United States Government Accountability Office

Report to the Chairman, Subcommittee on Coast Guard and Maritime Transportation, Committee on Transportation and Infrastructure, House of Representatives

May 2016

COAST GUARD

Actions Needed to Improve Strategic Allocation of Assets and Determine Workforce Requirements

Accessible Version

GAO-16-379

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GAO Highlights

Highlights of GAO-16-379, a report to the Chairman, Subcommittee on Coast Guard and Maritime Transportation, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

Following the terrorist attacks of September 11, 2001, the Coast Guard has been charged with expanded missions. Further, constrained budgets in recent years have underscored the importance of strategically allocating its assets and personnel to meet these missions.

GAO was asked to review the Coast Guard's resource allocation process. This report addresses the extent to which the Coast Guard: (1) employs an effective process to strategically allocate assets to meet its missions, and (2) has determined workforce requirements and addressed identified personnel needs.

GAO reviewed Coast Guard planning and workforce requirements documents and asset performance data for fiscal years 2010 through 2015. GAO also discussed the planning process and personnel needs with Coast Guard officials at headquarters; as well as at the two Area and nine District Commands.

What GAO Recommends

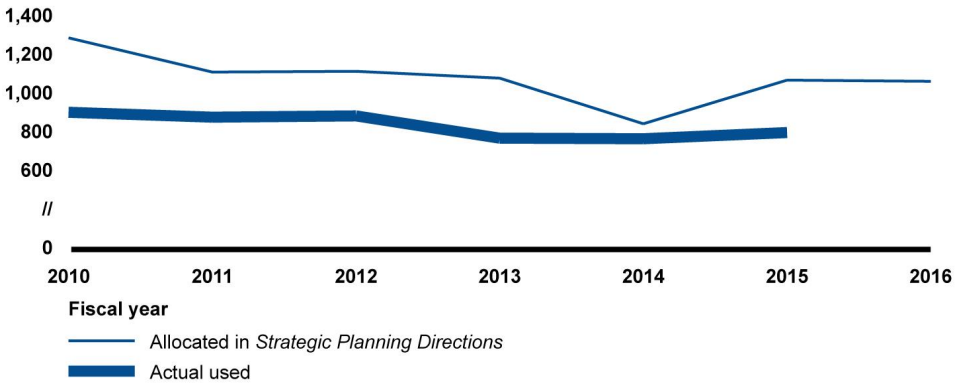
GAO is making three recommendations to the Coast Guard, including to incorporate field unit input to inform its allocation decisions and to develop a systematic process that prioritizes the most critical manpower requirements analyses to complete. DHS concurred with the recommendations and stated it is taking actions, such as including field unit input into its planning process and prioritizing manpower requirements analyses of unstudied units, as resources permit.

View GAO-16-379. For more information, contact Jennifer A. Grover at (202) 512-7141 or groverj@gao.gov.

What GAO Found

The Coast Guard developed and uses the Standard Operational Planning Process to annually allocate asset (aircraft and vessels) resource hours to field units for meeting missions, but the headquarters' *Strategic Planning Directions* used in this process do not provide field units with strategic, realistic goals. Rather, headquarters' *Strategic Planning Directions* allocate maximum resource hour capacities for each asset—such as 700 hours per Jayhawk helicopter per year. As shown below, these asset allocations have consistently exceeded actual asset resource hours used by field units. By better incorporating data on assets' actual use that field units provide to Coast Guard headquarters—such as *Operational Performance Assessment Reports*—to inform asset allocation goals in its *Strategic Planning Directions,* the Coast Guard would better ensure that it effectively communicates strategic intent to its field units and makes more informed asset allocation decisions that are aligned with its strategic goals.

Comparison of Total Asset Resource Hours Allocated in *Strategic Planning Directions* to the Actual Asset Resource Hours Used, Fiscal Years 2010 – 2015



Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

Note: In fiscal year 2014, lower resource hour use was planned because of anticipated budget reductions as a result of sequestration. Hours for assets used exclusively for training were excluded.

The Coast Guard has developed management tools, such as manpower requirements analyses, to help it determine workforce requirements and help align its personnel with its missions. However, a Coast Guard official responsible for these analyses stated that the Coast Guard cannot meet the demand for these analyses because it does not have sufficient staff and a system to help analyze and prioritize the manpower requirements analyses that need to be completed. Without a systematic process for prioritizing the most important manpower requirements analyses to complete, consistent with leading program management practices, the Coast Guard does not have reasonable assurance that the highest priority missions are fully supported with the appropriate number of staff possessing the requisite mix of skills and abilities.

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Abbreviations

ALMIS	Asset Logistics Maintenance Information System
AOPS	Abstract of Operations System
CG-LIMS	Coast Guard Logistics Information Management System

MRA	Manpower Requirements Analysis
MRD	Manpower Requirements Determination system
SOPP	Standard Operational Planning Process
SSM	Sector Staffing Model

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

May 24, 2016

The Honorable Duncan Hunter
Chairman
Subcommittee on Coast Guard and Maritime Transportation
Committee on Transportation and Infrastructure
House of Representatives

Dear Mr. Chairman:

The Coast Guard, within the Department of Homeland Security, is the principal federal agency responsible for maritime safety, security, and environmental stewardship. Following the terrorist attacks of September 11, 2001, the Coast Guard has been charged with expanded security-related mission responsibilities. Further, major natural disasters, such as Hurricane Katrina, provided the Coast Guard with lessons learned regarding the importance of strategically allocating resources (primarily assets and personnel) across its units. The impact of balancing a broad array of Coast Guard missions and the nationwide need for mission-ready Coast Guard units, in conjunction with constrained budgets in recent years, have underscored the need for the Coast Guard to ensure it can effectively allocate assets and personnel to meet its mission responsibilities.[1]

From 2006 to 2008, the Coast Guard began a series of actions, such as developing a planning process and management tools, to better determine resource needs and align resources accordingly across its mission responsibilities. The Coast Guard continues to face decisions about how to best allocate and use its resources to meet its mission responsibilities. Given the importance of the Coast Guard's missions—such as search and rescue and drug interdiction—you asked that we

[1]For example, over the past 5 fiscal years, the Coast Guard's total discretionary budget has declined overall—from almost $9.6 billion in fiscal year 2010 to about $9.0 billion in fiscal year 2015. In fiscal year 2016, the Coast Guard's discretionary budget is estimated at over $9.9 billion. The discretionary budget amounts were not adjusted for inflation and include the gross discretionary budget authority that is provided in appropriation acts and require annual action by Congress and the President. This is separate from mandatory spending, which is not determined through annual appropriation acts.

review the status of the Coast Guard's efforts to allocate resources across its statutory missions. This report addresses:

- the extent to which the Coast Guard employs an effective process to strategically allocate assets to meet its mission responsibilities, and
- the extent to which the Coast Guard has determined its workforce requirements and addressed identified personnel needs.

To address the first objective, we analyzed Coast Guard documents related to its annual planning process for allocating assets (mainly aircraft and vessels) to meet its mission responsibilities. The documents included policies and guidance regarding how this process is to operate, as well as documents used to inform and communicate the asset allocations throughout the Coast Guard's command structure, such as *Planning Assessments* for fiscal years 2010 through 2017, a 2014 risk assessment, strategies from 2013 through 2014, planned asset resource hour allocations by field units and missions, and reports of asset hours used by field units for each fiscal year. Using these documents, we analyzed resource hour data, planned and used, beginning in fiscal year 2010—when the Coast Guard began collecting these data in a standardized manner—through fiscal year 2015—the last full fiscal year for which data were available. Further, we analyzed trends in asset resource hour allocations from fiscal year 2010 through 2016—the latest year planning documents were available. To conduct these analyses, in consultation with Coast Guard headquarters and field unit officials, we compiled data on asset types—such as aircraft, cutters and boats—and calculated the percent difference between the asset hours planned and the asset hours used for each fiscal year.[2] To assess the reliability of these data, we analyzed documents, such as reporting guidance, and interviewed cognizant Coast Guard headquarters and field unit officials regarding how these data are collected and used. We determined that these data were

[2]In planning documents, the Coast Guard reports data on general asset types, such as boats. However, other asset types, such as cutters, are not reported as a group, but rather by specific type of cutters, such as icebreakers or tugs. Further, the asset type categorization can differ in the planning documents as compared to the reports of hours actually used. To address this issue, we consulted with Coast Guard headquarters and Area Command officials to categorize the data on the various assets within general asset types—such as fixed wing aircraft, rotary wing aircraft, major cutters, cutters, and boats—in the same manner as is used by the Coast Guard. According to Coast Guard officials, the Coast Guard conducts analyses of planned and actual asset hours across missions, assets, and years; but the analyses are informal, done on a quarterly basis, and are not part of an official reporting process.

sufficiently reliable to provide a general indication of asset resource hours planned and used.[3] We also assessed the Coast Guard's internal controls related to collecting and documenting quality information and assessing risks and compared them against criteria in *Standards for Internal Control in the Federal Government*.[4]

We interviewed officials that are responsible for helping plan and implement the resource allocation process at Coast Guard headquarters, the Atlantic and Pacific Area Commands, and at all nine of the Coast Guard's districts. In our interviews with Coast Guard district officials, we used a standard set of questions to obtain information about district perspectives on the resource allocation process. We made site visits to the Atlantic and Pacific Area Commands, as well as a district and sector in close proximity to each Area Command, to obtain a general understanding of how resource decisions are determined and implemented at these three command levels. Although the sectors we visited were not generalizable to all sectors, they provided insights into how sectors allocate and deploy assets to meet mission responsibilities. We also reviewed prior GAO reports on the Coast Guard's resource allocation process and its acquisitions.[5]

To address the second objective, we analyzed Coast Guard documents related to management tools it has developed and used to determine its workforce requirements and identify personnel needs; including guidance and analyses related to developing manpower requirements, a model used to determine sector staffing needs, and strategies that set out the Coast Guard's stated human capital priorities and principles. As with the first objective, we interviewed cognizant officials at Coast Guard headquarters, the Atlantic and Pacific Area Commands, and all nine of

[3]We did not report data on asset resource hour use by Coast Guard mission because we determined that resource hour data at the mission level may not be accurate, as discussed later in the report.

[4]GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: Nov. 1, 1999).

[5]See, for example, GAO, *Coast Guard: Strategy Needed for Setting and Monitoring Levels of Effort for All Missions,* GAO-03-155 (Washington, D.C.: Nov. 12, 2002); *Coast Guard: Observations on the Genesis and Progress of the Service's Modernization Program,* GAO-09-530R (Washington, D.C.: June 24, 2009); and *Coast Guard Acquisitions: Better Information on Performance and Funding Needed to Address Shortfalls,* GAO-14-450 (Washington, D.C.: June 5, 2014).

the Coast Guard's districts. Headquarters officials interviewed were responsible for the development of manpower requirements and overseeing implementation of the staffing model for Coast Guard units. The Area command and district officials we interviewed were responsible for implementing and managing personnel changes on behalf of their units. We also reviewed prior GAO reports on workforce planning and Coast Guard personnel problems.[6] Finally, we reviewed documents and information on these management tools and compared them against leading practices identified in the Program Management Institute's (PMI) *Standard for Program Management*.[7]

We conducted this performance audit from October 2014 to May 2016 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.

