



September 2020

DEPARTMENT OF HOMELAND SECURITY

Assessment of Air and Marine Operating Locations Should Include Comparable Costs across All DHS Marine Operations

GAO Highlights

Highlights of [GAO-20-663](#), a report to congressional committees

Why GAO Did This Study

DHS's operational components, primarily AMO and Border Patrol within CBP and Coast Guard, use aircraft and vessels to secure U.S. borders, support criminal investigations, and ensure maritime security and safety. Since DHS began operations in 2003, it has examined opportunities to integrate and coordinate CBP and Coast Guard air and marine operations, including identifying opportunities for potential efficiencies such as consolidation of operating locations.

The FAA Reauthorization Act of 2018 included a provision for GAO to review DHS's air and marine operations. This report examines, among other things, (1) CBP and Coast Guard air and marine mission activities across operating locations and (2) DHS assessments of components' operating locations for air and marine mission activities. GAO analyzed mission data; reviewed agency documentation; and met with DHS, CBP, and Coast Guard officials in headquarters and field locations. GAO conducted visits to air and marine operating locations along the northern, southwest, and southeast border in three states, chosen based upon border region, types of mission activities, and proximity of operating locations.

What GAO Recommends

GAO recommends that DHS develop and implement a mechanism to compare costs across components' marine operating locations. DHS concurred with the recommendation.

View [GAO-20-663](#). For more information, contact Rebecca Gambler at (202) 512-8777 or gamblierr@gao.gov.

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What GAO Found

U.S. Customs and Border Protection (CBP) and the U.S. Coast Guard (Coast Guard) share responsibility for patrolling and enforcing U.S. law along U.S. maritime borders and approaches (within 12 nautical miles seaward of the U.S. coast). The majority of CBP's air and marine mission activities across operating locations were for law enforcement activities from fiscal years 2016 through 2018. More specifically, GAO found that about 80 percent of air and marine mission activities from fiscal years 2016 through 2018 for CBP's Air and Marine Operations (AMO) were for law enforcement missions. These law enforcement missions include providing aerial support for investigations and detecting and interdicting illicit cross-border activity. Further, GAO found that over 90 percent of CBP's U.S. Border Patrol (Border Patrol) riverine mission activities—vessels used to patrol rivers and lakes and interdict illicit cross-border activity—were for law enforcement activities from fiscal years 2016 through 2018.

For Coast Guard, training missions were the largest proportion of its air and marine mission activities across operating locations from fiscal years 2016 through 2018. In particular, GAO found that training missions comprised 52 percent and 43 percent of total mission hours at air stations and boat stations from fiscal years 2016 through 2018, respectively.

Examples of Department of Homeland Security Aircraft and Vessels



Source: GAO. | GAO-20-663

The Department of Homeland Security (DHS) has ongoing initiatives to support integration and consolidation of nearby CBP and Coast Guard operating locations for air and marine mission activities. While DHS has comparable CBP and Coast Guard cost information for air operations, it does not for marine operations. As part of its ongoing initiatives, DHS began an assessment in July 2019 to examine benefits and costs for consolidating air and marine operating locations, among other things, as part of its agency reform plan in response to Executive Order 13781. DHS developed and implemented a standard cost per flight hour methodology to compare costs between AMO and Coast Guard air operations; however, DHS has not developed and implemented a standard cost per float (vessel underway) hour methodology to compare costs between CBP and Coast Guard marine operations. Development and implementation of a standard cost per vessel underway hour methodology would help ensure that DHS has key information to support its ongoing initiatives to support integration and consolidation of nearby air and marine operating locations.

This is a public version of a sensitive report that GAO issued in May 2020. Information that DHS deemed sensitive has been omitted.

Contents

Letter		1
	Background	4
	CBP and Coast Guard Air and Marine Mission Activities Varied across Operating Locations	11
	CBP and Coast Guard Use Various Coordination Mechanisms for Air and Marine Mission Activities and Identified Actions to Address Coordination Challenges	28
	DHS Has Assessed Operating Locations but Does Not Have a Mechanism to Compare Marine Operating Costs	32
	Conclusions	35
	Recommendation for Executive Action	36
	Agency Comments	36
Appendix I	Objectives, Scope, and Methodology	38
Appendix II	U.S. Coast Guard Cutter Mission Activities	43
Appendix III	Perspectives on Consolidation and Colocation of Air and Marine Operating Locations	46
Appendix IV	Comments from the Department of Homeland Security	48
Appendix V	GAO Contact and Staff Acknowledgments	50
Tables		
	Table 1: U.S. Coast Guard Mission Activities	5
	Table 2: Air and Marine Operations Mission Activities	8
	Table 3: U.S. Border Patrol Riverine Mission Activities	10
	Table 4: Air and Marine Operations—Flight Hours by Region, Fiscal Years 2016 through 2018	12
	Table 5: Air and Marine Operations—Flight Hours by Mission Category, Fiscal Years 2016 through 2018	13

