates for resolving recommendations, and (3) the time lines for resolving recommended actions. We then compared the results with Coast Guard recommended action resolution rate and timeliness goals. To assess the reliability of the Coast Guard’s recommended action data, we (1) performed manual and electronic testing of the data and (2) interviewed Coast Guard headquarters officials knowledgeable about Coast Guard after-action reporting. On the basis of this assessment, we determined that the data were sufficiently reliable for the purposes of this report. We also interviewed Coast Guard field unit personnel from the Atlantic Area Command and the three districts who participated in response efforts for the 2017 and 2020 hurricane seasons to gather feedback on the Coast Guard’s after-action reporting process, including the assignment and resolution of recommended actions. We assessed the Coast Guard’s efforts and response against criteria in its After Action Program guidance for tracking and timely resolution of recommended actions generated from surge operations. Additionally, we assessed efforts to adhere to the *Coast Guard Strategic Plan 2018-2022*, which calls for using lessons learned and best practices to improve its emergency management functions.

To examine how major surge operations have affected the Coast Guard’s ability to conduct its statutory missions, we analyzed year-to-year changes in performance metrics included in the Coast Guard *Annual Performance Reports* for fiscal years 2008 through 2020.<sup>5</sup> To determine if there were differences in performance metrics between selected Coast Guard districts, we analyzed mission performance metric data for fiscal years 2016 through 2020 for Districts 7 (Miami, FL) and 8 (New Orleans, LA)—the two districts most affected by the major events and related

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<sup>5</sup>We started with the fiscal year 2008 *Annual Performance Report* as the first identified major surge operation, the *Cosco Busan* oil spill, took place in November 2007, which is in fiscal year 2008.



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surge operations in recent years. While we noted some variations in mission performance metrics for Districts 7 and 8 during fiscal years 2016 through 2020, we could not determine the extent to which the variations in mission performance were a result of the surge operations as opposed to other factors, such as personnel transfers or the Coronavirus Disease 2019 (COVID-19) pandemic.

We supplemented our analyses of mission performance metrics with interviews of Coast Guard officials from Coast Guard headquarters; the Atlantic Area Command; and Districts 5, 7, and 8—the districts most impacted by the 23 major surge operations—to discuss the effect of major surge operations on the Coast Guard’s ability to carry out its statutory missions. We also asked these officials to discuss any statutory or regulatory impediments to the Coast Guard’s ability to carry out surge operations. Appendix I contains a more detailed discussion of our objectives, scope, and methodology.

We conducted this performance audit from April 2020 to September 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

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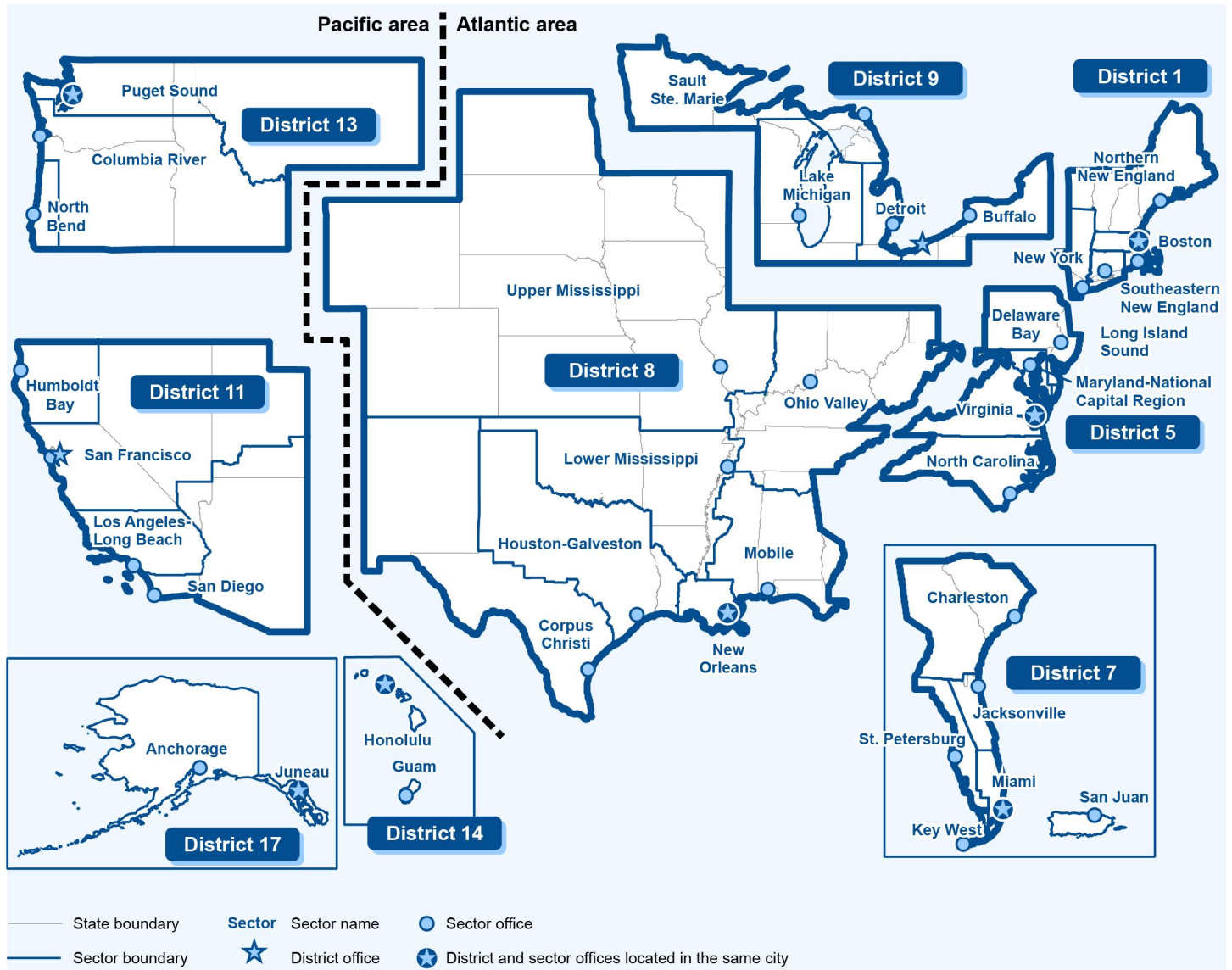
### Coast Guard Field Structure

The Coast Guard’s field structure is organized under two area commands, the Atlantic and Pacific Area Commands. These two area commands oversee nine districts across the U.S., which, in turn, collectively oversee 37 sectors, as shown in figure 1.<sup>6</sup> Each Coast Guard area, district, and sector is responsible for managing its assets and accomplishing missions within its area of responsibility.

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<sup>6</sup>The number and location of the Coast Guard’s districts have gone through numerous iterations over the years. Since the end of May 1996, the Coast Guard organization structure has included nine districts. As shown in figure 1, the districts are no longer numbered consecutively.

Figure 1: Map of the U.S. Coast Guard's Two Area Commands, Nine Districts, and 37 Sectors



Source: GAO analysis of U.S. Coast Guard data. | GAO-21-584

## Coast Guard Statutory Missions

The Coast Guard is responsible for conducting 11 statutory missions outlined in federal law.<sup>7</sup> Table 1 provides an overview of these missions.

**Table 1: The U.S. Coast Guard's 11 Statutory Missions**

<b>Mission</b>	<b>Mission description</b>
Marine Safety	Enforce laws that prevent death, injury, and property loss in the marine environment.
Search and Rescue	Search for, and provide aid to, people who are in distress or imminent danger in the maritime environment.
Aids to Navigation	Mitigate the risk to safe navigation by providing and maintaining more than 51,000 buoys, beacons, lights, and other aids to mark channels and denote hazards.
Living Marine Resources	Enforce laws governing the conservation, management, and recovery of living marine resources, marine protected species, and national marine sanctuaries and monuments.
Marine Environmental Protection	Enforce laws that deter the introduction of invasive species into the maritime environment, stop unauthorized ocean dumping, and prevent and respond to oil and chemical spills.
Ice Operations	Establish and maintain tracks for critical waterways, assist and escort vessels beset or stranded in ice, and remove navigational hazards created by ice in navigable waterways.
Ports, Waterways, and Coastal Security	Ensure the security of the waters subject to the jurisdiction of the United States and the waterways, ports, and intermodal landside connections that comprise the marine transportation system, and protect those who live or work on the water or who use the maritime environment for recreation.
Drug Interdiction	Stem the flow of illegal drugs into the United States via maritime routes.
Migrant Interdiction	Stem the flow of unlawful migration and human smuggling activities via maritime routes.
Defense Readiness	Maintain the training and capability necessary to immediately integrate with Department of Defense forces in both peacetime operations and during times of war.
Other law enforcement	Enforce international treaties, including the prevention of illegal fishing in international waters.

Source: GAO presentation of U.S. Coast Guard information. | GAO-21-584

Note: The Coast Guard is responsible for conducting the 11 statutory missions outlined in federal law. 6 U.S.C. § 468(a).

<sup>7</sup>6 U.S.C. § 468(a).

## Coast Guard Workforce and Assets

The Coast Guard relies on a workforce of active duty, reserve duty, and civilian personnel to carry out its mission responsibilities. As of April 30, 2021, the Coast Guard had approximately 55,500 active duty, reserve duty, and civilian personnel.<sup>8</sup> These personnel include, for example, operational field staff responsible for conducting the statutory missions outlined in table 1—such as search and rescue activities and law enforcement operations—and mission support personnel responsible for managing Coast Guard policy, planning, and logistics to meet mission needs. Table 2 provides more information on the Coast Guard workforce, by personnel type.