Background

The Coast Guard's Structure, Resources, and Missions

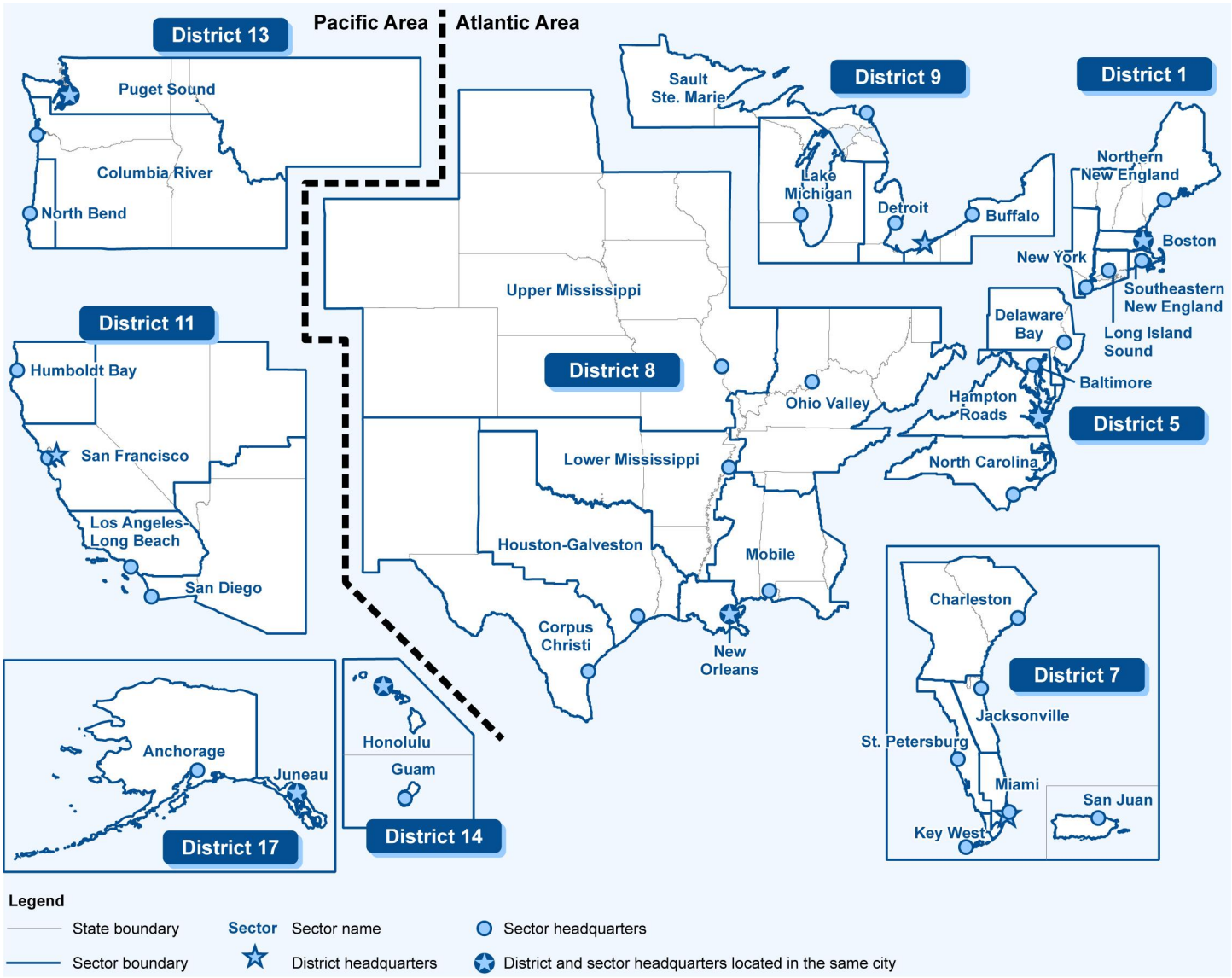
Coast Guard's Organizational Structure

The Coast Guard employs a multi-level organizational structure, as shown in figure 1.

[6]See, for example, *Human Capital: Key Principles for Effective Strategic Workforce Planning,* GAO-04-39 (Washington, D.C.: Dec. 11, 2003) and *Coast Guard: Service Has Taken Steps to Address Historic Personnel Problems, but It Is too Soon to Assess the Impact of These Efforts,* GAO-10-268R (Washington, D.C.: Jan. 29, 2010).

[7]Project Management Institute, Inc., *The Standard for Program Management* ®, Third Edition (Newton Square, PA: 2013). *The Standard for Program Managemen*t ® describes, among other things, how resource planning, goals, milestones, performance measures, and program monitoring and reporting are good practices that can enhance management for most programs.

Figure 1: Map Showing the Coast Guard's Two Area Commands, Nine Districts, and 37 Sectors



Source: GAO analysis of U.S. Coast Guard data; MapInfo (map). | GAO-16-379

Note: This figure is not to scale and the nine Coast Guard districts are not numbered sequentially.

The Coast Guard provides commanders at each level the authority and discretion to conduct operations within their operational areas. Command and control begins at Coast Guard headquarters, which is responsible for developing national strategies and policies for operations. However, Coast Guard headquarters does not exercise direct operational control of

assets. Rather, the Commandant apportions this control to the two Area commanders. The two Area commanders—one for the Atlantic Area Command and one for the Pacific Area Command—are responsible for translating policy into operational objectives through theater plans for Coast Guard missions. The Coast Guard has nine districts that report to the Area Commands. District commanders are responsible for regional operations and they assume tactical control of allocated resources to execute operations and missions within their areas of responsibility. The nine Coast Guard districts are supported by 37 sectors.[8] Sector commanders are responsible for local operations within each district.[9] Sector commanders assume tactical control of allocated resources to execute operations and missions within their areas of responsibility. Each of the Coast Guard Area commands, districts, and sectors is responsible for managing its assets and accomplishing missions within its geographic area of responsibility and for the purposes of this report are referred to as field units.

Coast Guard Assets and Personnel

The Coast Guard uses a variety of assets to conduct its mission responsibilities. The Coast Guard's assets consist of aircraft and vessels. The Coast Guard operates two types of aircraft—fixed wing (airplanes) and rotary wing (helicopters). Fixed wing aircraft operate from Air Stations and airports, whereas rotary wing aircraft operate from Air Stations, flight-deck equipped cutters, or other locations that could support flight operations. Similarly, the Coast Guard operates two types of vessels—cutters and boats. A cutter is any vessel 65 feet in length or greater, having adequate accommodations for crew to live on board. Larger cutters (major cutters), over 179 feet in length, are generally under the control of Area Commands and cutters 175 feet or less in length come under control of District Commands.[10] In contrast, all vessels less than 65 feet in length are classified as boats and usually operate near shore and on inland waterways. As of the end of fiscal year 2015, the Coast Guard's assets included 61 fixed wing aircraft, 142 rotary wing aircraft, 40 major

[8]The Coast Guard has 24 air stations and 6 air facilities that also report to District commands.

[9]For example, sector commanders are responsible for tactical control of ports, boat stations, and aids to navigation teams.

[10]The exception is the 225-foot Seagoing Buoy Tenders that are under the control of District commands, not Area commands.

cutters, 205 cutters, and 1,750 boats. For a more detailed listing of these Coast Guard's assets, see appendix I.

To crew its aircraft and vessels and to plan, manage, and carry out its mission responsibilities, the Coast Guard relies on a staff of active duty, reserve duty, and civilian personnel. As of the end of fiscal year 2015, the Coast Guard had 54,425 employees—39,116 active duty (6,566 officers, 1,728 Chief Warrant Officers, and 30,822 enlisted) personnel; 7,109 reservists; and 8,200 civilians.

Coast Guard Strategic Commitments

Strategic commitments are annual, up-front commitments of resources made at the headquarters level and are deemed by the Coast Guard as critical to the implementation of national, Department of Homeland Security, and Commandant strategic priorities. Among other things, strategic commitments specify the amount of time certain types of Coast Guard assets are to be operating in support of these activities, and these resource allocations serve as minimum levels of activity that field unit commanders are expected to provide. An example of a strategic commitment is supporting counter drug missions in the Western Caribbean and Eastern Pacific in coordination with other federal law enforcement or Department of Defense agencies. Strategic commitments represent the Coast Guard's highest priorities, so the Coast Guard allocates resources to these activities before it allocates the remaining resources to meet other field units' missions.

Coast Guard Missions

The Coast Guard is responsible for 11 statutory missions, which are divided into non-homeland security and homeland security missions, as shown in table 2.[11] The Homeland Security Act of 2002 requires that the authorities, functions, and capabilities of the Coast Guard to perform its missions be maintained intact and without significant reduction, except as specified in subsequent acts.[12] It also prohibits the Secretary of Homeland Security from reducing "substantially or significantly…the missions of the Coast Guard or the Coast Guard's capability to perform those missions."[13]

[11] 6 U.S.C. § 468 (a).

[12] 6 U.S.C. § 468(c).

[13] 6 U.S.C. § 468(e).

Table 1: Information on the Coast Guard's 11 Missions

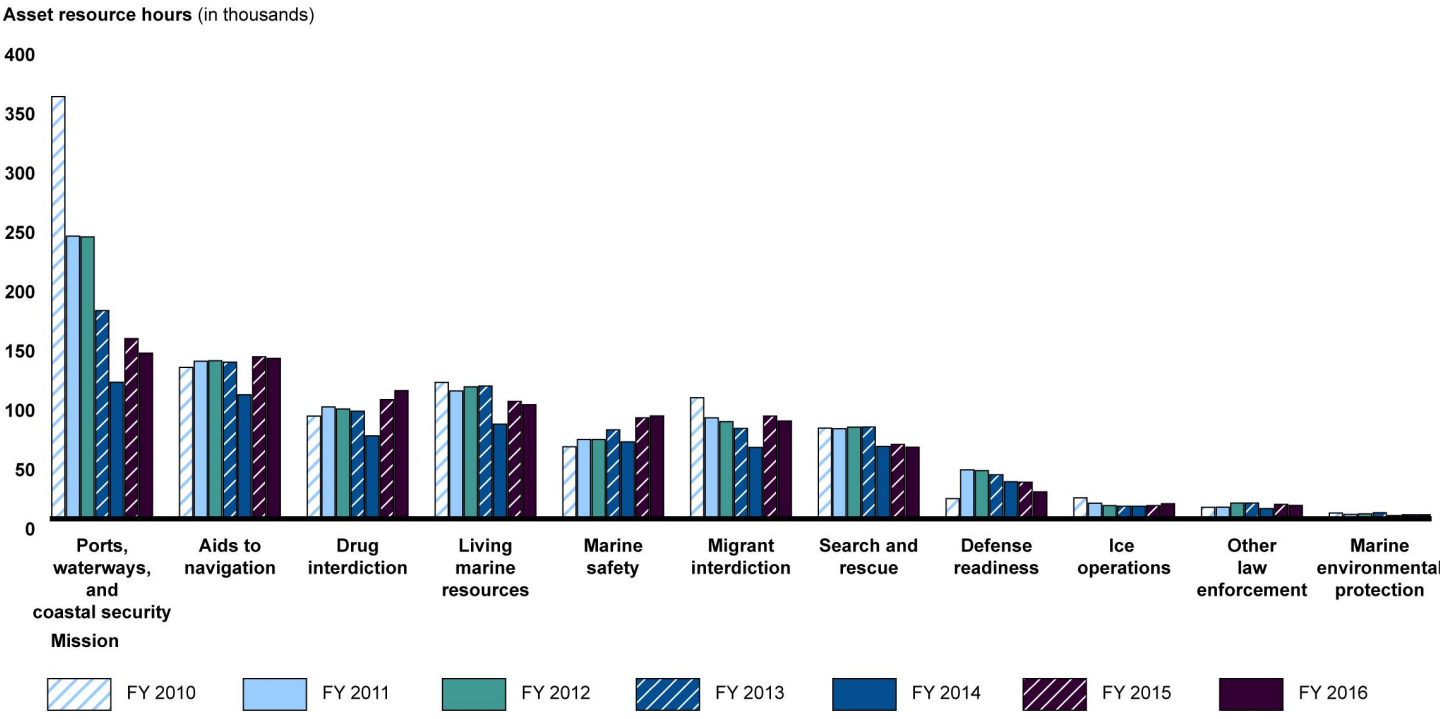
	Mission	Description
Non-homeland security missions	Marine safety	Enforce laws which prevent death, injury, and property loss in the marine environment.
	Marine environmental protection	Enforce laws which deter the introduction of invasive species into the maritime environment, stop unauthorized ocean dumping, and prevent and respond to oil and chemical spills.
	Search and rescue	Search for, and provide aid to, people who are in distress or imminent danger.
	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.
	Ice operations	The Coast Guard is the only federal agency directed to operate and maintain icebreaking resources for the United States. This includes establishing and maintaining tracks for critical waterways, assisting and escorting vessels beset or stranded in ice, and removing navigational hazards created by ice in navigable waterways.
Homeland security missions	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.
	Migrant interdiction	Stem the flow via maritime routes of undocumented alien migration and human smuggling activities.
	Defense readiness	The Coast Guard maintains 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	Enforcement of international treaties, including the prevention of illegal fishing in international waters and the dumping of plastics and other marine debris.