Table 6: Air and Marine Operations—Float Hours by Region, Fiscal Years 2016 through 2018	15
Table 7: Air and Marine Operations—Float Hours by Mission Category, Fiscal Years 2016 through 2018	16
Table 8: U.S. Border Patrol—Riverine Float Hours by Border Region, Fiscal Years 2016 through 2018	18
Table 9: U.S. Border Patrol—Riverine Float Hours by Mission Category, Fiscal Years 2016 through 2018	18
Table 10: U.S. Coast Guard—Air Station Flight Hours by District, Fiscal Years 2016 through 2018	21
Table 11: U.S. Coast Guard—Air Station Mission Hours by Mission Type, Fiscal Years 2016 through 2018	22
Table 12: U.S. Coast Guard—Boat Station Float Hours by District, Fiscal Years 2016 through 2018	25
Table 13: U.S. Coast Guard—Boat Station Mission Hours by Mission Type, Fiscal Years 2016 through 2018	26
Table 14: Department of Homeland Security (DHS) Assessments of Air and Marine Operating Locations	32
Table 15: List of U.S. Customs and Border Protection and U.S. Coast Guard Air and Marine Operating Locations Visited	40
Table 16: U.S. Coast Guard—Cutter Types and Numbers, Fiscal Years 2016 through 2018	43
Table 17: U.S. Coast Guard—Cutter Float Hours by Type, Fiscal Years 2016 through 2018	44
Table 18: U.S. Coast Guard—Cutter Mission Hours by Mission Type, Fiscal Years 2016 through 2018	45

Figures

Figure 1: U.S. Coast Guard Air and Marine Operating Locations by District	7
Figure 2: Air and Marine Operations Air and Marine Operating Locations by Region	9
Figure 3: U.S. Border Patrol Riverine Operating Locations by Sector	11
Figure 4: Air and Marine Operations (AMO) Flight Hours by Mission Types and Region, Fiscal Years 2016 through 2018	14
Figure 5: Air and Marine Operations (AMO) Float Hours by Mission Types and Region, Fiscal Years 2016 through 2018	17

Figure 6: U.S. Border Patrol (Border Patrol) Riverine Float Hours by Mission Types and Border Region, Fiscal Years 2016 through 2018	19
Figure 7: U.S. Coast Guard (Coast Guard) Air Station Mission Hours by Mission Types and Districts, Fiscal Years 2016 through 2018	23
Figure 8: U.S. Coast Guard (Coast Guard) Boat Station Mission Hours by Mission Types and Districts, Fiscal Years 2016 through 2018	27

Abbreviations

AMO	Air and Marine Operations
Border Patrol	U.S. Border Patrol
CBP	U.S. Customs and Border Protection
Coast Guard	U.S. Coast Guard
DHS	Department of Homeland Security
OCRSO	Office of the Chief Readiness Support Officer

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September 24, 2020

Congressional Committees

The Department of Homeland Security's (DHS) operational components, primarily the U.S. Coast Guard (Coast Guard) and U.S. Customs and Border Protection (CBP), use aircraft and vessels to secure U.S. borders, support criminal investigations, and ensure maritime security and safety. The Coast Guard is the principal federal agency charged with ensuring the security and safety of vessel on the high seas and waters subject to U.S. jurisdiction by enforcing laws in order to prevent death, injury, property loss, and illicit activity in the maritime environment. CBP is the nation's largest federal law enforcement agency. CBP's Air and Marine Operations (AMO) and U.S. Border Patrol (Border Patrol) are the uniformed law enforcement arms responsible for securing U.S. borders between ports of entry in the air, land, and maritime environments. AMO, Border Patrol, and Coast Guard share responsibility for patrolling, and enforcing U.S. law along the U.S. maritime borders, and territorial sea—maritime approaches 12 nautical miles seaward of the U.S. coast.