**Table 2: U.S. Coast Guard Workforce, by Personnel Type, as of April 30, 2021**

Personnel type	Description	Number of personnel
Active duty	Full-time military personnel responsible for carrying out the Coast Guard's 11 statutory missions	40,518
Reserve duty <sup>a</sup>	Part-time military personnel trained and qualified to take duty in times of war or national emergency and to augment Coast Guard forces and provide surge capacity to respond to natural or human-made disasters, accidents, and all other hazards	6,139
Civilian	Full-time, nonmilitary personnel supporting the Coast Guard's missions	8,877
<b>Total</b>		<b>55,534</b>

Source: GAO analysis of U.S. Coast Guard documentation and data. | GAO-21-584

Note: Members of the Coast Guard Auxiliary force are not included in this table. These personnel represent Coast Guard uniformed personnel who volunteer their time and maritime experience in support of Coast Guard missions and operations.

<sup>a</sup>Coast Guard reserve personnel are required to participate in part-time training activities each year. These personnel may be ordered to active duty status to meet the Coast Guard's operational needs.

In addition to its workforce, the Coast Guard also relies on a variety of assets—mainly aircraft and vessels—to conduct its mission responsibilities.<sup>9</sup> The Coast Guard operates two types of aircraft—fixed

<sup>8</sup>Members of the Coast Guard Auxiliary force are not included in this number. These personnel represent Coast Guard uniformed personnel who volunteer their time and maritime experience in support of Coast Guard missions and operations.

<sup>9</sup>The Coast Guard defines “capital assets” as significant pieces of property or equipment, such as buildings, cutters, boats, aircraft, computers, and software. A capital asset is a tangible asset used to support or conduct operations. For the purposes of this report, we focused on aircraft and vessels, which are the main assets used to support surge operations.

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wing (airplanes) and rotary wing (helicopters). Similarly, the Coast Guard generally operates two types of vessels—cutters and boats.<sup>10</sup>

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## Coast Guard Surge Operations

Coast Guard surge operations are high-intensity efforts launched on short notice in response to emergency situations or events. Surge operations are generally conducted in response to a catastrophic event, such as a hurricane or large oil spill.<sup>11</sup> The Coast Guard has also conducted surge operations for humanitarian events, such as the influx of unaccompanied immigrant minors at the southwest border in 2014.

Surge operations generally involve the deployment of personnel, aircraft, and vessels that normally support other mission activities and may require the Coast Guard to reallocate large numbers of such resources to the affected area(s). Coast Guard publications state that providing an appropriate response to a catastrophic or emergency event generally requires personnel and resources that are beyond the internal capabilities of any single Coast Guard unit, and requires that the Coast Guard adapt to find ways to meet the needs of the surge operations while still achieving critical day-to-day mission activities.<sup>12</sup> Surge operations, therefore, require the Coast Guard to balance the deployments of personnel and assets for surge activities with the need to maintain a level of personnel and assets to carry out its regular, statutory missions.

The Coast Guard categorizes each catastrophic event based on its complexity in order to determine the resources required and assign sufficient numbers of qualified personnel and assets to respond to the

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<sup>10</sup>A cutter is any vessel 65 feet in length or greater, having adequate accommodations for crew to live on board. In contrast, all vessels less than 65 feet in length are classified as boats and usually operate nearer to shore and on inland waterways.

<sup>11</sup>Section 602 of the Post-Katrina Emergency Management Reform Act of 2006 defines a catastrophic incident (or event) as any natural disaster, act of terrorism, or other human-made disaster that results in extraordinary levels of casualties or damage or disruption severely affecting the population (including mass evacuations), infrastructure, environment, economy, national morale, or government functions in an area. (Pub. L. 109–295, title VI, § 602, Oct. 4, 2006, 120 Stat. 1394. 6 U.S.C. § 701(4)).

<sup>12</sup>See U.S. Coast Guard, *Coast Guard Publication 1: Doctrine for the U.S. Coast Guard* (February 2014); and *Coast Guard Publication 3-28: Incident Management and Crisis Response* (March 2020).

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event. According to Coast Guard criteria, the most severe or complex events can include the following characteristics:

- The number of personnel deployed in the resulting major surge operation often exceeds 500 and can exceed 1,000.
- The event will involve highly complex information management software tools.
- The event will require the use of an “Incident Action Plan”<sup>13</sup> and status briefings for relevant officials.
- There will be a high impact on the local Coast Guard unit (e.g., sector) that requires additional staff for administrative and support functions.

Following its surge operations, the Coast Guard is to develop after-action reports (AAR) to document lessons learned, best practices, and recommendations for improvement. According to the Coast Guard’s After Action Program guidelines, sector, district, and area command levels must submit an AAR to the Contingency Preparedness System—the Coast Guard’s system for managing after-action information—within 60 calendar days of the conclusion of a major surge operation.<sup>14</sup> Officials from the Coast Guard Office of Emergency Management and Disaster Response (OEM) are to review the after-action information and use the included recommendations to generate recommended actions, or specific and measurable corrective actions to be taken to mitigate an identified deficiency or challenge.<sup>15</sup> OEM is then to assign these recommended actions to the appropriate headquarters program offices or field units for resolution. These offices, in turn, are responsible for ensuring that the status of the actions remains current within Contingency Preparedness System records.

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<sup>13</sup>An Incident Action Plan outlines the general objectives reflecting the overall strategy for managing a catastrophic event. The plan may include identifying operational resources and assignments, as well as attachments that provide direction and important information for managing the event.

<sup>14</sup>The Contingency Preparedness System is the system of record for the Coast Guard After Action Program. It is a web-based system that was launched to electronically link Coast Guard contingency plans, exercise planning, and after-action reporting. Officials use two specialized modules within the web-based system to first upload AAR information and then assign and track the status of associated recommended actions.

<sup>15</sup>The Coast Guard refers to these as “remedial action issues”; however, for the purposes of this report, we refer to them as “recommended actions.”

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## The Number of Coast Guard Surge Operations Fluctuates Each Year and Requires Deployments of Varying Levels of Resources

The number of major surge operations conducted by the Coast Guard fluctuates from one year to the next and involves the deployment of varying levels of personnel, aircraft, and vessels to support those operations. From calendar years 2007 through 2020, the Coast Guard conducted 23 major surge operations in response to catastrophic events, such as hurricanes and oil spills, as well as declared emergency humanitarian events. The annual number of surge operations the Coast Guard conducted during this 14-year period varied from a high of nine in 2020, to no major surge operations conducted in four of the 14 years (2008, 2009, 2011, and 2013). To support these surge operations, the Coast Guard deployed varying levels of resources—mainly personnel, aircraft, and vessels—depending on the severity and duration of the events. Below are some examples of major surge operations that the Coast Guard conducted in recent years.

- In April 2010, the mobile offshore drilling unit Deepwater Horizon, operating in the Gulf of Mexico, sank after a well experienced a catastrophic blowout, causing a major explosion and fire. The blowout resulted in a catastrophic oil spill of approximately 3.2 million barrels of oil, leading to an unprecedented oil spill response. Following the explosion, Coast Guard crews took part in the search and rescue mission, in which 115 members of the Deepwater Horizon crew were rescued. The Secretary of Homeland Security declared the event a Spill of National Significance and designated the Commandant of the Coast Guard as the National Incident Commander.<sup>16</sup> In the ensuing 7 months, the Coast Guard deployed, from across the country, at least 7,000 active duty and reserve personnel, and provided about 4,000 aircraft hours and about 4,000 vessel hours in support of this surge operation.

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<sup>16</sup>According to the National Oil and Hazardous Substances Pollution Contingency Plan, a Spill of National Significance is an oil spill that, “due to its severity, size, location, actual or potential impact on the public health and welfare or the environment, or the necessary response effort, is so complex that it requires extraordinary coordination of federal, state, local, and responsible party resources to contain and clean up the discharge.” See 40 CFR § 300.5.

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- The 2017 hurricane season was classified as “extremely active” by the National Hurricane Center, with 17 named storms and 10 hurricanes, six of which were major hurricanes—including Harvey, Irma, and Maria. The Coast Guard conducted search and rescue operations for the 2017 hurricane season and was able to rescue nearly 12,000 people. Additionally, the Coast Guard organized salvage and removal operations for displaced, sunken, and wrecked vessels; protected offshore petrochemical platforms; and documented environmental hazards. In all, for Harvey, Irma, and Maria, the Coast Guard deployed over 4,700 personnel (active duty, reserve personnel, and civilians); flew about 4,000 aircraft hours; and operated vessels for over 2,000 hours.<sup>17</sup>
  - From April 2019 through November 2019, the Coast Guard deployed personnel to assist U.S. Customs and Border Protection at the southwest border of the United States in response to a national emergency.<sup>18</sup> The Coast Guard provided transportation; logistical and administrative support; and medical teams to conduct medical screening and assessments, and to provide minor treatment services. Over the course of six waves (the first four waves lasting 30 days each and the last two waves lasting 60 days each), the Coast Guard deployed 996 personnel (496 active duty, 382 reservists, 72 medical team members, 23 logistics management team members, and 23 mission support staff).<sup>19</sup> The Coast Guard also contributed 495 aircraft hours and 325 vessel hours to support the surge operation.

Figure 2 shows images of some of the major surge operations the Coast Guard conducted since 2010. For a complete list of the 23 major surge

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<sup>17</sup>In September 2018, we reported on the federal response, including that of the Coast Guard, to the 2017 hurricanes. We reported that four sequential disasters—Hurricanes Harvey, Irma, Maria, and the California wildfires—created an unprecedented demand for federal disaster response and recovery resources. We found that the federal government provided significant support to Puerto Rico and the U.S. Virgin Islands in response to Irma and Maria but faced numerous challenges that complicated response efforts. See GAO, *2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges*, [GAO-18-472](#) (Washington, D.C.: Sept. 4, 2018).

<sup>18</sup>The national emergency was defined in Presidential Proclamation 9844, “Declaring a National Emergency Concerning the Southern Border of the United States,” 84 Fed. Reg. 4949 (Feb. 20, 2019).

<sup>19</sup>Pursuant to the Coast Guard’s assistance authority under 14 U.S.C. § 701, Coast Guard personnel authority was limited to mission support activities such as transportation and other types of logistical or administrative support. Deployed personnel were directed to not exercise law enforcement authority, not be armed, or assist in situations that would require being armed.



operations conducted by the Coast Guard from 2007 through 2020, along with more detailed information on each surge operation, see appendix II.