Source: U.S. Coast Guard. | GAO-16-379

Each fiscal year, the Coast Guard allocates resource hours to its field units for carrying out its 11 statutory missions based on the number and type of assets in those units at that time. During fiscal years 2010 through 2016, some missions were allocated more asset resource hours than others, as shown in figure 2. For example, for fiscal year 2016, the two missions with the highest allocation of asset resource hours were ports, waterways, and coastal security and aids to navigation. Conversely, the two missions with the lowest allocation of asset resource hours during

that year were other law enforcement and marine environmental protection.[14]

Figure 2: Allocation of Asset Resource Hours, by Mission, from Coast Guard Headquarters' *Strategic Planning Directions*, Fiscal Years (FY) 2010 through 2016



Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

Notes: Resource hours allocated to aircraft, cutters, and boats are included. The hours for certain assets, such as deployable specialized forces, are not included because these assets have specialized capabilities, such as law enforcement and counterterrorism operations or hazardous materials response, and perform unique functions across a range of Coast Guard missions. Hours for training and support activities, as well as the hours for assets used exclusively for training purposes, are not included. According to the Coast Guard, the number of boat resource hours allocated is relatively high and their actual use rate is relatively low, as compared to other assets. This issue is discussed later in this report. Coast Guard officials added that the number of resource hours allocated

[14]Asset resource hours allocated to the 11 statutory missions do not include the time Coast Guard personnel may spend on missions that do not use assets. For example, Coast Guard personnel conducting a dockside vessel inspection would not need to use an asset to carry out activities related to the marine safety mission and, thus, these activities would not be included in the Standard Operational Planning Process. According to Coast Guard officials, the costs and personnel devoted to activities that do not use Coast Guard assets are estimated for budgetary purposes using a model based on surveys and historical workload data.

to the ports, waterways, and coastal security mission hours is influenced by the concentration of hours performed in this mission area by boats.

Past Concerns about the Coast Guard's Alignment of Resources to Meet Mission Needs

In prior reports and testimonies, we have raised concerns about the Coast Guard's difficulties in clearly and systematically allocating resources to accomplish its diverse missions. For example, in March 2004, we found that although the Coast Guard used a variety of mission performance measures, it did not have a systematic approach that would allow it to understand the linkage between resources expended and performance results achieved. [15] We recommended, among other things, that the Coast Guard proceed with initiatives to account more completely for resources expended. In response, the Coast Guard developed the Mission Cost Model, which was to accurately capture the costs of mission-direct activities and the allocation of mission-support costs as they are incurred. We also previously reported that although the Coast Guard reports summary financial data by homeland security and non-homeland security missions to the Office of Management and Budget, as a multi-mission agency, the Coast Guard can be conducting multiple missions simultaneously.[16] As a result, we stated that it is difficult to accurately determine the level of resources dedicated to each mission.

The Coast Guard's Process for Aligning Assets to Meet Mission Needs

Recognizing the difficulty of determining resource needs in a multi-mission agency, the Coast Guard developed a process to help it better allocate its assets in line with its strategic commitments and statutory mission responsibilities. Specifically, since being implemented in fiscal year 2008, the Coast Guard has used the Standard Operational Planning Process (SOPP) for annually developing and communicating strategic commitments and allocating resource hours, by asset type (i.e., types of aircraft, cutters, and boats), throughout its chain of command for meeting mission needs. The SOPP is to provide guidance and direction, while

[15] *Coast Guard Programs: Relationship between Resources Used and Results Achieved Needs to Be Clearer,* GAO-04-432 (Washington, D.C.: Mar. 22, 2004).

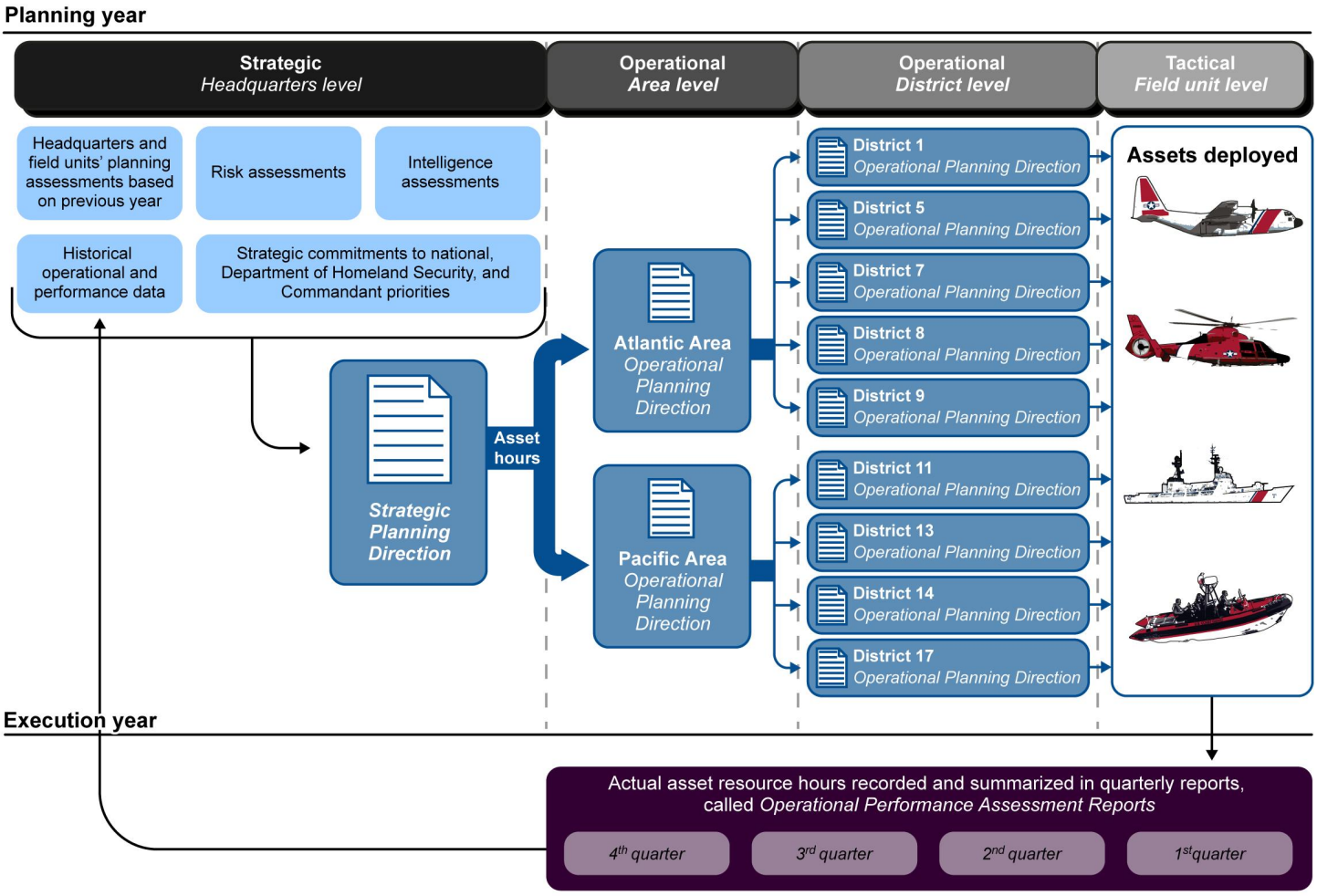
[16] *Coast Guard: Observations on the Fiscal Year 2009 Budget, Recent Performance, and Related Challenges,* GAO-08-494T (Washington, D.C.: Mar. 6, 2008).

preserving some autonomy for field unit commanders to conduct operations, as events require.[17]

As shown in Figure 3, as part of the SOPP, Coast Guard headquarters issues an annual *Strategic Planning Direction*, which is to be the primary mechanism for allocating resources and providing strategic direction to operational commanders at the Area, District, and Sector levels. To determine and plan for how assets are to be allocated, Coast Guard headquarters are to rely on mission priorities, data on historical and current-year mission performance, and operational and intelligence assessments. As part of the planning process, field commands are allocated resource hours by asset type to be used for meeting strategic commitments and executing the 11 statutory missions. The *Strategic Planning Direction* is annually disseminated to the two Area Commands that are then to disseminate their own *Operational Planning Directions* through their command levels, with each District command developing its own plan to cover its area of responsibility. The Area commanders develop a plan known as the *Area Operational Planning Direction* and District commanders develop a district level *Operational Planning Direction*. After assets are deployed, staff at the field units are to enter the assets' actual resource hours used, by mission, into data systems. The asset resource hour data are consolidated on a quarterly basis as part of *Operational Performance Assessment Reports*. The historical and current-year operational data from these reports, as well as *Planning Assessments*, are to be communicated back to Coast Guard headquarters as part of the information to be used to develop the *Strategic Planning Direction* for the following year.

[17]The SOPP also includes performance measures for each Coast Guard mission. We did not include information on performance measures as part of this report; however, in January 2016, we initiated a separate study on Coast Guard performance measures.