Since DHS began operations in 2003, it has examined opportunities to integrate and coordinate CBP and Coast Guard air and marine operations, including identifying opportunities for potential efficiencies such as consolidation of operating locations. We have previously reported on a range of operational and management challenges faced by DHS since it began operations in 2003, including its air and marine mission activities. For example, in 2005 and 2012, we reported on coordination challenges between Coast Guard and CBP and efforts to evaluate potential efficiencies such as consolidation between components.¹

The FAA Reauthorization Act of 2018 included a provision for us to examine and report on DHS's air and marine operations, including CBP and Coast Guard air and marine mission activities and operating locations.² This report examines: (1) CBP and Coast Guard air and marine mission activities across operating locations, (2) coordination

¹GAO, *Border Security: Opportunities Exist to Ensure More Effective Use of DHS's Air and Marine Assets*, [GAO-12-518](#) (Washington, D.C.: Mar. 30, 2012); and *Border Security: Opportunities to Increase Coordination of Air and Marine Assets*, [GAO-05-543](#) (Washington, D.C.: Aug. 12, 2005).

²Pub. L. No. 115-254, div. J, § 1810(a), 132 Stat. 3186, 3538.

mechanisms used by CBP and Coast Guard for air and marine mission activities, and (3) DHS assessments of components' operating locations for air and marine mission activities.

To identify CBP and Coast Guard air and marine mission activities across operating locations, we collected and analyzed AMO, Border Patrol, and Coast Guard operating location information and mission activity and results data from fiscal years 2016 through 2018.³ This was the time period starting when comparable data were available across each agency and through the most recent fiscal year available at the time of our review. Mission activity data included hours of operating by aircraft and marine vessels (referred to as flight and float hours, respectively) by operating location, type of aircraft or vessel, and mission activity type. Mission results data included events attributed to air and marine operating locations, including drug seizures, apprehensions of individuals and number of lives saved, among other events. We assessed the reliability of mission activity and results data by checking for missing data and obvious errors; reviewing guidance, documents, and summary data; and interviewing AMO, Border Patrol, and Coast Guard officials about how the data were compiled. We found AMO and Border Patrol mission activity and results data were sufficiently reliable for our reporting purposes of providing summary mission activity and results across operating locations. We found Coast Guard's mission activity data were sufficiently reliable for our reporting purposes of providing summary mission activity data across operating locations. We found Coast Guard's mission results data for the total of number of lives saved and assisted across air and marine operating locations were sufficiently reliable for our reporting purposes.

To determine how CBP and Coast Guard coordinate air and marine mission activities, we reviewed CBP and Coast Guard policies and

³Coast Guard operating locations for the purposes of our review included air stations, air facilities, boat stations, and small boat stations and excluded training, maintenance, and logistics centers and deployable specialized forces. At the time of our review, Coast Guard had 31 small boat stations, 160 boat stations, seven air facilities, and 25 air stations. AMO operating locations for the purposes of our review included air branches, air and marine branches, National Air Security Operations Centers, air units, and marine units and excluded training centers. At the time of our review, AMO had eight air and marine branches, six air branches, 18 air units, six National Air Security Operations Centers, and 31 marine units. Border Patrol operating locations for the purposes of our review included Border Patrol stations that conduct riverine operations and excluded use of vessels by Special Operations Groups. At the time of our review, there were a total of 40 Border Patrol stations that conducted riverine operations.

procedures and interviewed officials from AMO, Border Patrol, Coast Guard and DHS headquarters. We also reviewed DHS Office of Inspector General reports and our past work on DHS collaborative efforts involving air and marine mission activities.⁴ In addition, we interviewed officials from all nine Coast Guard Districts, all 20 AMO branches and centers, and the 12 Border Patrol sectors that conduct riverine operations. We also conducted site visits to northern, southeast, and southwest border DHS air and marine operating locations. Specifically, we met with officials and toured 28 air and marine operating locations in Florida, Texas, and Michigan. We selected these locations based on a variety of factors, to include a range of geographic locations; a mix of Coast Guard, AMO, and Border Patrol mission activities; and proximity to other agency locations. The information gathered from our observations and interviews during our site visits cannot be generalized to all DHS air and marine operating locations along the northern, southeast and southwest borders, but provide valuable insights into how Coast Guard, AMO, and Border Patrol conduct air and marine operations.

To examine DHS's efforts to assess its components' air and marine operating locations, we reviewed past and current assessments of CBP and Coast Guard air and marine operating locations. We also interviewed officials from DHS, CBP, AMO, Coast Guard, and Border Patrol headquarters and field locations. We compared DHS's efforts to assess air and marine operating locations against guidance in Office of Management and Budget Circular A-94.⁵ Additional details on our scope and methodology are contained in appendix I.