**Figure 2: Selected Images of the U.S. Coast Guard Conducting Surge Operations in Response to Catastrophic Events**

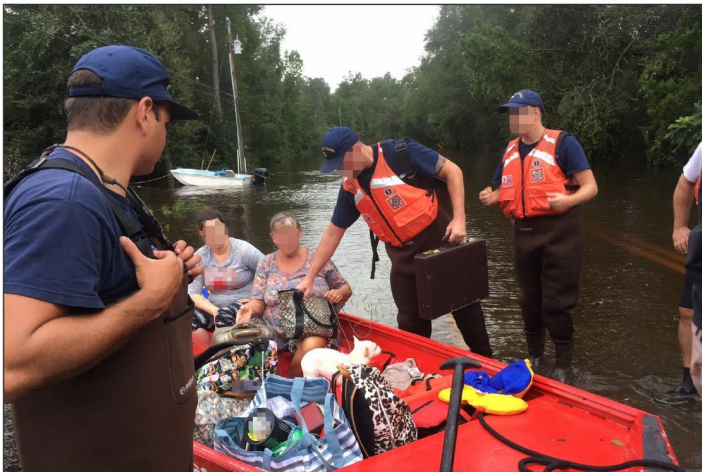
**Deepwater Horizon oil spill (2010)**



**Hurricane Maria (2017)**



**Hurricane Irma (2017)**



**Hurricane Harvey (2017)**



Source: U.S. Coast Guard. | GAO-21-584

While the Coast Guard's 23 major surge operations covered a large geographical area, Coast Guard District 7 (Miami, FL) and District 8 (New Orleans, LA) were the most affected, with 18 of the 23 surge operations occurring within these two districts (seven events in District 7, 10 events in District 8, and one event in both Districts 7 and 8). Figure 3 shows the locations of the 23 major surge operations the Coast Guard conducted

from 2007 through 2020. For additional information on these surge operations, refer to our [interactive graphic](#).

**Figure 3: Map Showing the Locations of U.S. Coast Guard Surge Operations Conducted from 2007 through 2020**



Source: GAO analysis of U.S. Coast Guard, National Oceanic and Atmospheric Administration, National Hurricane Center, National Weather Service, and open source information. | GAO-21-584

## The Coast Guard Documents Lessons Learned and Best Practices but Does Not Systematically Track and Resolve Recommended Actions

### The Coast Guard Documents Lessons Learned and Best Practices from Major Surge Operations to Improve Future Surge Operations

The Coast Guard identifies lessons learned from major surge operations and develops associated recommended actions to inform potential improvements to its future surge operations.<sup>20</sup> According to its After Action Program, the Coast Guard documents these lessons learned and accompanying recommendations in an AAR following each surge operation. In addition to documenting lessons learned, Coast Guard officials may also document best practices identified during the course of

<sup>20</sup>The Coast Guard defines a “lesson learned” as an issue encountered during an event that resulted in either a positive or a negative outcome.

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surge operations.<sup>21</sup> For example, using their experiences during the 2017 hurricane season, Atlantic Area officials noted that prepositioning resources such as vessels in safe, but more proximate, geographic areas prior to a predicted event's occurrence is a best practice. According to their AAR, adopting this practice, when possible, allows for vessels to be more readily available to assist with response needs during a surge event and serve as reliable platforms for command, control, communications, and reconnaissance needs if nearby Incident Command Posts are damaged or disabled.

According to the Coast Guard's After Action Program guidance, field units—that is, sectors, districts, or area commands—that participate in major surge operations are responsible for identifying relevant lessons learned and documenting them in formal AARs.<sup>22</sup> Coast Guard guidance further states that feedback from AARs should be used to support policy development and revision and to increase awareness of challenges and opportunities for improvement to subsequent Coast Guard surge operations. According to Coast Guard officials, and our review of AARs, the types of lessons learned, best practices, and recommendations contained in AARs can differ, depending on the scope of a field unit's involvement in a surge operation. For example, lessons learned can range from a sector acknowledging the need to purchase additional equipment (such as laptop computers), to an area command recommending revisions to Coast Guard policy guidance. In addition, Coast Guard officials from one district told us that AARs may contain recommendations as to what command level a particular issue should be addressed (e.g., headquarters, area, district, or sector), which we confirmed from our review of AARs.

Officials we spoke with from both headquarters program offices and field units told us they generally find information from AARs helpful for identifying common themes or challenges experienced during surge

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<sup>21</sup>The Coast Guard defines a "best practice" as an innovative or modified procedure that results in an improved or more effective response and that may merit adoption by other units, platforms, or commands

<sup>22</sup>AARs may be developed at each unit level for the same event. For example, five different sectors developed AARs for Hurricane Irma in 2017, as did District 7 and Atlantic Area command. Feedback from subordinate commands can also be included in AARs developed by higher command authorities. For example, Atlantic Area officials said that they solicit and incorporate information submitted by districts in their jurisdiction when they develop area-level AARs.

operations, as well as for recognizing planning needs for future surge operations. As an example of how the Coast Guard has applied lessons learned from past surge operations, feedback from multiple Coast Guard AARs for the 2017 hurricane season showed that field staff lacked familiarity with the process and online tool used to request surge staff from across the Coast Guard; this resulted in numerous recommended actions that were assigned to headquarters offices.<sup>23</sup> In response, Coast Guard headquarters officials told us they began training field units on the updated surge staffing system and tool beginning in 2018. Coast Guard field unit officials we spoke with confirmed this, stating that field unit staff became more comfortable with using the surge staffing tool during surge operations conducted after 2017.

Our review of AARs for the 23 major surge operations that the Coast Guard conducted during calendar years 2007 through 2020 identified the following categories of lessons learned (see table 3).<sup>24</sup>

**Table 3: Examples of Lessons Learned from U.S. Coast Guard After-Action Reports for Surge Operations, 2007 through 2020**

Category	Category description	Example from After-Action Reports
Command and control <sup>a</sup>	Includes actions taken by the relevant Coast Guard entities related to decision-making	Commands found it difficult to transition from their normal organization to an Incident Management Team structure. This led to confusion over which tools to use and how to operate according to Incident Command System requirements and the Coast Guard's traditional command and control. (2012 Super Storm Sandy)
Communications	Includes issues related to media relations and public affairs, as well as enhanced communication among Coast Guard units	The Coast Guard hosts numerous systems or processes for use during surge operations, but there is no overarching understanding of what a Common Operational Picture <sup>b</sup> is. The lack of an effective Common Operational Picture made it difficult to satisfy the information needs of senior leadership. <sup>c</sup> (2018 Hurricane Michael)
Policies and guidance	Includes issues related to the application and use of Coast Guard guidance, policies, and procedures	The 2nd 80's Deer Park Fire highlighted a gap in preidentified plans, procedures, and capabilities when dealing with atmospheric hazards associated with the release of petrochemical mixtures. Air monitoring and water sampling plans were needed, as well as reporting thresholds and time lines to ensure the public was notified for their protection. (2019 2nd 80's Deer Park Fire <sup>d</sup> )

<sup>23</sup>In 2017, the Coast Guard replaced the previous system used to manage personnel requests for surge operations with a new tool called Direct Access Mobilization. According to Coast Guard guidance, Direct Access Mobilization is a web-based, personnel resource tool used to find personnel with specific qualifications who can be mobilized to respond during surge operations.

<sup>24</sup>The Coast Guard provided approximately 41 reports that covered most events within our scope. The reports were developed by Coast Guard sector, district, and Atlantic Area officials per a 60-day reporting requirement, as described in Coast Guard policy guidance.

Category	Category description	Example from After-Action Reports
Personnel management	Includes issues related to the understanding and use of the process for requesting additional personnel, as well as issues related to personnel training	Liaison officers did not have the experience or training to adequately provide good information to local stakeholders and were not involved in the response planning process. This created negative images of the response effort among local agencies and the public, even though the operation was a success. (2007 Cosco Busan oil spill)
Asset management	Includes issues related to the availability and operability of deployed aircraft and vessels, as well as the processes for requesting such assets	When planning for deploying aircraft long term, certain considerations must be taken into account, including ability to obtain aircraft services; logistics; availability of ground support personnel in addition to the flight crew; and the security of aircraft while at the support location. (2014 Coast Guard Response to Influx of Unaccompanied Children)
Technology	Includes issues related to the availability and performance of computer-related equipment	Surge operations fell short due to a lack of sufficient or robust information technology (IT) resources. Examples included (1) severely degraded or inoperable communications capabilities of information centers during and immediately after storms' landfalls, leading to contradictory or incorrect messaging among Coast Guard stakeholders; (2) limited Coast Guard network bandwidth, preventing image upload of areas affected by storms; (3) lack of suitable space and workstations in local operations centers; and (4) lack of a central information-sharing site available to both Coast Guard and non-Coast-Guard stakeholders. (2017 Hurricanes Harvey, Irma, and Maria)

Source: GAO analysis of Coast Guard After Action Reports. | GAO-21-584

<sup>a</sup>Command and control refers to the exercise of authority and direction by a commander over assigned and attached forces in the accomplishment of the mission.

<sup>b</sup>Common Operational Picture refers to the capability for sharing dynamic, geospatially-referenced situational awareness information. The Coast Guard's primary Common Operational Picture application is a map-based information system that can be shared among Coast Guard commands and includes an information display that provides the position and additional details on vessels and aircraft to Coast Guard and other decision makers.

<sup>c</sup>The Coast Guard convened a working group in 2018 to address issues related to Common Operational Picture systems, ultimately selecting an application with the desired capability and adopting it Coast Guard-wide in April 2019.

<sup>d</sup>On March 17, 2019, a massive fire erupted within a 50.4 million gallon capacity petrochemical tank farm at a facility in Deer Park, Texas. Nearly 5,000 personnel across 322 organizations responded to the fire that burned for 64.5 hours and subsequently released 9.4 million gallons of petrochemical products into the Houston Ship Channel.

## The Coast Guard Has Processes for Assigning Recommended Actions

The Coast Guard has processes for assigning recommended actions to appropriate Coast Guard headquarters offices or field units. According to the Coast Guard, the number of recommended actions generated varies with each major event. For example, the Coast Guard generated 60 recommended actions following Hurricane Sandy in 2012, while it generated 10 following its response to the influx of unaccompanied children at the southern U.S. border in 2014.