Figure 3: Overview of Standard Operational Planning Process Documents that Are to Guide and Inform Asset Resource Hour Allocations



Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

Coast Guard Management Tools for Aligning Personnel to Meet Mission Needs

The Coast Guard has also developed management tools to help it align its personnel with its missions. In particular, the Coast Guard has developed the Manpower Requirements Determination (MRD) system and the Sector Staffing Model (SSM) to facilitate management decisions on personnel requirements (see table 3).[18]

Table 2: Coast Guard Management Tools Used to Align Personnel to Meet Mission Needs

Tool	Personnel included	Description
Manpower Requirements Determination (MRD) system	All Coast Guard units	The MRD system begins with a Manpower Requirements Analysis (MRA), which is a structured, scientific analysis used to determine the number and types of personnel needed to effectively perform each mission to a specified standard. MRAs are the building blocks of the MRD system and include a comprehensive review of the workload as determined from a wide range of factors, including regulations, support, training, and competencies. The MRA report establishes the personnel requirements for the unit or unit type studied and provides information necessary to adjust actual personnel, resources, mission, or risk dependent upon availability of resources, among other things. A MRD document is the output of an MRA and identifies the number and types of staff required to accomplish the prescribed amount of work to the prescribed standard.
Sector Staffing Model (SSM)	Sectors	The SSM is a staffing requirements decision making tool that is intended to address the challenges of aligning sectors and subordinate units with mission activities. According to Coast Guard guidance, the SSM is used to determine staffing needs at specific sectors, such as reallocating existing resources, quantifying staff shortfalls, and aligning current staffing to operational responsibilities.

Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

Coast Guard's Data Systems Used to Record Its Mission Activities

The Coast Guard collects and reports the number of hours its assets—aircraft, cutters, and boats—spend conducting missions. Coast Guard field unit personnel are to record asset resource hours used to accomplish a mission(s), by mission category (such as domestic ice breaking or marine environmental protection operations), into one of two operational reporting databases. The Asset Logistics Maintenance Information System (ALMIS)[19] and the Abstract of Operations System

[18]According to Coast Guard officials, they use the Activity-based (Station) Staffing Model to calculate staffing standards for boat stations based on the level of activity and unit resources, among other things. We did not review management tools used to align personnel to missions at the boat station level as part of this review.

[19]ALMIS is a centralized system that provides aircraft and vessel logistics information and support for Coast Guard operations, mission scheduling and execution, maintenance, and other issues. Coast Guard field units are responsible for timely and accurate data entry and are to ensure the database is secure and that access is appropriately limited.

(AOPS)[20] capture asset resource hour data to support mission responsibilities. According to Coast Guard instructions, field units are to record at least one type of activity, such as one of the Coast Guard's 11 statutory missions, within 24 hours after an asset is deployed. Staff at the relevant field units are to review and certify that the data entered are accurate. After the data have been entered, the Coast Guard Business Intelligence system is used to extract and combine resource and performance data each quarter to create *Operational Performance Assessment Reports*.[21] Data on resource hours used by field units' assets are included in these reports and are part of the feedback component of the SOPP whereby field units report data on asset usage to Coast Guard headquarters on a quarterly basis.

The Coast Guard's Process for Allocating Assets Has Limitations that Constrain Its Strategic Effectiveness

[20]Information from AOPS is used for documenting planning activities, such as tracking the number, locations, and missions of Coast Guard assets, among other things. According to operational reporting guidance, the Coast Guard is in the process of migrating AOPS data to ALMIS.

[21]Some performance data for the *Operational Performance Assessment Reports* are extracted from a third database—the Marine Information for Safety and Law Enforcement system—an operational activity case management system used to collect data on activities concerning safety and law enforcement such as vessel inspections and oil spill assistance. According to Coast Guard officials, these reports may not be updated with resource hour data that was entered after the fiscal year ends.

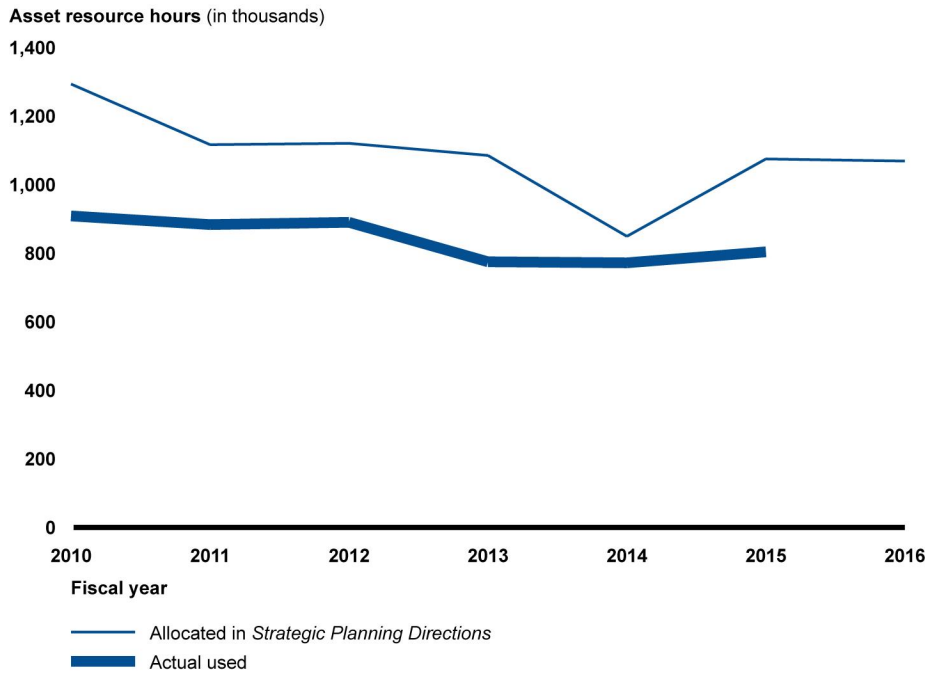
Coast Guard Headquarters' *Strategic Planning Directions* Reflect Asset Performance Capacities Rather Than Achievable Goals

Coast Guard headquarters does not provide field units with strategic, realistic goals for allocating assets, by mission. Rather, headquarters' allocations of assets in the *Strategic Planning Directions* that we reviewed for fiscal years 2010 through 2016 were based on assets' maximum performance capacities. For example, the *Strategic Planning Directions* allocated each Hercules fixed wing aircraft (HC-130H) 800 hours per year, each Jayhawk helicopter (MH-60T) 700 hours per year, and each 210-foot or 270-foot medium endurance cutter (WMEC) 3,330 hours per year, irrespective of the condition, age, or availability of these assets.[22] As a result, as shown in figure 4, the asset resource hours allocated in the *Strategic Planning Directions* have consistently exceeded the asset resource hours actually used by Coast Guard field units during fiscal years 2010 through 2015. For example, in fiscal year 2015, the *Strategic Planning Direction* allocated a total of 1,075,015 resource hours for field unit assets whereas the actual asset resource hours used was 804,048 hours, or about 75 percent of the allocated hours for that year.[23]

[22]According to Coast Guard officials, the hours allocated to the medium endurance cutters is calculated by using the Coast Guard's cutter employment standard of 185 days away from home port multiplied by a planning factor of 18 hours per day, which equals an estimated 3,330 hours of underway operational hours per year.

[23]A separate analysis by asset type—fixed and rotary wing aircraft, major cutters, cutters, and boats—indicates that asset resource hours allocated in the *Strategic Planning Directions* consistently exceeded the asset resource hours actually used during fiscal years 2010 through 2015, with the exception of rotary wing aircraft in fiscal year 2014. In fiscal year 2014, the number of rotary wing aircraft resource hours actually used exceeded the resource hours allocated in the *Strategic Planning Direction* by about 1 percent, as shown in figure 5.

Figure 4: Comparison of Total Field Unit Asset Resource Hours Allocated in *Strategic Planning Directions* to the Actual Field Unit Asset Resource Hours Used, Fiscal Years 2010 through 2015



Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

Notes: The hours for certain assets, such as deployable specialized forces, are not included because these assets have specialized capabilities, such as law enforcement and counterterrorism operations or hazardous materials response, and perform unique functions across a range of Coast Guard missions. The hours for all assets' (aircraft, cutters, and boats) training and support activities, such as engineering and test functions, are included. The hours for assets used exclusively for training purposes are not included.

The fiscal year 2014 *Strategic Planning Direction* planned for lower asset resource hour use because of anticipated budget reductions as a result of sequestration. According to the Coast Guard, the number of boat resource hours allocated in the *Strategic Planning Directions* is relatively high, but the boats' actual use rate is relatively low, as compared to other assets. This issue is discussed later in the report.

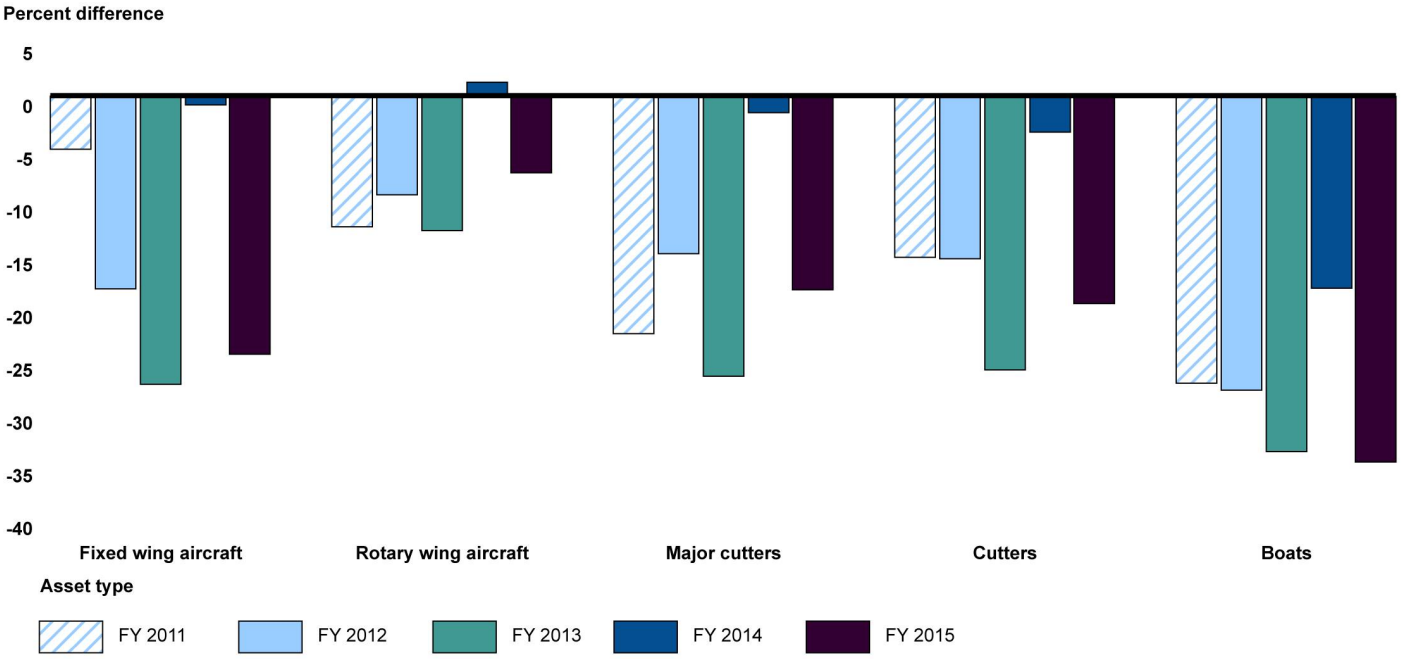
Coast Guard field unit officials we spoke with and Coast Guard planning documents we reviewed indicate that the Coast Guard is not able to achieve the resource allocation capacities set by the headquarters' *Strategic Planning Directions* for several reasons, including asset condition and unscheduled maintenance. The field unit officials told us they provide Coast Guard headquarters with information on their assets' availabilities through *Operational Planning Directions*, *Operational Performance Assessment Reports*, and *Planning Assessments*. For example, in its Planning Assessment for fiscal years 2015-2016, an Area

Command noted that one of its classes of cutters was 50 years old and the cutters were hampered by mechanical failures requiring emergency dry dock repairs resulting in reduced availability to carry out their missions during the year. In another example, an Area Command stated in its fiscal year 2015 *Operational Planning Direction* that based on historical use, it planned for 575 hours per vessel for one type of cutter instead of the 825 hours performance capacity, as specified in the *Strategic Planning Direction*. Further, district officials we interviewed told us that they do not expect to use all of the boat asset resource hours allocated to their units because they do not have sufficient crews available, or needed maintenance prevents them from operating the boats at their capacity resource hours.