This report is a public version of the prior sensitive report that we provided to you in May 2020.⁶ DHS deemed some of the information in the prior report as Law Enforcement Sensitive or For Official Use Only, which must be protected from public disclosure. Therefore, this report

⁴[GAO-12-518](#), [GAO-05-543](#). Department of Homeland Security, Office of Inspector General, *CBP Should Improve Its Air Coordination in the Rio Grande Valley Sector*, OIG-19-02 (Washington, D.C.: Oct. 18, 2018); and *AMO and Coast Guard Maritime Missions Are Not Duplicative, But Could Improve with Better Coordination*, OIG-17-03 (Washington, D.C.: Oct. 14, 2016).

⁵Office of Management and Budget, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, OMB Circular No. A-94 (trans. 64) (October 1992; discount rates revised December 2019).

⁶GAO, *Department of Homeland Security: Assessment of Air and Marine Operating Locations Should Include Comparable Costs across All DHS Marine Operations*, GAO-20-420SU (Washington, D.C.: May 27, 2020).

omits sensitive information about specific CBP and Coast Guard operations, including precise facility locations and detailed information on some law enforcement activities. Although the information provided in this report is more limited, the report addresses the same objectives as the sensitive report and uses the same methodology.

The performance audit upon which this report is based was conducted from November 2018 to May 2020 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. We subsequently worked with DHS from June 2020 to September 2020 to prepare this nonsensitive version of the original sensitive report for public release. This public version was also prepared in accordance with these standards.

Background

DHS Organization

DHS was created pursuant to the Homeland Security Act of 2002 (effective March 1, 2003) by combining 22 separate federal agencies with law enforcement, immigration, border security, emergency management, and other homeland security missions.⁷ After the creation of DHS, air and marine duties of the legacy U.S. Customs Service and Border Patrol were consolidated into CBP's AMO. In addition, the Coast Guard was transferred from the Department of Transportation to DHS.

DHS's Management Directorate, led by the Under Secretary for Management, is responsible for department-wide mission support services and oversight functions. The Management Directorate fulfills its responsibilities by providing policy, guidance, operational oversight and support, and innovative solutions for the management needs of the entire department. The Office of the Chief Readiness Support Officer (OCRSO), within DHS's Management Directorate, has broad responsibility for oversight and management of DHS-wide assets, including aircraft, vessels, and facilities.

⁷Pub. L. No. 107-296, 116 Stat. 2135 (classified, as amended, at Title 6, U.S. Code).

Coast Guard Missions

As a component within DHS, and one of the five members of the Armed Services of the United States, the Coast Guard operates a fleet of about 200 fixed- and rotary-wing aircraft and over 1,600 boats.⁸ The Coast Guard uses aircraft and boats to execute its 11 statutory missions and other support mission activities, such as training missions and maintenance of aircraft and boats.⁹

The Coast Guard collects data and reports on its air and marine mission activities by tracking:

- flight hours: the number of hours an aircraft is in operation from point of an aircraft takeoff to touchdown;
- float hours: the number of hours a vessel is in operation from point of departure to arrival; and
- mission hours: the number of hours an aircraft or vessel spends conducting missions associated with each type of mission activity.

For an overview of Coast Guard's mission activities, see table 1 below.

Table 1: U.S. Coast Guard Mission Activities

	Mission	Description
Statutory missions	Marine safety	Missions to prevent death, injury, and property loss in the marine environment, such as recreational boat safety missions to prevent accidents through the enforcement of boating safety laws and regulations, such as boardings and terminations for unsafe use.
	Marine environmental protection	Missions to stop unauthorized ocean dumping and prevent and respond to oil and chemical spills.
	Search and rescue	Missions to search for, and provide aid to, people who are in distress or imminent danger.
	Aids to navigation	Missions to maintain buoys, beacons, lights, and other aids to mark channels and denote hazards.
	Ice operations	Missions to maintain icebreaking resources, including establishing and maintaining tracks for critical waterways and removing navigational hazards created by ice in navigable waterways.

⁸Coast Guard vessels under 65 feet in length are classified as boats and usually operate near shore, on inland waterways, or attached to cutters. Coast Guard also operates cutters, defined as a vessel 65 feet in length or greater with accommodations for a crew to live aboard. For more information about Coast Guard's cutters, see app. II.