The number of recommended actions assigned to a headquarters office or field unit also varies with each major event. For example, after Hurricane Harvey in 2018, the Coast Guard assigned five recommended actions to Sector Houston-Galveston, while it assigned more than 20 to District 8. OEM officials added that prior to assigning recommended actions, they will consult with other headquarters program offices and field units to determine the appropriate office(s) to address the recommended actions. In addition, officials said they sometimes look for ways to combine recommended actions from different events based on common themes, as well as to determine if the resolution of a specific recommended action addresses other recommended actions in their data system. According to officials, the Contingency Preparedness System is the data system the Coast Guard uses to store and track AARs and recommended actions. At the time of our review, the system contained over 9,000 AARs and over 12,000 recommended actions.

To inform this process, the Coast Guard developed guidelines, tools, and goals to provide direction to headquarters offices and field units assigned recommended actions. These are detailed in the sections that follow.

**National guidelines.** In 2015, the Coast Guard updated the national guidelines for its After Action Program. The guidance describes how recommended actions are to be managed and the roles and responsibilities of headquarters offices and field units in the after-action reporting process.

**Tools.** OEM officials told us that they use specific modules within the Contingency Preparedness System and spreadsheets as the primary tools to facilitate the after-action reporting process. If any of the AARs include recommendations for improvement, the associated recommended actions are to be entered into a customized module within the system. In addition, OEM program officials stated they also use spreadsheets to record the resolution rates for assigned recommended actions.

**Coast Guard goals.** In addition to having national guidelines, OEM officials told us they have established goals for the recommended action process. Specifically, the Coast Guard's goal is the resolution of 80 percent of recommended actions overall, and recommended actions

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should “ideally be resolved<sup>25</sup> and closed out within 18 months of assignment.”<sup>26</sup> Officials told us that the majority of recommended actions are typically resolved within this time frame but noted that the 18-month goal may not always be met, particularly for headquarters program offices that can be assigned large, complex issues involving multiple Coast Guard stakeholders that are generally broader in scope and more difficult to resolve.<sup>27</sup>

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## The Coast Guard Does Not Systematically Track the Status of Recommended Actions to Help Ensure They Are Resolved in Line with Coast Guard Goals

Coast Guard OEM officials told us that they use various communication methods to conduct outreach to headquarters program offices and field units regarding the status of assigned recommended actions. However, some of these actions are done on an informal basis, as time allows, rather than as part of a more systematic process, such as with scheduled follow-ups with offices and units, or requirements for offices and units to provide regular status updates on actions taken to address assigned recommended actions.

For field units that have been assigned recommended actions to address, OEM officials we met with told us they issue a monthly update to each unit’s staff on their recommended action resolution rates. OEM officials cited these updates as an impetus for field staff to regularly check the status of recommended actions assigned to their units and keep their resolution rates within targeted time frames. For headquarters offices that have been assigned recommended actions to address, OEM officials told us they send an email to officials in the relevant offices to alert them once recommended actions have been assigned. These emails include a link to a Frequently Asked Questions guide on how to track and update the status of recommended actions in the Contingency Preparedness System, as well as contact information for staff in OEM who can assist

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<sup>25</sup>The Coast Guard considers a recommended action to be resolved when actions are taken that sufficiently address the identified deficiency or deficiencies.

<sup>26</sup>The 80 percent resolution target goal includes recommended actions generated from AARs of both major surge operations and preparedness exercises.

<sup>27</sup>The Contingency Preparedness System began to be used for after-action recordkeeping in 2003. According to the Coast Guard, prior to 2011, data from non-Coast Guard reports were not recorded in the system and, therefore, some data and information from major events prior to 2011 are not in the system’s records.

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them. OEM officials stated that, as time allows, they also conduct periodic reviews of the status of unaddressed recommended actions by contacting officials in the relevant headquarters program offices to obtain updates. The OEM officials added, though, that there is no set schedule or systematic process for conducting such reviews.

While OEM's monthly updates to field units, and its periodic communications with headquarters offices about assigned recommended actions, are useful, a more systematic process for tracking recommended actions at both levels could help ensure greater likelihood of timely resolution. Our analysis of data on the recommended actions related to the major surge operations the Coast Guard conducted from 2011 to September 1, 2019, shows that the Coast Guard has not consistently achieved its resolution rate goal of 80 percent or met its timeliness goal of resolving recommended actions within 18 months. In particular, our analysis shows that the Coast Guard generated and assigned 431 recommended actions during this period, of which 279 (65 percent) had been resolved, while 152 (35 percent) remained unresolved as of March 1, 2021. For those recommended actions that had been resolved, about half were completed within the Coast Guard's desired 18-month time frame, while the remainder required more than 18 months to resolve (see fig. 4).<sup>28</sup>

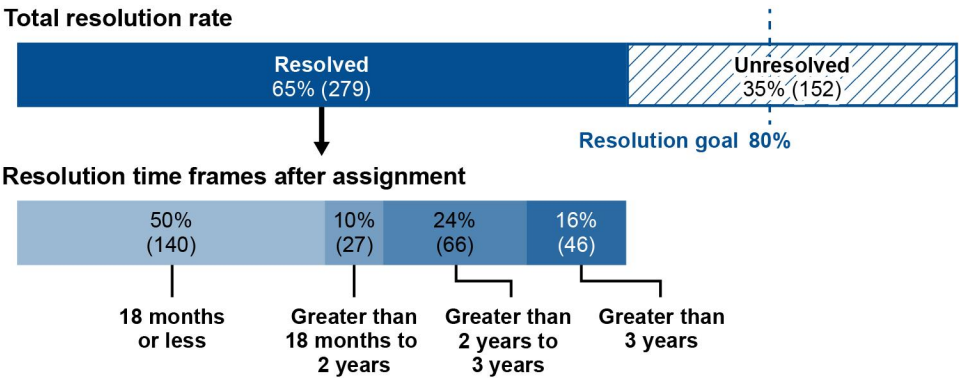
Some of the unresolved recommended actions date as far back as 2010. For example, of the 40 actions generated from the 2010 Haiti earthquake, 17 were unresolved as of March 1, 2021. Similarly, of the 60 actions generated from Super Storm Sandy in 2012, 14 were unresolved as of March 1, 2021. More recently, for the 2017 hurricane season, which, collectively, generated the largest number of recommended actions for the events included in our analyses (156), 66 were unresolved, and 49 of the 97 recommended actions generated from Hurricanes Michael and Florence in 2018 were also unresolved as of March 1, 2021.

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<sup>28</sup>This analysis did not include the 2007 *Cosco Busan* oil spill because no recommended action data were available, and that event predated the Coast Guard's use of the Contingency Preparedness System to document such data. Although the use of the Contingency Preparedness System to track recommended actions did not begin until 2011, the system contained data for the 2010 Haiti earthquake, which was included in the analysis. According to the Coast Guard, the data provided were current as of March 10, 2021. As a result, we excluded from our analysis any recommended actions assigned on or after September 1, 2019, or 18 months prior to March 1, 2021.



**Figure 4: U.S. Coast Guard Recommended Action Resolution Rates, Calendar Years 2011 to September 1, 2019, as of March 1, 2021**



Source: GAO analysis of U.S. Coast Guard data. | GAO-21-584

**Accessible Data Table for the figure 4**

Resolution			
Total resolution rate	Resolved	279	65%
	Unresolved	152	35%
	Resolution goal		80%
Resolution time frames after assignment	18 months or less	140	50%
	Greater than 18 months to 2 years	27	10%
	Greater than 2 years to 3 years	66	24%
	Greater than 3 years	46	16%

Note: The Coast Guard has established a resolution rate goal of 80 percent for all recommended actions catalogued in its data system, as well as a timeliness goal of resolving recommended actions within 18 months. According to the Coast Guard, the data provided were current as of March 10, 2021. As a result, we excluded recommended actions assigned on or after September 1, 2019, or 18 months prior to March 1, 2021.

Further analysis of the data found that Coast Guard headquarters program offices have a higher proportion of unresolved recommended actions as compared with field units. For example, of the 152 recommended actions in our review that were unresolved as of March 1, 2021, 104 (68 percent) were assigned to an office or offices within Coast Guard headquarters, as compared with 48 (32 percent) assigned to field units. In addition, among the recommended actions for which headquarters program offices were responsible, a higher proportion of recommended actions took longer than 18 months to resolve, as compared with those recommended actions assigned to field units (see fig. 5).

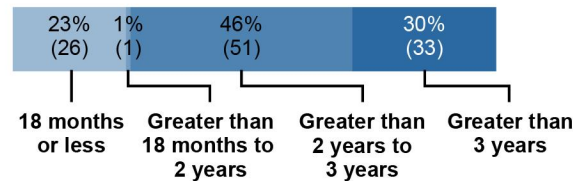
**Figure 5: Coast Guard Recommended Action Resolution Rates, by Headquarters Program Offices and Field Units, Calendar Years 2011 to September 1, 2019, as of March 1, 2021**

### Headquarters

#### Total resolution rate



#### Resolution time frames after assignment

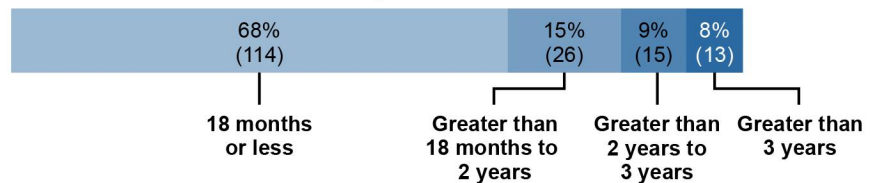


### Field units

#### Total resolution rate



#### Resolution time frames after assignment



Source: GAO analysis of U.S. Coast Guard data. | GAO-21-584

### Accessible Data Table for the Figure 5 (1 of 4 parts)

#### Total Resolution rate (Headquarters)

Resolved Amount	Unresolved Amount
52% (111)	48% (104)

### Accessible Data Table for the Figure 5 (2 of 4 parts)

#### Resolution time frames after assignment (Headquarters)

18 months or less	Greater than 18 months to 2 years	Greater than 2 years to 3 years	Greater than 3 years
23% (26)	1% (1)	46% (51)	30% (33)

### Accessible Data Table for the Figure 5 (3 of 4 parts)

#### Total resolution rate (Field Units)

Resolved Amount	Unresolved Amount
78% (168)	22% (48)

**Accessible Data Table for the Figure 5 (4 of 4 parts)**  
**Resolution time frames after assignment (Field Units)**

18 months or less	Greater than 18 months to 2 years	Greater than 2 years to 3 years	Greater than 3 years
68% (114)	15% (26)	9% (15)	8% (13)

Note: The Coast Guard has established a resolution rate goal of 80 percent for all recommended actions catalogued in its data system, as well as a timeliness goal of resolving recommended actions within 18 months. According to the Coast Guard, the data provided were current as of March 10, 2021. As a result, we excluded recommended actions assigned on or after September 1, 2019, or 18 months prior to March 1, 2021.