Our analyses of Coast Guard resource hour data across asset types for fiscal years 2011 through 2015 show that actual asset use differed by asset type, but overall fell below asset resource hour projected capacities, as shown in figure 5.[24] During this time period, the percent difference between resource hour capacities and actual resource hours used for rotary-wing aircraft were relatively close—for example, about 7 percent fewer hours were used than allocated for fiscal year 2015. In contrast, the percent difference between boat resource hour capacities and actual boat resource hours used during fiscal years 2011 through 2015 were more sizable—for example, about 35 percent fewer hours were used than allocated for fiscal year 2015.

[24]Percent difference is calculated by subtracting the resource capacity hours from the actual resource hours used, dividing by the resource capacity hours, and multiplying the quotient by 100. According to *Strategic Planning Direction* guidance, field unit commanders are authorized to operate fixed and rotary wing aircraft and cutters within plus or minus 10 percent of the resource allocations levels and must obtain headquarters approval to exceed allocations by over 10 percent.

Figure 5: Percent Difference between Field Units' Asset Resource Hour Capacities in the *Strategic Planning Directions* and Actual Asset Resource Hours Used by Asset Type, Fiscal Years (FY) 2011 through 2015



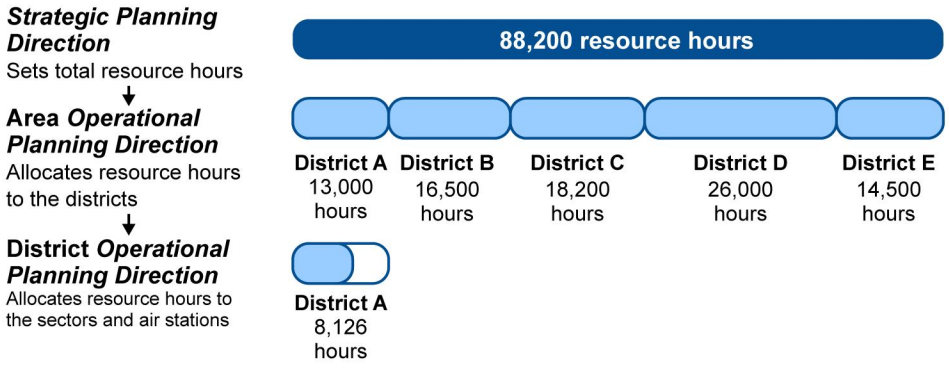
Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

Note: Percent difference is calculated by subtracting the resource capacity hours from the actual resource hours used, dividing by the resource capacity hours, and multiplying the quotient by 100. The hours for certain assets, such as deployable specialized forces, are not included because these assets, along with teams of specially trained personnel, have specialized capabilities and perform unique functions across a range of Coast Guard missions. These specialized teams and assets are to be readily available and globally deployable where their unique capabilities are required, such as law enforcement and counterterrorism operations or hazardous materials response. Hours for training and support activities, such as engineering and test functions, as well as the hours for assets used exclusively for training purposes, were excluded. Fiscal year 2010 data was not included because the Coast Guard did not apportion resource hour data by specific asset type that year.

Our review of Coast Guard planning documents and discussions with field unit officials also show that *Operational Planning Directions* developed by field unit commands can differ from headquarters' *Strategic Planning Directions*. For example, officials from one district told us that based on their analyses, they determined that their district could realistically use only about two-thirds of the performance capacity hours for boats allocated for one mission. Specifically, in fiscal year 2013, for the ports, waterways, and coastal security mission, the district's *Operational Planning Direction* included 8,126 hours, or 63 percent, of the 13,000 hours allocated in headquarters' *Strategic Planning Direction*, as shown in figure 6. The district officials stated that allocating 13,000 hours (total

assets' capacity) was not practical based on their analysis of the boat station locations and events requiring protection, among other things.

Figure 6: Allocation of Boat Resource Hours from the *Strategic Planning Direction* to One Area Operational Planning Direction to the District Operational Planning Direction for the Ports, Waterways, and Coastal Security Mission, Fiscal Year 2013



Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

District officials we met with told us that actual asset use for other missions was similarly below performance capacities, such as cutters that used about 75 percent of the capacity hours for the aids to navigation mission. These officials stated that the differences did not reflect an underutilization of their assets; rather, they considered the boat stations to be appropriately staffed with sufficient numbers of boats to meet mission demands. Thus, the capacity resource hours allocated to the district's various missions through the SOPP do not align with the district's actual asset resource hours used—as reported in the *Operational Performance Assessment Reports*.

Because actual asset use has consistently fallen below asset performance capacities, headquarters' *Strategic Planning Directions* have steadily overstated the amount of asset resource hours available to achieve the Coast Guard's strategic commitments and missions, and there is not a direct alignment between the Coast Guard's strategic goals and its prospects for achieving those goals. As a result, the headquarters' strategic intent is not effectively communicated to field units when allocating asset resource hours. According to a Coast Guard Commandant Instruction, the SOPP is to effectively translate strategic intent to mission execution by, for example, issuing guidance and

direction; setting performance targets; allocating resources; and providing effective feedback, including operational status and desired outputs.[25] The Coast Guard Instruction also states that the intent of the *Operational Performance Assessment Reports* is for operational commanders to inform pertinent stakeholders about their resource utilization and mission performance, identify operational gaps, and provide a forecast of operational requirements for the next 4 quarters. In addition to the Coast Guard Commandant Instruction, *Standards for Internal Control in the Federal Government* states that for an agency to run and control its operations, it must have relevant, reliable, and timely communications relating to internal, as well as external events.[26] Moreover, agencies should use quality information to achieve objectives and address related risks. Quality information should be appropriate, current, complete, accurate, accessible, and timely. Agency management can then use this information to make informed decisions and evaluate performance in achieving key objectives and addressing risks.[27] Further, agencies should internally communicate the necessary, quality information to achieve the agency's objectives.

Coast Guard headquarters officials told us that they use assets' maximum performance capacities as a basis for asset allocations in the *Strategic Planning Directions* because (1) they do not have the necessary information and methods to realistically predict the operational availability of all assets, and (2) they need to identify assets' maximum performance capacities available to field units in the event of needed surge operations or to respond to emergency situations.

With regard to asset operational availability, the Coast Guard is in the process of implementing the Coast Guard Logistics Information Management System (CG-LIMS), which is intended to improve information on assets' operational availability by consolidating its legacy logistics systems into one system, and providing timely and accurate

[25]Coast Guard Standard Operational Planning Process/Global Force Management, Commandant Instruction 3120.4A, dated Dec. 10, 2009.

[26]GAO/AIMD-00-21.3.1.

[27]*Standards for Internal Control in the Federal Government,* GAO-14-704G (Washington, D.C.: Sept. 10, 2014). GAO revised and reissued its Standards for internal Control in the Federal Government on September 10, 2014. These new standards became effective on October 1, 2015.

information on the location, movement, and operational status of assets, among other things. According to Coast Guard officials, CG-LIMS could provide more centralized and systematic information on the operational availability of the assets, such as when assets are scheduled to be in maintenance during the year. For example, beginning in fiscal year 2017, one major cutter—a National Security Cutter—is expected to be out of commission for about 1 year for needed structural enhancements.[28] An official from a Coast Guard Area Command stated that the Area Command has planned for the reduction in available resource hours for this cutter, but it would be useful to have more systematic information on operational availability across all assets. In December 2014, CG-LIMS began consolidating data on one aircraft type and the system is to expand to support all Coast Guard aircraft and some of its boats by the end of 2018. Coast Guard officials noted, though, that a decision has not yet been made to expand CG-LIMS to consolidate the logistics systems of other assets, such as cutters. The officials said that if the Coast Guard makes a determination to include all of its assets into the new CG-LIMS system, it should provide more systematic and centralized operational data across all assets.

With regard to the use of asset capacities, we do not disagree that information on assets' performance capacities can help inform decisions regarding surge operations or emergency situations. However, in addition to asset capacities, information on assets' actual performance in the *Strategic Planning Directions* would more effectively communicate the Coast Guard's strategic intent and more closely align asset allocations to the field units' actual use of the assets in carrying out their various missions. For example, as stated earlier, one district had sufficient numbers of assets to meet demands in one mission while about 25 percent under capacity hours. Coast Guard officials stated that although they consider *Operational Performance Assessment Report* data when determining the number of asset resource hours to allocate among the missions in the annual *Strategic Planning Directions*, they do not reduce

[28]After the structural enhancements are completed to the first National Security Cutter, a second National Security Cutter will be out of service for a year to undergo the same needed structural enhancements. See *Coast Guard: Timely Actions Needed to Address Risks in Using Rotational Crews,* GAO-15-195 (Washington, D.C.: Mar. 6, 2015).

the estimates of total asset capacity and align actual resource hour use accordingly.[29]

Until the Coast Guard implements CG-LIMS or another system for asset allocation, using current and accessible information from field units, such as *Operational Performance Assessment Reports* and *Planning Assessments*, to inform asset hour allocations in the annual *Strategic Planning Directions*—in addition to the asset performance capacities currently used—will better ensure that the Coast Guard is effectively communicating strategic intent to its field units, realistically identifying any operational limitations of its assets, and making more informed asset resource hour allocation decisions that are aligned with its strategic goals. Further, without this alignment, Coast Guard headquarters does not know the extent to which field units are effectively and meaningfully carrying out the intent of the *Strategic Planning Directions*, and field units do not have the benefit of headquarters' strategic direction in terms of the actual use of their assets in carrying out missions.