⁹See 6 U.S.C. § 468(a). Coast Guard's statutory missions include: (1) marine safety; (2) search and rescue; (3) aids to navigation; (4) living marine resources (fisheries law enforcement); (5) marine environmental protection; (6) ice operations; (7) ports, waterways, and coastal security; (8) drug interdiction; (9) migrant interdiction; (10) defense readiness; and (11) other law enforcement.

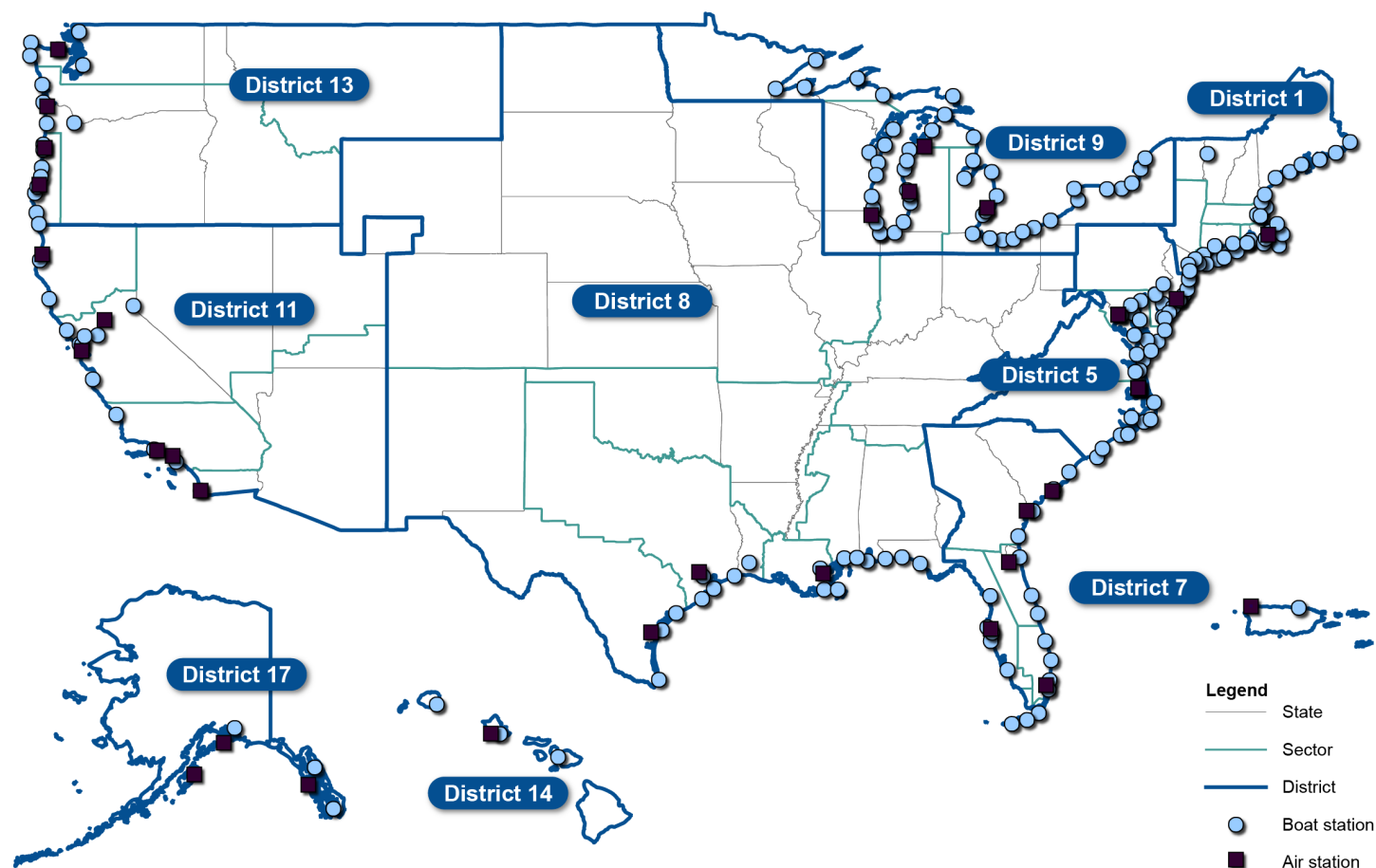
	Mission	Description
	Ports, waterways, and coastal security	Mission to secure to U.S. waters, waterways, ports, and intermodal landside connections that comprise the marine transportation system.
	Law enforcement ^a	Missions to prevent, detect, and suppress violations of all applicable U.S. laws and treaties, including for illicit drug trafficking (drug interdiction), unlawful migration (migrant interdiction), and violations of laws and regulations relating to domestic fisheries and commercial fishing vessel safety.
	Defense readiness	Missions to maintain readiness to integrate with Department of Defense forces in both peacetime operations and during times of war.
Support missions	Training	Missions for boat crew qualifications and proficiencies and pilot and air crew proficiency training and recurring standardization checks.
	Maintenance	Missions for activities associated with the testing or examining of aircraft or vessels and associated components following instances of modification, maintenance or overhaul.
	Other	Missions such as public and international affairs, support provided to other government agencies for activities unrelated to one of the U.S. Coast Guard's responsibilities, transfer of aircraft between units, investigations of bridge operation violations, and miscellaneous purposes.