Coast Guard OEM officials told us that recommended action resolution rates are generally lower for headquarters program offices than for field units for a variety of reasons. First, OEM officials stated that recommended actions assigned to headquarters may involve difficult or complex issues that can be broader in scope and, therefore, require more time to resolve. For example, after the 2017 hurricane season, Atlantic Area Command officials reported that the Coast Guard needed to invest in aids to navigation equipment (such as buoys and beacons) in order to meet response requirements for hurricanes. The officials noted that repair and replacement of the aids to navigation were negatively affected by such factors as long lead times for navigation equipment manufacturing and delivery.

Coast Guard OEM officials also told us that staff turnover at the headquarters level is an additional factor that has resulted in lower resolution rates for recommended actions assigned to headquarters offices. Specifically, OEM officials stated that staff turnover among headquarters program offices has led to less familiarity with the Contingency Preparedness System and the recommended action tracking and update process. The OEM officials stated that, by comparison, field unit staff with emergency management responsibilities are generally familiar with using the Contingency Preparedness System.

Coast Guard OEM officials further told us that they do not have a systematic process for tracking the status of recommended actions assigned to headquarters offices—for example, a process that includes routinely notifying offices about their resolution rates or designating officials within each office to be responsible for ensuring progress toward resolving assigned actions. Rather, OEM officials told us that they conduct outreach efforts to headquarters offices “as time is available.” Moreover, OEM officials said the process for tracking and resolving recommended actions—both for headquarters and field units—is largely based on self-verification and, as a result, offices or units that are

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assigned recommended actions, rather than OEM, are responsible for tracking them and documenting the steps taken, if any, to resolve them.

Coast Guard After Action Program guidance states that the pursuit and resolution of recommended actions is essential to strengthening Coast Guard contingency preparedness. The guidance also states that resolving recommended actions is the link between lessons “identified” in AARs and lessons “learned” through the achievement of preparedness improvements. The guidance further states that offices and units that are assigned recommended actions should designate individuals to take timely and appropriate steps to address assigned recommended actions and track their progress toward resolution.<sup>29</sup> Further, according to the *Coast Guard Strategic Plan 2018-2022*, acting on lessons learned and best practices from previous events is an important factor for integrated emergency management planning and execution.

The Coast Guard’s After Action Program is a key effort for identifying areas for improvement in the Coast Guard’s contingency response capabilities, and assigned recommended actions can be mechanisms for implementing such improvements. By implementing a more systematic process for ensuring that recommended actions are tracked, monitored, and resolved in line with program goals, the Coast Guard would be better positioned to ensure that important lessons learned from past surge operations are incorporated to enhance its future surge operations.

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## Mission Performance Targets Are Generally Met, Despite Surge Operations

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Surge Operations Can Temporarily Affect Some Statutory Missions, but the Coast Guard Was Generally Able to Meet Mission Performance Targets

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<sup>29</sup>According to Coast Guard guidance, a unit (e.g., program management office) designates an individual, known as a Remedial Action Coordinator, to be the point of contact for coordinating and tracking assigned recommended actions.

According to Coast Guard field unit officials, certain statutory missions or activities—such as vessel inspections or inspecting aids to navigation—may have been delayed as a result of surge operations, depending on the duration and magnitude of the operations. However, our analysis of Coast Guard-wide mission performance targets from fiscal years 2008 through 2020 showed that the Coast Guard was generally able to carry out its 11 statutory missions within the same fiscal year as the surge operations and meet mission performance targets.

The Coast Guard is a multimission agency and, according to *Coast Guard Doctrine*, it is the Coast Guard Principle of Flexibility that allows it to rapidly adjust to a wide variety of tasks and circumstances.<sup>30</sup> Specifically, the doctrine states that surge operations can require the Coast Guard to adapt to find ways to meet the needs of the surge operation while still achieving critical day-to-day missions and activities. As a result, the Coast Guard may reduce or defer certain planned mission activities. For example, for those major events in which the related surge operations lasted longer than a few days or involved the deployment of relatively large numbers of personnel and assets, Coast Guard officials stated that they used a risk-based approach to prioritizing mission activities. As a result, Coast Guard field units delayed some mission activities, like commercial vessel inspections, but continued to carry out more critical or time-sensitive missions, such as search and rescue.<sup>31</sup>

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<sup>30</sup>There are seven principles of Coast Guard operations: clear objective, effective presence, unity of effort, on-scene initiative, managed risk, flexibility, and restraint. See U.S. Coast Guard, *Coast Guard Publication 1*.

<sup>31</sup>Relatedly, in November 2020, we found that Coast Guard contracting officials experienced delays in carrying out their normal mission responsibilities when they needed to shift to responding to 2017 and 2018 disasters. GAO, *Disaster Response: Agencies Should Assess Contracting Workforce Needs and Purchase Card Fraud Risk*, [GAO-21-42](#) (Washington, D.C.: Nov. 24, 2020).

In addition to our analyses of Coast Guard-wide mission performance targets during fiscal years 2008 through 2020, we analyzed mission performance data for the two districts most affected by catastrophic events in fiscal years 2016 through 2020—Districts 7 (Miami, FL) and 8 (New Orleans, LA). The mission performance data for these two districts showed a decrease in some mission activities during the years in which they experienced major events and related surge operations. For example, District 7 experienced a decrease in the number of fishing vessel inspections from 2016 to 2017, a year in which the district experienced three hurricanes and associated surge activities. Specifically, the number of fishing vessel examinations decreased from 731 in 2016 to 426 in 2017—a reduction of 305, or about 42 percent. Similarly, District 8 experienced a decrease in vessel inspections and certifications between 2019 and 2020, when District 8 was more affected by hurricanes. In particular, the number of vessel inspection and certification activities decreased from 6,172 in 2019 to 5,080 inspections in 2020—a reduction of 1,092 inspections, or about 18 percent.

While these examples show some change in mission activities from one year to the next within Districts 7 and 8, there are multiple factors that can affect the Coast Guard's ability to carry out mission activities, in addition to surge operations. For example, the completion of mission activities can also be affected by other factors—such as the following: (1) the amount of resources (e.g., personnel and assets) allocated to each statutory mission, which varies from one year to the next; (2) the districts might have experienced personnel transfers or rotations; or (3) the districts might have had changes in demand for certain missions (e.g., vessel examinations and inspections) as a result of changes in law, or from COVID-19 in 2020.

Nevertheless, our analyses of data of Coast Guard-wide mission performance targets show that, overall, the Coast Guard generally met its mission performance targets from fiscal years 2008 through 2020, which included the 2017 and 2020 hurricane seasons—the years in which the Coast Guard conducted concurrent or back-to-back surge operations. Officials from Districts 7 and 8, and from the Coast Guard Atlantic Area Command, also noted that they were able to carry out concurrent or back-to-back surge operations during the 2017 and 2020 hurricane seasons. According to these Coast Guard officials, the Coast Guard can mitigate the effects of concurrent or back-to-back surge operations by implementing relevant lessons learned or best practices gleaned from prior surge operations. For example, the Coast Guard area and district officials stated that when they anticipate a major storm, they have teams on standby before the storm hits. Officials from one district stated that they create specialized teams that are reassigned from their day-to-day duties to focus solely on the catastrophic event.

In addition to preparing personnel, Coast Guard officials stated that they may preposition aircraft and vessels by moving them closer to the predicted impact area of the catastrophic event so that they are ready to be utilized if needed, as discussed earlier in this report. The goal in deploying personnel and assets to surge operations is to effectively address the consequences of catastrophic events while also minimizing disruption to other field units so they can continue to conduct their statutory mission activities. With respect to personnel, Coast Guard officials stated that active duty personnel are first assigned to surge operations, and then reservists may be used. Therefore, reserve forces generally are deployed for the most significant surge operations.<sup>32</sup> For example, the 2017 hurricane season resulted in the first significant Coast Guard Reserve mobilization since the Deepwater Horizon oil spill in 2010, with over 1,100 reservists brought on active duty to support response and recovery efforts.

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<sup>32</sup>The Reserve Component is a significant portion of the Coast Guard's surge capacity and provides a workforce pool that can be used to supplement active duty ranks either for individual positions or large-scale mission requirements within 48 hours of notification. Reservists may be identified as primary surge response personnel due to unique qualifications or local knowledge, or may backfill for deployed active duty members. Reservists provide surge capability through involuntary mobilization under 10 U.S.C. § 12302; involuntary mobilization under 14 U.S.C. § 712; or voluntary mobilization under 10 U.S.C. § 12301(d).

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## Coast Guard Officials Did Not Identify Any Statutory or Regulatory Impediments to Conducting Surge Operations

While some surge operations may temporarily affect the Coast Guard's ability to carry out its statutory missions, Coast Guard officials at the headquarters, area, and district command levels that we spoke with did not identify any statutory or regulatory impediments to the Coast Guard's ability to conduct surge operations.<sup>33</sup> Officials from the Coast Guard's Judge Advocate General and the Chief Counsel offices stated that federal law limits the number of days that Coast Guard reservists can be involuntarily recalled within a 2-year period to 120 days.<sup>34</sup> The officials noted that the federal law pertains to the involuntary deployment of Department of Defense services' reservists as well, not just Coast Guard reservists. Therefore, the officials noted that the law is not so much an impediment to surge operations but a designed limit or parameter regarding the extent to which reservists can be deployed within which the Coast Guard operates.