The Coast Guard is Taking Steps to Improve Data Quality for Resource Hours Used to Support Each Mission

Coast Guard field officials we met with told us that total asset resource hours recorded in *Operational Performance Assessment Reports* are accurate, but noted that data on asset resource hours used to support each mission may not be accurate. As stated earlier, Coast Guard guidance states that units should report at least one primary employment category, such as one of the 11 statutory missions, for the time an asset is deployed. The officials told us that data on resource hours, by mission, for all assets may not be accurate because the Coast Guard does not have a systematic way for field units to (1) record time spent on more than one mission during an asset's deployment or (2) consistently account for time assets spend in transit to designated operational areas. For example, officials from six of the nine Coast Guard districts we interviewed told us that they generally record one mission per asset deployment, even though each asset's crew may have performed two or more missions during a deployment. Officials from the remaining three districts told us that if their assets' crews perform more than one mission per deployment, the crews generally apportion the number of hours spent

[29]Our analyses did show, however, that one Area Command reduced the number of boat hours in its fiscal year 2016 *Operational Planning Direction* to reflect usable hours, not capacity hours which, according to Coast Guard Area officials, would better account for the levels its districts' need for effective operations.

on each mission performed. Thus, for example, if a cutter is deployed on a ports, waterways, and coastal security mission and is diverted to an emergency search and rescue mission, the cutter's crew would record the hours spent on each respective mission.[30] The officials noted, though, that this may not be a consistent practice across all units.

In September 2013, the Coast Guard began drafting guidance for field units to capture assets' transit times in order to better account for both the direct and indirect costs of conducting missions. Area and district officials we met with told us that it is important to accurately capture the time an asset is in transit because, for example, it can sometimes take a number of days for a cutter to transit to an operational area to conduct its mission because of vast geographic areas of responsibility. As of February 2016, Coast Guard officials informed us that the Coast Guard was investigating potential solutions to enhance the current software and information technology systems' capabilities, but did not have an estimated date for finalizing the guidance.

The Coast Guard has acknowledged these data limitations and Coast Guard officials stated that the resource hour data were accurate enough for operational planning purposes. Further, the Coast Guard officials stated that the Coast Guard was in the process of determining how best to account for time spent by assets on multiple missions and in transit in order to obtain more accurate and complete data on the time assets spend conducting each of its missions. For example, in April 2014, the Coast Guard issued instructions to its field units to provide definitions, policies, and processes for reporting their operational activities and also established a council to coordinate changes among the various operational reporting systems used by different field units. These are positive steps and should help the Coast Guard address limitations that currently hinder its ability to accurately capture assets' operational data.

[30]Several district officials told us they perform several missions concurrently.

The Coast Guard Is Taking Steps to Track How Increased Strategic Commitments Affect Resource Hours Available for Other Missions

In the headquarters' *Strategic Planning Directions*, according to Coast Guard headquarters' officials, the allocations of certain assets' hours in support of strategic commitments has grown from fiscal year 2010 to fiscal year 2016, including commitments in support of the Coast Guard's Western Hemisphere Strategy issued in September 2014 and the Department of Homeland Security's Southern Borders and Approaches Campaign Plan issued in January 2015.[31] These strategic commitments of assets are made at the headquarters level and, as stated earlier, are deemed critical to the implementation of national, Department of Homeland Security, and the Commandant's strategic priorities. Headquarters and field unit officials we met with told us that it has become increasingly difficult to fulfill these growing strategic commitments when asset performance levels have generally remained the same or declined in recent years. For example, one Area Command stated that its ability to meet the strategic commitments and other priority missions was severely strained because of concerns over the reliability of some cutters in its fleet that are 50 years old and operating beyond their useful service lives. Area command officials stated that after meeting these priority missions, it has been challenging to respond to threats within their areas of responsibility with the remaining asset resource hours. Further, the Coast Guard Commandant testified before a congressional subcommittee in February 2015 that the Coast Guard's mission demands continue to grow and evolve and that given the age and condition of some of its legacy assets, the success of future missions relies on the continued recapitalization of Coast Guard aircraft, cutters, boats, and infrastructure.[32]

To address these challenges, the Coast Guard is taking steps to provide more transparency regarding asset resource hours needed to support

[31]The Coast Guard's Western Hemisphere Strategy is a 10-year regional strategy to address transnational threats and maritime challenges in the western hemisphere and emphasizes the use of offshore vessel and aircraft presence to support effective governance and sovereignty in the area, among other things. The Department of Homeland Security's Southern Border and Approaches Campaign Plan is a department-wide approach to enforce immigration laws and interdict threats to the land, maritime areas, and airspace, and degrade transnational criminal organizations involved in the illicit flows of illegal drugs and migrant smuggling, among other things, while facilitating the flow of lawful commerce and travel.

[32]Zukunft, Paul, F., Commandant of the U.S. Coast Guard, *Coast Guard, Fiscal Year 2016 Budget Request*, testimony before the House Coast Guard and Maritime Transportation Subcommittee, 114th Cong., 1st sess., February 25, 2015.

strategic commitments and the remaining resource hours available to field unit commanders. For example starting in fiscal year 2015, the Coast Guard began using a new data field to track the time assets spent supporting its Arctic strategy. Moving forward, these efforts will continue to be important if current trends continue—that is, actual asset performance levels remaining the same or declining and strategic commitments and other mission needs increasing.

The Coast Guard Does Not Document the Extent to Which Risk Assessments Affect Asset Allocation Decisions

The Coast Guard does not maintain documentation on the extent to which risk factors have affected the allocation of resource hours to missions through its *Strategic Planning Directions*. For example, Coast Guard officials told us that the Coast Guard conducts a National Maritime Security Risk Assessment every 2 years to inform its asset allocations; however, the Coast Guard does not document how these risk assessments have affected asset allocation decisions across its missions.[33] Further, these officials told us that they consider this risk assessment, as well as other information, such as intelligence reports, to establish planning priorities across its 11 statutory missions in the *Strategic Planning Directions*. The officials added that changes made to *Strategic Planning Directions*' resource allocations, by mission, are discussed in verbal briefings but are not formally documented. Specifically, Coast Guard officials stated that the National Maritime Security Risk Assessment informs allocations for 7 of the 11 statutory missions. For the remaining 4 missions, the Coast Guard relies on other factors—such as historic use of asset resource hours by mission and field unit *Planning Assessments*—to inform allocations for those 4 missions.[34]

[33]The National Maritime Strategic Risk Assessment is a cross-program assessment which produces three main products: (1) a residual risk profile that estimates the expected societal loss remaining after the Coast Guard has performed all its prevention and response activities, (2) a Coast Guard risk reduction profile that estimates the amount of risk averted as a result of Coast Guard activities, and (3) a risk observations for management to be used to support performance management and decision-making.

[34]According to Coast Guard officials, the National Maritime Security Risk Assessment informs resource allocations to the following seven missions: ports, waterways, and coastal security; drug interdiction; migrant interdiction; search and rescue; living marine resources; other law enforcement; and marine environmental protection. The remaining four missions not impacted by the risk assessment, are: marine safety, defense readiness, aids to navigation, and ice operations.

Written statements provided to us by the Coast Guard indicate that all projections and changes to resource hours, such as changes made to allocations among missions in the *Strategic Planning Directions*, are to be documented throughout the planning process. In addition, SOPP guidance states that risk-informed methods and processes are to be incorporated to support establishing planning priorities across missions, performance targets, and force apportionment to better understand and articulate the impacts of shifting resources from one mission to another. Further, *Standards for Internal Control in the Federal Government* state that agencies should identify, analyze, and respond to changes and related risks that may impact internal control systems as part of its risk assessment process; and create and maintain documentation to provide evidence of the execution of these control activities.[35] Coast Guard officials told us that while they have identified, analyzed, and incorporated risk factors as part of the SOPP, it is not their practice to maintain documentation on the extent to which risk factors have affected resource allocation decisions. Without documenting how risk factors have informed the asset allocation decisions, the Coast Guard lacks a record to help ensure that its decisions are transparent and the most effective ones for fulfilling its missions given existing risks.

The Coast Guard Has Made Progress in Determining Workforce Needs, but Lacks Priorities for Remaining Workforce Requirements

[35]GAO/AIMD-00-21.3.1.

The Coast Guard Has Made Progress in Determining Workforce Requirements, but Does Not Have a Plan to Prioritize Remaining Work

As stated earlier, a manpower requirements analysis (MRA) is to turn documented mission requirements into manpower requirements, which a unit can use to compare against actual personnel assigned.[36] As shown in table 4, for its 134 unit types, the Coast Guard has completed 9 MRAs along with the accompanying manpower requirements determinations (MRD); as well as an additional 42 MRAs, as of December 2015.[37] According to Coast Guard officials, unit types can represent an asset, such as the National Security Cutter, or an office, such as the Office of Civilian Human Resources.[38]

[36]According to the Coast Guard, if there is a gap between the MRA and the actual personnel assigned—in terms of personnel shortage or lack of required competencies—it is presented to the unit in terms of risk, which the unit and relevant program managers can work through the resource reconciliation process to mitigate.

[37]As of December 2015, an additional 26 MRAs and 4 MRDs were in process.

[38]The National Security Cutter had two MRAs and two MRDs—an MRA and MRD for the number and type of crew needed to operate the cutter and an MRA and MRD for the number and type of shore side team needed to support the cutter. Coast Guard officials told us that some Coast Guard units would not need an MRA or MRD because they had only a few staff; however, they did not know how many of the 134 units fit into this category. Coast Guard officials told us that they were limiting the number of MRAs or MRDs to be conducted for sector work units, since the sector workload and staffing had generally been analyzed, although using a different methodology—the Sector Staffing Model.

Table 3: Number of Manpower Requirements Analyses (MRA) and Manpower Requirements Determinations (MRD) Completed by the Coast Guard, as of December 2015

Unit type	Total number of units	Only MRAs completed	Both MRAs and MRDs completed
Shore-based units	27	8	0
Mission support commands	25	6	0
Staff[a]	24	10	2
Maritime patrol	24	9[b]	6
Shore-based forces	14	2	1
Logistics and service centers	6	5	0
Deployable specialized forces	7	1	0
Specialty units	7	1	0
Total	**134**	**42**	**9**

Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

Note: Some unit types may require more than one MRA and MRD, such as the determination of the number and type of crew to operate a cutter and another to determine the number and type of shore side personnel to support that cutter. Some MRAs and MRDs may be done for a particular function, which is not associated with a unit type, such as a regional team of divers that serve a number of Coast Guard units

[a]Includes staff in various offices, such as financial management, intelligence, and human resources.

[b]Five of the nine completed MRAs were components of one study.

In June 2015, Coast Guard officials told us that based on current staffing levels, they estimate it could take 10 years to complete baseline MRAs for all Coast Guard units and were working on a strategy to prioritize and complete them. Further, these officials said that they cannot meet the demand for MRAs in a timely manner and that the units that can fund a contractor to conduct an MRA are the ones that are most likely to be completed.[39] As of February 2016, the Coast Guard had not made progress on this strategy or established a process for prioritizing the MRA workload.