Source: U.S. Coast Guard. | GAO-20-663

^aWithin this law enforcement category, we have included drug interdiction, migrant interdiction, living marine resources, and other law enforcement activities. See 6 U.S.C. § 468(a).

The Coast Guard's field structure is divided into two Area Commands, Atlantic and Pacific, within which are nine districts consisting of 37 Sectors, and the stations within the sectors (see fig. 1). Coast Guard air stations and air facilities—detachments of air stations in separate locations that may or may not operate year-round—conduct missions using fixed- and rotary-wing aircraft. Coast Guard boat stations and small boat stations—detachments of boat stations in separate locations that generally operate during the summer boating season that are designated as "station small"—conduct marine missions using various types of boats.

Figure 1: U.S. Coast Guard Air and Marine Operating Locations by District



Source: GAO analysis of Department of Homeland Security information; U.S. Census Bureau (state boundaries). | GAO-20-663

Notes: Boat stations shown above also include small boat stations. Air stations shown above also include air facilities.

The district numbers are not consecutive because some districts were consolidated to reflect the U.S. Coast Guard's operational reorganizations since its creation in 1915.

AMO Missions

CBP's AMO operates a fleet of over 200 fixed- and rotary-wing aircraft and over 100 vessels to secure U.S. borders in the air, maritime, and land

domains.¹⁰ AMO’s missions include direct support to Border Patrol and collaborative efforts with other federal, state, and local partner agencies. This includes, but is not limited to, law enforcement missions for investigative operations, surveillance, warrant service, and criminal apprehensions. AMO collects data on its air and marine mission activities by tracking the number of hours from point of an aircraft takeoff to touchdown, referred to as flight hours, and the number of hours from point of vessel departure to arrival, referred to as float hours. For each aircraft flight hour or vessel float hour, AMO also records each type of mission activity. For an overview of AMO’s mission activities, see table 2 below.