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## Conclusions

Catastrophic events, such as the 2017 hurricane season, have shown that federal entities must rely on surge operations to help reduce the devastating impacts of these events. From 2007 through 2020, the Coast Guard conducted 23 major surge operations in response to catastrophic or emergency events, deploying varying levels of personnel, aircraft, and vessels to support these events. In accordance with its After Action Program requirements, Coast Guard officials documented lessons learned and best practices that were identified during the course of these surge operations. In addition, Coast Guard officials identified recommended actions that could help improve future surge operations. However, the Coast Guard lacks assurance that the identified recommended actions are tracked, updated, and resolved in line with program goals. Without a more systematic process in place to track and resolve recommended actions—for example, a process that includes

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<sup>33</sup>We spoke with Coast Guard officials from headquarters offices, to include the Coast Guard Judge Advocate General and Chief Counsel, as well as from the Atlantic Area Command and from three districts (District 5, Portsmouth, VA; District 7, Miami, FL; and District 8, New Orleans, LA).

<sup>34</sup>Under 14 U.S.C. § 3713, the Coast Guard's authority to recall reservists, reservists are only available for a maximum of 120 days for involuntary recall in a 2-year period.



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scheduled follow-ups or monitoring of interim actions to resolve recommended actions—the Coast Guard may not resolve recommended actions in a timely manner that could help it enhance future surge operations.

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## Recommendation for Executive Action

We are making the following recommendation to the Coast Guard:

The Commandant of the Coast Guard should establish a more systematic process for ensuring that assigned recommended actions are tracked, updated, and resolved in line with the Coast Guard’s resolution rate and timeliness goals. (Recommendation 1)

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## Agency Comments and Our Evaluation

In August 2021, we provided a draft of this report to the Department of Homeland Security (DHS) and the Coast Guard for review and comment. The Coast Guard provided technical comments, which we have incorporated into the report as appropriate. In addition, DHS provided written comments, which are reprinted in appendix III. In its letter, DHS stated it concurred with the recommendation and noted that the Coast Guard’s OEM has developed an action plan to address the recommendation.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Homeland Security, the Commandant of the Coast Guard, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staffs have any questions about this report, please contact Heather MacLeod at 202-512-8777 or [macleodh@gao.gov](mailto:macleodh@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff that made key contributions to this report are listed in appendix IV.



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Heather M. MacLeod  
Acting Director, Homeland Security and Justice Issues

*List of addressees*

The Honorable Maria Cantwell  
Chairwoman  
The Honorable Roger F. Wicker  
Ranking Member  
Committee on Commerce, Science, and Transportation  
United States Senate

The Honorable Chris Murphy  
Chairman  
The Honorable Shelley Moore Capito  
Ranking Member  
Subcommittee on Homeland Security  
Committee on Appropriations  
United States Senate

The Honorable Peter A. DeFazio  
Chairman  
The Honorable Samuel Bruce Graves Jr.  
Ranking Member  
Committee on Transportation and Infrastructure  
House of Representatives

The Honorable Lucille Roybal-Allard  
Chairwoman  
The Honorable Chuck Fleischmann  
Ranking Member  
Subcommittee on Homeland Security  
Committee on Appropriations  
House of Representatives

## Appendix I: Objectives, Scope, and Methodology

This report examines (1) the number of major surge operations the Coast Guard has conducted from calendar years 2007 through 2020, and how many personnel and assets it used to support these surge operations; (2) the extent to which the Coast Guard documents lessons learned and best practices from its major surge operations, and resolves the related, recommended actions to improve future surge operations; and (3) how surge operations have affected the Coast Guard's ability to conduct its statutory missions.

To address all three objectives, we reviewed relevant Coast Guard policy manuals, including *Publication 1, Doctrine for the U.S. Coast Guard*; the four-volume emergency management manuals; the *U.S. Coast Guard Incident Management Handbook*; and other relevant policies and guidance related to emergency management and disaster response.

To determine how many major surge operations the Coast Guard conducted from calendar years 2007 through 2020, we reviewed the *Coast Guard's Incident Typing Characteristics*, which the Coast Guard uses to determine the complexity of an incident.<sup>1</sup> For the purposes of this report, we focused on Type 1 incidents, which are the most severe or complex events, and their related major surge operations that took place from 2007 through 2020.<sup>2</sup> To compile the list of Type 1 incidents during this period, we relied on the Coast Guard to provide us with a list of surge operations it had conducted during this period. Coast Guard officials stated that since the Coast Guard's formal incident typing system was relatively new, there was no comprehensive database of Type 1 incidents and the associated major surge operations. As a result, the Coast Guard generated the list of Type I incidents and related major surge operations by reviewing information contained in the after-action reports, which are required to be submitted for all Type 1 incidents. While we could not verify whether the Coast Guard identified all Type 1 incidents from 2007 through 2020, the 23 surge operations it identified provided sufficient information to review the Coast Guard's surge capacity and, therefore, was determined to be sufficiently reliable for the purposes of this review.

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<sup>1</sup>The Coast Guard uses the concept of incident typing, as it allows incident commanders and others to understand the general characteristics of an incident and to plan for potential resource needs, given the type of incident. Incidents can be categorized from Type 1 to Type 5. Type 1 is the most complex incident requiring national resources and is expected to go into multiple operational periods. See U.S. Coast Guard, *U.S. Coast Guard Emergency Management Manual Volume IV: Incident Management and Crisis Response*, COMDTINST M3010.24A (October 2020).

<sup>2</sup>The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 required that the review cover all catastrophic events after 2005. However, according to the Coast Guard, the first identified Type 1 event after 2005 took place in calendar year 2007. See Pub. L. No. 116 -283, § 8256.

To determine what personnel the Coast Guard used to support these major surge operations, we analyzed data on personnel deployments from the Coast Guard's human resources information system of record, Direct Access Mobilization. The Coast Guard started using this system in 2017, so it was not able to provide comparable data on the number of personnel deployed for major surge operations that took place before 2017. For major surge operations that the Coast Guard conducted prior to 2017, we relied on after-action reports for determining the number of personnel deployed. To determine what assets (i.e., aircraft and vessels) the Coast Guard used to support surge operations, we analyzed data on vessel and aircraft hours used for each surge operation. To determine the reliability of these data, we interviewed Coast Guard officials and compared the data the Coast Guard provided us on personnel and asset deployments in support of surge operations with the data it reported in after-action reports. Using this assessment, we determined that the data were sufficiently reliable for the purposes of reporting on the amount of resources (i.e., personnel, aircraft, and vessels) that the Coast Guard used to support its major surge operations from 2007 through 2020.

To examine the extent to which the Coast Guard documents lessons learned and best practices from its major surge operations, and tracks the related actions to improve future surge operations, we reviewed after-action reports for the major surge operations identified from calendar years 2007 through 2020. These included reports written by Coast Guard officials at the area, district, and sector command levels, as well as reports developed by local, state, and federal officials that included Coast Guard input. We analyzed these after-action reports to identify specific lessons learned, best practices, and recommendations to address challenges identified during the course of these surge operations. We also gathered and analyzed Coast Guard data on the recommended actions generated from after-action reports to determine—for both headquarters offices and field units—(1) the number of recommended actions that were assigned, (2) the rates for resolving recommendations, and (3) the time lines for resolving recommended actions. We then compared the results for these three categories with Coast Guard recommended action resolution rate and timeliness goals. To assess the reliability of the Coast Guard's recommended action data, we (1) performed manual and electronic data testing and looked for obvious errors in accuracy and completeness; and (2) interviewed Coast Guard headquarters officials knowledgeable about Coast Guard after-action reporting, including the use and limitations of the data system used to record surge operation recommended actions, to determine the processes in place to ensure the integrity of the data. Using this

assessment, we determined that the data were sufficiently reliable for the purposes of this report. We also interviewed relevant Coast Guard field unit personnel from the Atlantic Area Command and the three districts who participated in response efforts for the 2017 and 2020 hurricane seasons to gather information on surge operations associated with those major events, as well as to gather feedback on the Coast Guard's after-action reporting process, including the assignment and resolution of recommended actions. We assessed the Coast Guard's efforts and response against criteria in its After Action Program guidance for tracking and timely resolution of recommended actions generated from surge operations. Additionally, we assessed efforts against the *Coast Guard Strategic Plan 2018-2022*, which calls for using lessons learned and best practices to improve its emergency management functions.

To examine how major surge operations have affected the Coast Guard's ability to conduct its statutory missions, we analyzed performance metrics included in the Coast Guard *Annual Performance Reports* for fiscal years 2008 through 2020.<sup>3</sup> Specifically, we analyzed year-to-year changes in outcome metrics and noted the instances when the Coast Guard did not meet its target for certain mission-related metrics. We reviewed the explanations provided in the report for when targets were not met. To determine if there were differences in performance metrics between selected Coast Guard districts, we analyzed mission performance metric data for fiscal years 2016 through 2020 for District 7 (Miami, FL) and District 8 (New Orleans, LA)—the two districts most affected by the major events and related surge operations in recent years. We started with data from fiscal year 2016, as this was one year before the 2017 hurricane season to provide a baseline, and ended with fiscal year 2020, the latest year for which mission-related performance metric data were available. We analyzed the performance metric data for these years to determine if there were changes in mission performance during the 2017 and 2020 hurricane seasons, when the two districts were responding to concurrent or back-to-back disasters. While we noted some variations in mission performance metrics for Districts 7 and 8 from fiscal years 2016 through 2020, we could not determine the extent to which the variations in mission performance were a result of the surge operations as opposed to other factors, such as personnel transfers or the Coronavirus Disease 2019 (COVID-19) pandemic.