Coast Guard guidance states that the MRA sponsor—such as the heads of the 134 unit types mentioned above—are to use the data provided in MRAs and decide if the personnel requirements recommended by the MRAs are feasible in the context of the program's overall strategies,

[39]In this case, the Coast Guard staff in charge of MRAs would help to oversee the contract.

goals, and objectives. Coast Guard MRA guidance states that the Coast Guard should seek efficient staff, overhead, and support organizations with a goal of ensuring that high priority mission activities are fully supported. Further, the Coast Guard's January 2016 *Human Capital Strategy* states that when an adjustment to personnel strength or competencies is necessary, the MRD process is the primary tool to be used by planners to define the human capital required to accomplish the mission.[40] The *Standard for Program Management* calls for agencies to engage in (1) resource planning to determine which resources are needed and when they are needed to successfully implement the program, and (2) resource prioritization to allow the program manager to prioritize critical resources that are not available in abundance and to optimize their use across all program components.[41]

A Coast Guard official in charge of MRAs and MRDs told us in December 2015 that the Coast Guard has not issued the strategy because it does not have sufficient resources. In particular, the official noted that the Coast Guard does not have enough staff and lacks a system to store analyses from previously completed MRAs—such as standard workweek calculations for different personnel—that could help analyze the MRA workload and facilitate better risk management decision making. Because the Coast Guard does not have a systematic process that allows it to prioritize critical resources and to optimize their use across all program components, it faces risks in its ability to identify and prioritize the most important MRAs to complete and does not have reasonable assurance that the high priority mission activities are fully supported with the appropriate number of staff possessing the requisite mix of skills and abilities.

[40]U.S. Coast Guard, *Human Capital Strategy* (Washington D.C.: January 2015).

[41]Project Management Institute, Inc., *The Standard for Program Management* ®, Third Edition.

Most Staffing Changes Identified in the Sector Staffing Model Are to Be Implemented by the End of 2017

In 2012, the Coast Guard implemented what it called the Sector Staffing Model (SSM) to redistribute and balance existing personnel across its sectors, based on its analyses of the sectors' workloads from about 2009 through 2012.[42] Coast Guard officials told us that, given overall limited resources, the sectors were staffed at lower staffing levels than were identified in the SSM. Officials we interviewed at the two Area Commands and nine districts stated that they thought that implementing the SSM was an important step in analyzing sector workload and balancing personnel across the sectors to meet workload demands. In total, the SSM involved the redistribution of about 1,400 positions, including about 1,280 active duty and 122 civilian personnel. Coast Guard officials told us that beginning in 2014, active duty positions identified in the SSM began to be redistributed through normal active duty transfer cycles and the officials noted that they expected all active duty position redistributions to be completed by the end of 2017. As of the end of 2015, 1,167 of the 1,280 active duty positions and 57 of the 122 civilian positions identified in the SSM had been redistributed.[43]

According to business rules the Coast Guard established for implementing the SSM, changes to civilian positions identified by the SSM did not require mandatory transfers or positions to be vacated in order to minimize disruption to the civilian workforce. This has resulted in staffing challenges for some field units. Officials we spoke with at seven of the nine districts stated that they faced staffing challenges because targeted civilian positions could not be redistributed until the civilians voluntarily transfer to a different position or retire. For example, officials from one district told us that one of its sectors was waiting for a civilian specialist to help manage hazardous materials, but they could not fill the position until a targeted civilian position was vacated.[44] Further, officials at another district told us that one of its sectors was waiting for a civilian port

[42]In 2012, the Coast Guard began a one-time redistribution of sector staff using the SSM, the Reprogramming and Optimization of Sector Enterprise (ROSE) initiative.

[43]According to Coast Guard officials, the transfers of all the personnel may not have yet taken place, but the identified positions had been redistributed among the sector units, including positions being vacated or transferred, positions with new job classifications, and positions changing from active duty to civilian positions or vice versa.

[44]Coast Guard officials told us that the redistribution of positions was to be a zero-sum game, that is, no new staff were to be added and total staffing levels were to remain the same. Thus, managers could not fill a vacant position in their units until the targeted position in another unit was vacated.

security specialist, but the sector could not fill this position until a civilian administrative position was vacated in another sector. Because the business rules state that changes to civilian positions were not mandatory, it could be a number of years before some civilian positions are vacated, if the civilians in those positions have no desire to move to a different position and have years to work before they retire.

Coast Guard headquarters officials told us they recognized that staffing gaps would remain in some civilian positions after SSM implementation, but noted they were waiting for the normal active duty transfer cycles to be completed by the end of 2017 before considering any updates to the SSM. Further, the officials said they were cognizant of the difficulties that some field units are facing since some needed civilian positions have not been filled or some unneeded civilian positions have not been vacated as identified in the SSM. These officials noted, though, that SSM business rules state that field units can request headquarters' consideration of staff reprogramming proposals to make changes to their existing staff to align with the SSM and that they have been working to rectify these staffing imbalances and accommodate staffing changes as field units make staff reprogramming requests.

Conclusions

Given the declining availability of its aging assets and the constrained budgets in recent years to replace legacy assets, together with growing strategic commitments, the Coast Guard will continue to face critical decisions about how to best allocate its limited assets to meet its mandated mission responsibilities. The Coast Guard uses the Standard Operational Planning Process (SOPP) to allocate asset resource hours to its field units for meeting their missions, but this planning process allocates maximum asset resource hour capacities and does not also include more realistic operational targets. However, by incorporating data that field units provide to Coast Guard headquarters on assets' performance—such as *Operational Performance Assessment Reports* and *Planning Assessments*—to inform asset hour allocations in headquarters' annual *Strategic Planning Directions*, the Coast Guard would be better positioned to ensure it is identifying any operational limitations of its assets, making more informed asset resource hour allocation decisions, and more effectively communicating strategic intent to its field units.

The Coast Guard does not maintain documentation on the extent to which risk factors have affected the allocation of asset resource hours to missions through its annual *Strategic Planning Directions*. Without such

documentation, the Coast Guard lacks transparency and a record to help ensure that its asset allocation decisions are the most effective ones for fulfilling its missions given existing risks.

The Coast Guard has developed management tools, such as manpower requirements determinations, to help it strategically align its personnel with its missions, but Coast Guard officials state they cannot meet the demand for these analyses and have not established a process to prioritize them because they do not have sufficient staff and lack a system to help analyze the MRA workload. Because the Coast Guard does not have a systematic process for identifying and prioritizing the most important manpower requirements analyses to complete, it does not have reasonable assurance that the highest priority missions are fully supported with the appropriate number of staff possessing the requisite mix of skills and abilities.

Recommendations for Executive Action

We recommend that the Commandant of the Coast Guard take the following three actions:

- To improve the strategic allocation of assets, the Coast Guard should incorporate field unit input, such as information on assets' actual performance from *Operational Performance Assessment Reports* and *Planning Assessments*, to inform more realistic asset allocation decisions—in addition to asset performance capacities currently used—in the annual *Strategic Planning Directions* to more effectively communicate strategic intent to field units.

- To improve transparency in allocating its limited resources, and to help ensure that its resource allocation decisions are the most effective ones for fulfilling its missions given existing risks, the Coast Guard should document how the risk assessments conducted were used to inform and support its annual asset allocation decisions.

- To ensure that high priority mission activities are fully supported with the appropriate number of staff possessing the requisite mix of skills and abilities, the Coast Guard should develop a systematic process that prioritizes manpower requirements analyses for units that are the most critical for achieving mission needs.

Agency Comments and Our Evaluation

In April 2016, we requested comments on a draft of this report from the Department of Homeland Security (DHS) and the Coast Guard. Both DHS and the Coast Guard provided technical comments, which we have incorporated into the report, as appropriate. In addition to its technical comments, DHS provided an official letter for inclusion in the report, which can be seen in appendix II. With regard to the first two recommendations, the Coast Guard stated that it was taking actions, such as incorporating field unit input contained in *Operational Performance Assessment Reports* and *Planning Assessments*, and documenting how risk assessments conducted were used to inform its annual asset allocation and program direction to field units. If implemented as described in the fiscal year 2017 *Strategic Planning Direction* to be issued by October 2016, this would meet the intent of these recommendations. Further, with regard to the third recommendation, the Department stated that the Coast Guard would be prioritizing manpower requirements analyses of unstudied units and incorporating all available manpower data into future personnel decisions, as resources permit, by October 2016. If implemented as described, this would meet the intent of the recommendation.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the Secretary of Homeland Security and the Commandant of the Coast Guard. In addition, the report will be available at no charge on the GAO website at http:www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-7141 or groverj@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 who made key contributions to this report are listed in appendix III.

Sincerely yours,

Jennifer A. Grover
Director, Homeland Security and Justice Issues

Appendix I: Coast Guard Assets as of the End of Fiscal Year 2015

Table 4: Listing of Coast Guard Assets as of the End of Fiscal Year 2015

Asset type	Common name	Asset	Number
Fixed wing aircraft	Hercules Aircraft	HC-130H	22
	Super Hercules Aircraft	HC-130J	6
	Ocean Sentry Maritime Patrol Aircraft	HC-144	18
	Medium Range Surveillance Aircraft[a]	C-27J	13
	Gulfstream Aircraft[b]	C-37A	2
	Total	**(empty cell)**	**61**
Rotary wing aircraft	Jayhawk Helicopter	MH-60T	43
	Dolphin Helicopter	MH-65D	99
	Total	**(empty cell)**	**142**
Major cutters	National Security Cutter	WMSL-418	5
	High Endurance Cutter	WHEC-378	6
	Medium Endurance Cutter	WMEC-282	1
	Medium Endurance Cutter	WMEC-270	13
	Medium Endurance Cutter	WMEC-210	14
	Training Barque	WIX-295	1
	Total	**(empty cell)**	**40**
Cutters	Icebreaker	WAGB-420	1
	Icebreaker[c]	WAGB-399	2
	Domestic Icebreaker	WLBB-240	1
	Seagoing Buoy Tender	WLB-225	16
	Coastal Buoy Tender	WLM-175	14
	Inland Construction Tender	WLIC-160	4
	Icebreaking Tug	WTGB-140	9
	Fast Response Cutter	WPC-154	14
	Patrol Boat	WPB-110	29
	Inland Buoy Tender	WLI-100	2
	Inland Construction Tender	WLIC-100	1
	Patrol Boat	WPB-87	73
	Inland Construction Tender	WLIC-75	8
	River Buoy Tender	WLR-75	12
	River Buoy Tender	WLR-65	6
	Inland Buoy Tender	WLI-65	2
	Small Harbor Tug	WYTL-65	11
	Total	**(empty cell)**	**205**

Asset type	Common name	Asset	Number
Boats	ATON Boat - Small	AB-S	36
	ATON Boat - Skiff	AB-SKF	28
	ATON Boat 55’	ANB 55’	5
	ATON Boat 64’	ANB 64’	3
	Arctic Survey Boat	ASB	1
	Buoy Boat, Stern Loading	BUSL	26
	Cutterboat - ATON - Large (WLBB, WLB, WLM)	CB-ATON-L	18
	Cutterboat - ATON - Medium (WLM)	CB-ATON-M	1
	Cutterboat - Large (POLAR STAR & MACKINAW)	CB-L	2
	Cutterboat - Large (WMEC)	CB-L 19’	7
	Cutterboat - Large (HEALLY)	CB-L 22’	0
	Cutterboat - Large (WMEC, WMSL, WLB)	CB-L 24’	34
	Cutterboat - Large (SRP)	CB-L 25’	3
	Cutterboat - Large (WMEC)	CB-L 270’ WMEC (20’)	11
	Cutterboat - Medium (110’ WPB)	CB-M 110’ WPB	50
	Cutterboat - Medium (87’ WPB)	CB-M 87’ CPB	78
	Cutterboat - Medium (17’ Willard on WLMs)	CB-M WLM	12
	Cutterboat - Over The Horizon (WHEC, WMEC, WMSL)	CB-OTH	69
	Cutterboat - Over The Horizon - Polar (SAFE MK-IV)	CB-OTH-P	3
	Cutterboat - Over The Horizon (SAFE MK-V)	CB-OTH IV	27
	Cutterboat - Over The Horizon (NAIAD on FRCs)	CB-OTH 26’	1
	Cutterboat - Small (WYTL)	CB-S	11
	Cutterboat - Small (WYTL)	CB-S 21’	36
	Cadet Training Boat	CT-64	3
	Landing Craft (POLAR STAR & HEALLY)	LC	4
	Long Range Interceptor	LRI	6
	Motor Lifeboat	MLB	117
	Motor Surf Boat (EAGLE)	MSB	3
	Response Boat - Medium	RB-M	174
	Response Boat - Small	RB-S	241
	Response Boat - Small (AUX-Use)	RB-S (AUX-use)	5
	Response Boat - Small (Gen-II)	RB-S II	158
	Sailboat	SB	114
	Skiff	SKF	95
	Skiff - Ice Rescue (standard boat)	SKF-ICE	48
	Special Purpose Craft - Airboat (standard)	SPC-AIR	4
	Special Purpose Craft – Airboat (non-standard)	SPC-Airboat	4