Table 2: Air and Marine Operations Mission Activities

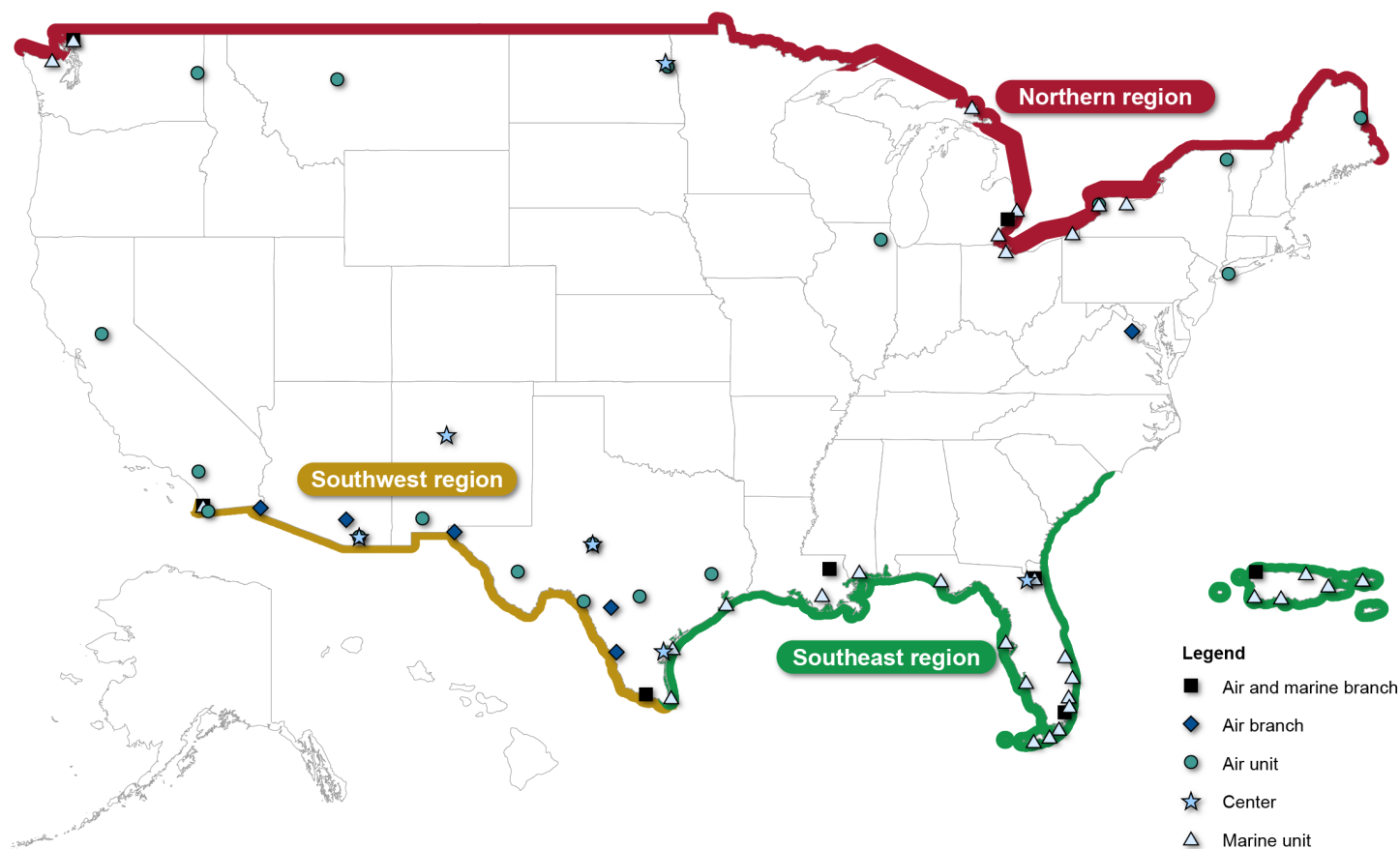
Mission	Description
Law enforcement	Missions to provide surveillance capabilities to detect and support the interdiction of illicit cross-border activity and for investigations, including undercover operations.
Nonenforcement	Missions to support search and rescue activities and other agencies relating to natural, humanitarian, environmental or other disasters.
Training	Missions for pilots to meet and maintain Federal Aviation Administration certification and vessel commanders and crew to meet currency hour requirements, a specified amount of time an agent must have onboard a vessel while underway over a 90- or 180-day period and maintain certifications.
Maintenance	Missions to facilitate inspection, repair, and servicing of aircraft and vessels.

Source: U.S. Customs and Border Protection information. | GAO-20-663

AMO’s field structure is divided into three regions—northern, southeast, and southwest—and National Air Security Operations throughout the continental United States, Puerto Rico, and the U.S. Virgin Islands. Each region is further divided into branches, which include units that conduct air and marine missions. National Air Security Operations is further divided into National Air Security Operations Centers that conduct missions using fixed-wing aircraft and unmanned aircraft systems. See figure 2 below for a map of AMO operating locations.

¹⁰AMO operates vessels less than 41 feet in length in coastal waters near shore. See 19 U.S.C. § 1581(a) (Delineating CBP officers’ authority to board any vessel or vehicle and examine, inspect and search such vessel or vehicle and any items or persons aboard, in the United States or within U.S. customs waters or a customs-enforcement area, or any other authorized place); see also the implementing regulation, 19 C.F.R. § 162.3(a) (CBP officers may board any vessel in the United States or within U.S. customs waters; any American vessel on the high seas; and any vessel within a customs-enforcement area, but a foreign vessel is not to be boarded in violation of any treaty with the foreign government, or in the absence of a special arrangement)..

Figure 2: Air and Marine Operations Air and Marine Operating Locations by Region



Source: GAO analysis of Department of Homeland Security information; U.S. Census Bureau (state boundaries). | GAO-20-663

Note: Centers shown above are National Air Security Operations Centers.