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<sup>3</sup>We started with the fiscal year 2008 *Annual Performance Report*, as the first identified major surge operation, the *Cosco Busan* oil spill, took place in November 2007, which is in fiscal year 2008.

We supplemented our analyses of mission performance metrics with interviews of Coast Guard officials to seek their input on the impact of surge operations on the districts' mission performance metrics from fiscal years 2016 through 2020. In particular, we interviewed officials from Coast Guard headquarters; the Atlantic Area Command; and Districts 5, 7, and 8 to discuss the effect of major surge operations on the Coast Guard's ability to carry out its statutory missions. We chose these districts because the majority of the major surge operations, including the 2017 and 2020 hurricane season events, occurred in these districts' respective areas of responsibility. We also asked these officials to discuss any statutory or regulatory impediments to the Coast Guard's ability to carry out surge operations. Further, we reviewed Coast Guard Congressional Budget Justifications for fiscal years 2012 through 2021 to determine if the Coast Guard reported (1) any effects that major surge operations might have had on its ability to conduct its statutory missions, or (2) any statutory or regulatory impediments to its ability to conduct major surge operations.

We conducted this performance audit from April 2020 to September 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Appendix II: Information on Major Events and the Coast Guard's Surge Operations, Calendar Years 2007 through 2020

**Table 4: Information on Major Events and the Resulting U.S. Coast Guard Surge Operations, Calendar Years 2007 through 2020**

Major event description	Time frames <sup>a</sup>	Personnel and assets used to support the surge operation
<b>Cosco Busan oil spill:</b> The containership Cosco Busan struck one of the towers of the San Francisco-Oakland Bay Bridge. The impact tore a hole in the hull, releasing over 53,000 gallons of fuel oil into the water.	Nov. 7, 2007 – Nov. 13, 2007	According to the Incident Specific Preparedness Review, the Coast Guard deployed about 1,400 personnel and provided 33 aircraft hours to respond to the oil spill. In addition, the Coast Guard assigned between 25 and 41 vessels from day 1 through day 7. <sup>b</sup>
<b>Haiti earthquake:</b> A violent earthquake struck Port-au-Prince, Haiti, resulting in about 200,000 fatalities, over 300,000 injuries, and displacing over 500,000 people from their homes. In total, over 3 million Haitians were affected by this natural disaster.	Jan. 12, 2010 – Apr. 30, 2010	According to Coast Guard documentation, the Coast Guard deployed about 1,000 personnel, with over 600 aboard cutters; and more than 100 for assistance with medical treatment, food aid, and port security. The deployed personnel also included nearly 300 reservists. In addition, the Coast Guard provided 1,043 aircraft hours and 1,011 vessel hours.
<b>Deepwater Horizon explosion and oil spill:</b> The oil drilling rig Deepwater Horizon, operating in the Gulf of Mexico, experienced a catastrophic blowout, causing a major explosion and fire. The blowout resulted in a catastrophic oil spill, leading to an unprecedented oil spill response.	Apr. 20, 2010 – Dec. 17, 2010	According to the Incident Specific Preparedness Review, the Coast Guard deployed at least 7,000 active duty and reserve personnel to respond to the oil spill. In addition, the Coast Guard provided 3,981 aircraft hours and 3,819 vessel hours.
<b>Super Storm Sandy:</b> Tropical Storm Sandy became a Category 1 hurricane as it moved through the Caribbean before making landfall in New Jersey. The near 14-foot surge was the highest storm surge in the New York harbor on record. Sandy resulted in at least 179 fatalities.	Oct. 25, 2012 – Dec. 1, 2012	The Coast Guard did not have data on the number of personnel deployed for this event but provided data to show it provided 464 aircraft hours and 787 vessel hours.
<b>Coast Guard response to influx of unaccompanied children:</b> The United States experienced a surge of unaccompanied children crossing the southern border. During the surge, staff from the Department of Homeland Security and its component agencies apprehended about 34,000 unaccompanied children. The Coast Guard supported the response by providing transportation, planning, and medical support.	May 24, 2014 – Oct. 10, 2014	According to Coast Guard data, the Coast Guard deployed at least 20 Coast Guard personnel, of which 12 were medical personnel, four were members from the Coast Guard Incident Management Assistance Team, and four provided coordination or technical support. In addition, the Coast Guard provided 503 aircraft hours and 0 vessel hours.



**Appendix II: Information on Major Events and  
the Coast Guard's Surge Operations, Calendar  
Years 2007 through 2020**

<b>Major event description</b>	<b>Time frames<sup>a</sup></b>	<b>Personnel and assets used to support the surge operation</b>
<b>Refugio Beach oil spill:</b> An underground pipeline located in Santa Barbara County, California, failed and discharged approximately 142,800 gallons of crude oil, affecting both inland and coastal zones.	May 19, 2015 – May 3, 2016	According to a Coast Guard after-action report, the Coast Guard assigned 70 percent of Sector Los Angeles-Long Beach personnel to assist with the response to the oil spill. The Coast Guard could not provide data for the aircraft or vessel hours.
<b>Hurricane Harvey:</b> Hurricane Harvey started as a tropical storm but intensified into a Category 4 hurricane before making landfall along the Texas Gulf Coast. Harvey then stalled, dropping historic amounts of rainfall over southeastern Texas.	Aug. 24, 2017 – Nov. 10, 2017	According to Coast Guard data, the Coast Guard deployed at least 1,505 Coast Guard personnel, including 983 active duty members, 441 reservists, and 66 civilians, among others. In addition, the Coast Guard provided 1,760 aircraft hours and 379 vessel hours.
<b>Hurricane Irma:</b> Hurricane Irma made U.S. landfall as a Category 5 hurricane in the U.S. Virgin Islands as well as later landfall in the Florida Keys at a Category 4 intensity. Irma caused widespread devastation and was one of the strongest and costliest hurricanes on record in the Atlantic basin.	Sept. 6, 2017 – Sept. 29, 2017	According to Coast Guard data, the Coast Guard deployed at least 1,385 Coast Guard personnel, including 885 active duty members, 426 reservists, and 70 civilians, among others. In addition, the Coast Guard provided 960 aircraft hours and 1,615 vessel hours.
<b>Hurricane Maria:</b> Hurricane Maria made landfall as a Category 5 hurricane in Dominica and struck Puerto Rico at Category 4 intensity. Maria caused severe flooding and mud slides across both islands.	Sept. 21, 2017 – Mar. 19, 2018	According to Coast Guard data, the Coast Guard deployed at least 1,834 Coast Guard personnel, including 1,105 active duty members, 663 reservists, and 63 civilians, among others. In addition, the Coast Guard provided 1,316 aircraft hours and 29 vessel hours.
<b>Hurricane Florence:</b> Hurricane Florence made landfall near Wilmington, North Carolina, as a Category 1 storm, where it released a downpour over the same area for several days. Florence became the wettest cyclone on record in the eastern U.S., with 10 trillion gallons of rain, resulting in at least 51 fatalities.	Sept. 7, 2018 – Dec. 31, 2018	According to Coast Guard data, the Coast Guard deployed at least 1,061 Coast Guard personnel, including 695 active duty members, 291 reservists, and 72 civilians. In addition, the Coast Guard provided 737 aircraft hours and 883 vessel hours.
<b>Hurricane Michael:</b> Hurricane Michael made landfall as a Category 4 hurricane over the Florida Panhandle and struck Georgia as a Category 3 hurricane. Michael was the strongest storm on record in the Florida Panhandle and the third most pressure-intense Atlantic hurricane to make landfall in the U. S., resulting in 45 fatalities.	Oct. 8, 2018 – Feb. 16, 2019	According to Coast Guard data, the Coast Guard deployed at least 601 Coast Guard personnel, including 434 active duty members, 131 reservists, and 34 civilians. In addition, the Coast Guard provided 281 aircraft hours and 10 vessel hours.
<b>2nd 80's Deer Park fire:</b> A massive fire erupted within a 50.4 million gallon capacity petrochemical tank farm at a facility in Deer Park, Texas. Nearly 5,000 personnel across 322 organizations responded to the fire that burned for 64.5 hours and, subsequently, released 9.4 million gallons of petrochemical products into the Houston Ship Channel.	Mar 17, 2019 – May 9, 2019	According to Coast Guard documentation, the Coast Guard deployed 199 personnel (169 active duty and 30 members of the Strike Team). In addition, over 142 skimming vessels and 50 vacuum trucks were used for the removal and mitigation of petrochemical products. <sup>c</sup>
<b>Coast Guard support at southwest border:</b> The Coast Guard assisted Customs and Border Protection and Immigration and Customs Enforcement in responding to the presidentially declared emergency at the southwest border of the U. S.	Apr 1, 2019 – Nov 21, 2019	According to Coast Guard data, the Coast Guard deployed at least 965 Coast Guard personnel, including 537 active duty members, 410 reservists, and 12 civilians. In addition, the Coast Guard provided 495 aircraft hours and 325 vessel hours.