Asset type	Common name	Asset	Number
	Special Purpose Craft - Board team delivery	SPC-BTD	2
	Special Purpose Craft - Heavy weather	SPC-HWX	4
	Special Purpose Craft- Law Enforcement	SPC-LE	56
	Special Purpose Craft - Law Enforcement Open	SPC-LEO	2
	Special Purpose Craft - Near Shore Lifeboat	SPC-NLB	3
	Special Purpose Craft - Screening Vessel	SPC-SV	12
	Special Purpose Craft - Shallow Water	SPC-SW	45
	Special Purpose Craft - Training Boat	SPC-TB	16
	Special Purpose Craft - Tactical Training Boat	SPC-TTB	3
	Trailereable ATON Boat (standard boat)	TANB 26’	90
	Transportable Port Security Boat 25’	TPSB	6
	Transportable Port Security Boat 32’	TPSB 32’	59
	Utility Boat - Light	UTL	6
	Utility Boat – Light (AUX-use)	UTL-AUX	5
	Utility Boat - Medium	UTM	3
	Total	**(empty cell)**	**1,750**

Source: GAO analysis of U.S. Coast Guard data. | GAO-16-379

Note: The 494 boats indicated in the shaded areas above are not part of Standard Operational Planning Process (SOPP) allocations. The total number of boats that are part of the annual SOPP allocations is 1,256 (i.e., 1,750 total boats minus 494).

[a]These assets have been acquired but were not operational as of the end of fiscal year 2015.

[b]One of the two aircraft is leased.

[c]One of the icebreakers was not operational as of the end of fiscal year 2015.

Appendix II: Comments from the Department of Homeland Security

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

Homeland Security

May 3, 2016

Jennifer A. Grover
Director, Homeland Security and Justice Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Re: Draft Report GAO-16-379, "COAST GUARD: Actions Needed to Improve Strategic Allocation of Assets and Determine Workforce Requirements"

Dear Ms. Grover:

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

The United States Coast Guard (USCG) recognizes that successful operations depend on the efficient management of finite resources, including both personnel and the multi-mission platforms used to execute operations. As the principal federal agency responsible for maritime safety, security and environmental stewardship, the Coast Guard performs a broad range of missions across 95,000 miles of coastline and 25,000 miles of coastal waterways, employing more than 47,000 personnel to operate a fleet comprised of 250 cutters, 1,750 boats, and 200 aircraft.

Central to the USCG's success is the delegation of tactical control of assets to Operational Commanders. This provides them with the capabilities and flexibility to perform day-to-day operations, while also being ready to respond to major national emergencies, such as Hurricane Katrina or Deepwater Horizon. The USCG has established asset allocation processes and metrics to ensure mission accomplishment, while carefully managing mission priorities and developing more innovative methods to generate greater synergy between asset allocation and workforce management.

The draft report contained three recommendations with which the Department concurs. Specifically, GAO recommended that the Commandant of the Coast Guard take the following actions:

Recommendation 1: Incorporate field unit input, such as information on assets' actual performance from *Operational Performance Assessment Reports* and *Planning Assessments*, to inform more realistic asset allocation decisions—in addition to asset performance capacities currently used—in the annual *Strategic Planning Direction* to more effectively communicate strategic intent to field units.

Response: Concur. The Fiscal Year (FY) 2017 Standard Operational Planning Process (SOPP) included all field unit input contained within the *Operational Performance Assessment Reports* and *Planning Assessments.* This input was used to inform asset allocation and mission program direction to field units. As discussed during the audit and reflected in the report, the *Strategic Planning Direction* (SPD) provides an asset class hour ceiling while the *Operational Planning Direction* (OPD) provides targets and tactical direction to assets at the Area and District levels. We request that GAO consider this recommendation as resolved and closed (implemented).

Recommendation 2: Document how the risk assessments conducted were used to inform and support its annual asset allocation decisions

Response: Concur. USCG's Office of Performance Management & Assessment (CG-DCO-81) will begin documenting how the risk assessments conducted were used to inform and support its annual asset allocation decisions in the FY 2017 SPD. Estimated Completion Date (ECD): October 31, 2016.

Recommendation 3: Develop a systematic process that prioritizes manpower requirements analyses for units that are the most critical for achieving mission needs.

Response: Concur. USCG's Shore Forces Command Centers Division (CG-7412) has manning standards for most of its operational units which have been developed and tested over decades of operation. For example, legacy cutters have proven manning standards that have been in place for several years and all new acquisitions will have a manpower analysis completed before the asset is operational.

In addition, USCG's Office of Human Resources Strategy & Capability Development (CG-1B) has developed Sector staffing, small boat, and aviation asset standards. While not formal manpower requirements analysis, all of these models and methodologies provide manpower requirements information to senior leaders that inform resource allocation decisions. As resources permit, this office (CG-1B) will prioritize manpower requirements analysis of unstudied units and incorporate all available manpower data into future personnel decisions. ECD: October 31, 2016.

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Again, thank you for the opportunity to comment on this draft report. Technical comments were previously provided under separate cover. Please feel free to contact me if you have any questions. We look forward to working with you in the future.

Sincerely,

Jim H. Crumpacker, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

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Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Jennifer A. Grover, (202) 512-7141 or groverj@gao.gov

Staff Acknowledgments

In addition to the contact above, Christopher Conrad, Assistant Director; Nancy Kawahara, Analyst in Charge; Dominick Dale; Michele Fejfar; Holly Halifax; Eric Hauswirth; Carol Henn; Bonnie Ho; Tracey King; Ying Long; Alexandra Squitieri; and John Yee all made key contributions to this report.

Appendix IV: Accessible Data

Agency Comment Letter

Text of Appendix II: Comments from the Department of Homeland Security

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U.S. Department of Homeland Security

Washington, DC 20528

Homeland Security

May 3, 2016

Jennifer A. Grover

Director, Homeland Security and Justice Issues

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Washington, DC 20548

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Page 2

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Sincerely,

Jim H. Crumpacker, CIA, CFE

Director

Departmental GAO-OIG Liaison Office

Data Tables

Data Table for Figure 2: Allocation of Asset Resource Hours, by Mission, from Coast Guard Headquarters' Strategic Planning Directions, Fiscal Years (FY) 2010 through 2016

	Asset resource hours (in thousand)						
Mission	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**
Ports, waterways, and coastal security	356000	238360	237650	175590	115206	152025	139689
Aids to navigation	127700	132960	133260	132160	104589	136654	135308
Drug interdiction	86600	94334	92674	90708	69905	100534	108130
Living marine resources	115000	107810	111355	111930	79827	98969	96244
Marine safety	60800	66860	66890	75055	64865	85142	86744
Migrant interdiction	102100	85130	82000	76261	60210	86648	82507
Search and rescue	76500	75976	77301	77415	60975	62801	60340
Defense readiness	17000	41275	40605	37115	31262	30910	22761
Ice operations	17700	13220	11120	10590	10685	11234	12799
Other law enforcement	9700	9810	13250	13365	8693	12263	11288
Marine environmental protection	4900	3680	4210	5165	2796	3406	3444

Data Table for Highlights Figure and Figure 4: Comparison of Total Field Unit Asset Resource Hours Allocated in Strategic Planning Directions to the Actual Field Unit Asset Resource Hours Used, Fiscal Years 2010 through 2015

	Asset resource hours (in thousands)	
Fiscal year	**Allocated in Strategic Planning Directions**	**Actual used**
2010	1293.56	908.762
2011	1116.76	883.598
2012	1120.61	890.184
2013	1085.26	775.055
2014	849.367	772.037
2015	1075.02	804.048
2016	1068.93	No data

Figure 5: Percent Difference between Field Units' Asset Resource Hour Capacities in the Strategic Planning Directions and Actual Asset Resource Hours Used by Asset Type, Fiscal Years (FY) 2011 through 2015

	Percentage difference				
Asset type	**FY 2011**	**FY 2012**	**2 FY 013**	**FY 2014**	**FY 2015**
Fixed wing aircraft	-5.02	-18.26	-27.3	-0.82	-24.43
Rotary wing aircraft	-12.38	-9.34	-12.73	1.32	-7.24

	Percentage difference				
Asset type	**FY 2011**	**FY 2012**	**2 FY 013**	**FY 2014**	**FY 2015**
Major cutters	-22.5	-14.92	-26.53	-1.56	-18.32
Cutters	-15.27	-15.4	-25.94	-3.41	-19.63
Boats	-27.19	-27.86	-33.67	-18.2	-34.65

Related GAO Products

Coast Guard Acquisitions: Enhanced Oversight of Testing Could Benefit National Security Cutter Program and Future DHS Acquisitions, GAO-16-314T. Washington, D.C.: February 3, 2016.

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Coast Guard: Timely Actions Needed to Address Risks in Using Rotational Crews, GAO-15-195. Washington, D.C.: March 6, 2015.

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Homeland Security: Observations on the Coast Guard's and the Department of Homeland Security's Fleet Studies, GAO-12-751R. Washington, D.C.: May 31, 2012.

Coast Guard: Action Needed As Approved Deepwater Program Remains Unachievable, GAO-11-743. Washington, D.C.: July 28, 2011.

Coast Guard: Observations on Acquisition Management and Efforts to Reassess the Deepwater Program, GAO-11-535T. Washington, D.C.: Apr. 13, 2011.

Coast Guard: Deepwater Requirements, Quantities, and Cost Require Revalidation to Reflect Knowledge Gained, GAO-10-790. Washington, D.C.: July 27, 2010.

Coast Guard: Service Has Taken Steps to Address Historic Personnel Problems, but It Is too Soon to Assess the Impact of These Efforts. GAO-10-268R. Washington, D.C.: January 29, 2010.

Coast Guard: Better Logistics Planning Needed to Aid Operational Decisions Related to the Deployment of the National Security Cutter and Its Support Assets, GAO-09-497. Washington, D.C.: July 17, 2009.

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Coast Guard: Observations on Changes to Management and Oversight of the Deepwater Program, GAO-09-462T. Washington, D.C.: Mar. 24, 2009.