**Appendix II: Information on Major Events and  
the Coast Guard's Surge Operations, Calendar  
Years 2007 through 2020**

Major event description	Time frames <sup>a</sup>	Personnel and assets used to support the surge operation
<b>Saint Simons Sound/Golden Ray grounding:</b> The 656-foot car carrier, Golden Ray, carrying 4,200 vehicles and over 300,000 gallons of oil, capsized outside of Brunswick, Georgia.	Sept. 2019 – present	According to Coast Guard data, as of January 11, 2021, the Coast Guard deployed at least 264 Coast Guard personnel, of which 186 were active duty, 67 were reserve, and 11 were civilians. The Coast Guard did not provide data for the aircraft or vessel hours used, as this operation was still ongoing as of July 2021.
<b>Hurricane Hanna:</b> Hurricane Hanna made U.S. landfall as a Category 1 hurricane just south of Corpus Christi, Texas. Hanna caused significant flooding in northeastern Mexico, resulting in at least four fatalities.	July 20, 2020 – July 29, 2020	According to Coast Guard data, the Coast Guard deployed one active duty member in support of Hurricane Hanna. <sup>d</sup> In addition, the Coast Guard provided 121 aircraft hours and 0 vessel hours.
<b>Hurricane Douglas:</b> Hurricane Douglas was the first major hurricane of the 2020 Central Pacific hurricane season. While peaking as a Category 4 hurricane, Douglas weakened as it approached and passed north of the main Hawaiian Islands. Douglas caused minimal damage and no fatalities.	July 23, 2020 – July 27, 2020	The Coast Guard could not provide data on the number of personnel deployed for this event but provided data to show that it provided about 1 aircraft hour and 0 vessel hours.
<b>Hurricane Isaias:</b> Hurricane Isaias caused devastating flooding and wind damage in Puerto Rico before making landfall as a Category 1 hurricane near Ocean Isle Beach, North Carolina. Isaias caused more than 3 million power outages and became the costliest storm to affect the northeastern U.S. since Hurricane Sandy in 2012.	July 29, 2020 – Aug. 6, 2020	According to Coast Guard data, the Coast Guard deployed at least 68 Coast Guard personnel, of which 56 were active duty, eight were reserve, and four were civilians. In addition, the Coast Guard provided 36 aircraft hours and 81 vessel hours.
<b>Hurricane Marco:</b> Hurricane Marco made U.S. landfall as a tropical storm near the mouth of the Mississippi River and caused flooding as far east as the Florida Panhandle. Marco caused minimal damage due to flooding and resulted in no reported casualties.	Aug. 20, 2020 – Sept. 4, 2020 <sup>e</sup>	According to Coast Guard data, the Coast Guard deployed at least 11 active duty personnel to respond to Hurricane Marco. In addition, the Coast Guard provided 32 aircraft hours and 8 vessel hours.
<b>Hurricane Laura:</b> Hurricane Laura made U.S. landfall as a Category 4 hurricane near Cameron, Louisiana. Laura was the fourth-largest storm to ever hit Louisiana, with the impacts affecting over 1 million people.	Aug. 20, 2020 – Sept. 4, 2020 <sup>e</sup>	According to Coast Guard data, the Coast Guard deployed at least 409 Coast Guard personnel, of which 328 were active duty, 58 were reserve, and 19 were civilians. In addition, the Coast Guard provided 238 aircraft hours and 56 vessel hours.
<b>Hurricane Sally:</b> Hurricane Sally made U.S. landfall as a Category 2 hurricane near Gulf Shores, Alabama. The rainfall and storm surge combined to produce catastrophic flooding along the Gulf Coast, resulting in the loss of power for more than 500,000 homes and businesses in Alabama and the Florida Panhandle.	Sept. 11, 2020 – Oct. 26, 2020	According to Coast Guard data, the Coast Guard deployed at least 336 Coast Guard personnel, including 278 active duty members, 36 reservists, and 21 civilians. In addition, the Coast Guard provided 110 aircraft hours and 72 vessel hours.
<b>Hurricane Delta:</b> Hurricane Delta made U.S. landfall as a Category 2 hurricane near Creole, Louisiana. Delta brought significant storm surge, heavy rainfall, and damaging winds to Louisiana and southeast Texas.	Oct. 7, 2020 – Oct. 13, 2020	According to Coast Guard data, the Coast Guard deployed at least 299 Coast Guard personnel, including 254 active duty members, 23 reservists, and 11 civilians. In addition, the Coast Guard provided 145 aircraft hours and 71 vessel hours.
<b>Hurricane Zeta:</b> Hurricane Zeta made U.S. landfall as a Category 2 hurricane near Cocodrie, Louisiana. Zeta resulted in power outages to more than 2 million people, from Louisiana to the Carolinas.	Oct. 27, 2020 – Nov. 2, 2020	According to Coast Guard data, the Coast Guard deployed at least 83 Coast Guard personnel, including 66 active duty members, five reservists, and 10 civilians. In addition, the Coast Guard provided 97 aircraft hours and 99 vessel hours.

**Appendix II: Information on Major Events and  
the Coast Guard's Surge Operations, Calendar  
Years 2007 through 2020**

Major event description	Time frames <sup>a</sup>	Personnel and assets used to support the surge operation
<b>Hurricane Eta:</b> Hurricane Eta made U.S. landfall as a tropical storm in the Florida Keys. Eta caused heavy rainfall and flooding across parts of south and central Florida and into the Carolinas.	Nov. 9, 2020 – Nov. 13, 2020	The Coast Guard could not provide data on the number of personnel deployed for this event but provided data to show that it provided 15 aircraft hours and 0 vessel hours.

Source: GAO analysis of information from U.S. Coast Guard after-action reports and Incident Specific Preparedness Reviews; as well as reporting from the National Oceanic and Atmospheric Administration, National Hurricane Center, and National Weather Service. | GAO-21-584

<sup>a</sup>Time frames documented are the inclusive dates of the Coast Guard surge response to each catastrophic event and not necessarily the time frames of each event, with the exceptions of Hurricanes Delta, Zeta, and Eta, as district- and sector-level after-action reports had not yet been completed as of July 2021.

<sup>b</sup>According to Coast Guard officials, at the time of the *Cosco Busan* incident, the Coast Guard did not assign incident codes to track resource hours for major surge operations; therefore, it could not provide vessel hours used. As such, we relied on the Incident Specific Preparedness Review for this information.

<sup>c</sup>According to Coast Guard officials, if a surge operation is staffed at the sector level, personnel staffed to the event may not be tracked through Direct Access Mobilization, which is part of the Coast Guard's human resources information system of record. Therefore, we relied on the after-action report for information on personnel staffed to the 2nd 80's Deer Park Fire surge operation.

<sup>d</sup>According to Coast Guard officials, the data provided on personnel deployed only included staff that were requested or tracked through Direct Access Mobilization. If a surge operation is staffed at the sector level, it may not be tracked through Direct Access Mobilization. For the Hurricane Hanna surge operation, only one staff member was either assigned or tracked through the system. We reviewed the after-action report for Hurricane Hanna, but it did not include information on personnel deployed; therefore, we cannot report those data at this time.

<sup>e</sup>Time frames are inclusive of both Hurricanes Marco and Laura, as they made landfall within 60 hours and 200 miles of each other.

# Appendix III: Comments from the Department of Homeland Security

U.S. Department of Homeland Security  
Washington, DC 20528



**Homeland  
Security**

September 1, 2021

Ms. Heather M. MacLeod  
Acting Director, Homeland Security and Justice Issues  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Re: Management Response to Draft Report GAO-21-584, "COAST GUARD: A More Systematic Process to Resolve Recommended Actions Could Enhance Future Surge Operations"

Dear Ms. MacLeod:

Thank you for the opportunity to comment on this draft report. The U.S. Department of Homeland Security (DHS or the Department) appreciates the U.S. Government Accountability Office's (GAO) work in planning and conducting its review and issuing this report.

The Department is pleased to note GAO's positive recognition that the Coast Guard was generally able meet statutory mission performance targets during fiscal years 2007 through 2020 in which it also conducted 23 major surge operations in response to catastrophic or emergency events. GAO also acknowledged that the Coast Guard:

- Documents lessons learned and best practices from its major surge operations,
- Develops recommended actions to help improve future operations, and
- Has processes for assigning recommended actions to appropriate headquarters offices and field units.

The Coast Guard is committed to adapting to surge operation demands, while continuing to meet critical mission needs and activities.

The draft report contains one recommendation with which the Department concurs. Attached find our detailed response to the recommendation. DHS previously submitted technical comments addressing several accuracy, contextual, and other issues under a separate cover for GAO's consideration.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Sincerely,

JIM H  
CRUMPACKER

Digitally signed by JIM H  
CRUMPACKER  
Date: 2021.09.01 07:30:05  
-04'00'

JIM H. CRUMPACKER, CIA, CFE  
Director  
Departmental GAO-OIG Liaison Office

Attachment

**Attachment: Management Response to Recommendation  
Contained in GAO-21-584**

GAO recommended that the Commandant of the Coast Guard:

**Recommendation 1:** Establish a more systematic process for ensuring that assigned recommended actions are tracked, updated, and resolved in line with the Coast Guard’s resolution rate and timeliness goals.

**Response:** Concur. The Coast Guard’s Office of Emergency Management and Disaster Response (CG-OEM) will take the following actions:

<b>Action</b>	<b>Estimated Completion Date (ECD)</b>
Create and institute a metric to track action office compliance which requires the action office to provide an initial comment within thirty days after assignment regarding the status of task or approach to resolving the recommended action.	March 31, 2022
Change the Contingency Preparedness System (CPS) to allow the identification of lead and supporting offices for recommended actions.	June 30, 2022
Update the Commandant Instruction 3010.19 (series), “Coast Guard After Action Program,” dated January 12 2015, to clarify the: (1) role of action offices assigned a recommended action; (2) requirements for commenting and resolution; and (3) requirements for designating an action officer for each task.	September 30, 2022
Review outstanding recommended actions and: (1) identify lead offices and action officers for each; and (2) provide outreach and instruction for utilizing the CPS to update progress and resolve recommended actions	September 30, 2022
Within two years after funding is made available, create CPS dashboards showing progress toward resolution of outstanding recommended actions, as well as generate automatic notifications to action officers to inform them of progress toward resolution.	To Be Determined (TBD)

Overall ECD: TBD.

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## Agency Comment Letter

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### The text of Appendix III: Comments from the Department of Homeland Security

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#### Page 1

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Page 2

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JIM H CRUMPACKER

JIM H. CRUMPACKER, CIA, CFE

Director

Departmental GAO-OIG Liaison Office

Attachment



Page 3

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**Contained in GAO-21-584**

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Overall ECD: TBD.

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## Appendix IV: GAO Contact and Staff Acknowledgments

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### GAO Contact

Heather M. MacLeod, (202) 512-8777 or [macleodh@gao.gov](mailto:macleodh@gao.gov)

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### Staff Acknowledgments

In addition to the contact named above, Christopher Conrad (Assistant Director), Valerie Kasindi (Analyst-in-Charge), Jason Blake, and Bailey McCoy made key contributions to this report. Nathan Anderson, Michele Fejfar, Eric Hauswirth, David Hooper, Susan Hsu, John Karikari, Grant Mallie, and Sam Portnow also contributed to this report.

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