Border Patrol Riverine Missions

CBP's Border Patrol operates a fleet of over 200 riverine vessels to secure U.S. land borders between ports of entry. Border Patrol's riverine operations are conducted by agents that operate vessels to patrol rivers and lakes along the U.S.-Canada and U.S.-Mexico borders to detect and interdict illicit cross-border activity.¹¹ Border Patrol collects data on its riverine mission activities by tracking the number of hours from point of vessel departure to arrival, referred to as float hours. For each vessel

¹¹Border Patrol operates riverine vessels 28 feet or less in length that are excluded from operating in coastal areas by CBP policy for safety reasons.

float hour, Border Patrol also records each type of mission activity. For an overview of Border Patrol’s riverine mission activities, see table 3 below.

Table 3: U.S. Border Patrol Riverine Mission Activities

Mission	Description
Law enforcement	Missions to patrol waterways and lakes along U.S. borders to detect and interdict illicit cross-border activity.
Nonenforcement	Missions to support search and rescue activities, and other agencies relating to natural, humanitarian, environmental or other disasters.
Training	Missions for agent vessel commanders and crew to meet currency hour requirements, a specified amount of time an agent must have onboard a vessel while underway over a 90- or 180-day period, and maintain certifications.
Maintenance	Missions to facilitate inspection, repair, and servicing of vessels.

Source: U.S. Customs and Border Protection information. | GAO-20-663

Border Patrol’s field structure is divided into 20 sectors, of which 12 sectors conduct riverine operations. Border Patrol further divides up its operations geographically among sectors into a varying number of stations. For a map of Border Patrol riverine operating locations along the U.S.-Canada and U.S.-Mexico borders, see figure 3 below.

Figure 3: U.S. Border Patrol Riverine Operating Locations by Sector



Source: GAO analysis of Department of Homeland Security information; U.S. Census Bureau (state boundaries). | GAO-20-663

CBP and Coast Guard Air and Marine Mission Activities Varied across Operating Locations

Majority of CBP Air and Marine Mission Activities Were for Law Enforcement Purposes across All Operating Locations

AMO and Border Patrol track air and marine mission activities by collecting data on the number of hours aircraft and vessels (flight or float

hours) were used to conduct each type of mission activity.¹² We found law enforcement missions accounted for the greatest proportion, over 80 percent, of total flight and float hours across air and marine operating locations from fiscal years 2016 through 2018.

AMO Air Mission Activities

According to our analysis of AMO air mission activity data, we found that branches and centers reported a total of 283,039 flight hours from fiscal years 2016 through 2018.¹³ Further, among regional branches and centers, AMO’s southwest region reported the greatest proportion, or 52 percent (147,136 of 283,039 flight hours), of total flight hours from fiscal years 2016 through 2018. Table 4 shows the total flight hours across AMO regions and National Air Security Operations Centers by fiscal year.

Table 4: Air and Marine Operations—Flight Hours by Region, Fiscal Years 2016 through 2018

Flight hours

Region	Fiscal year			Total	Percent of total
	2016	2017	2018		
National Air Security Operations	16,146	18,856	18,195	53,197	19
Northern Region	15,204	14,086	14,082	43,372	15
Southeast Region	12,995	13,387	12,952	39,334	14
Southwest Region	50,612	48,375	48,149	147,136	52
Total	94,957	94,704	93,378	283,039	100

Source: GAO analysis of U.S. Customs and Border Protection data. | GAO-20-663.

We found that 82 percent (232,739 of 283,039 flight hours) of AMO’s air missions from fiscal years 2016 through 2018 were for law enforcement mission activities, such as providing surveillance capabilities to detect illicit cross-border activity and support investigations (see table 5). Further, we found training missions accounted for 10 percent (28,654 of 283,039 flight hours), nonenforcement missions accounted for 5 percent

¹²AMO and Border Patrol air and marine mission activities are recorded in CBP’s Tasking, Operations, and Management Information System, and the data provided were current as of February 26, 2019.

¹³Branch flight hours include hours from subunit air units.

(14,970 of 283,039 flight hours), and maintenance missions accounted for 2 percent (6,676 of 283,039 flight hours) (see table 5).¹⁴

Table 5: Air and Marine Operations—Flight Hours by Mission Category, Fiscal Years 2016 through 2018

Flight hours

Fiscal year	Mission category				Total
	Law enforcement	Maintenance	Nonenforcement	Training	
2016	79,317	2,156	3,629	9,855	94,957
2017	77,207	2,346	5,899	9,252	94,704
2018	76,215	2,174	5,442	9,547	93,378
Total	232,739	6,676	14,970	28,654	283,039
Percent of total	82	2	5	10	100

Source: GAO analysis of U.S. Customs and Border Protection data. | GAO-20-663

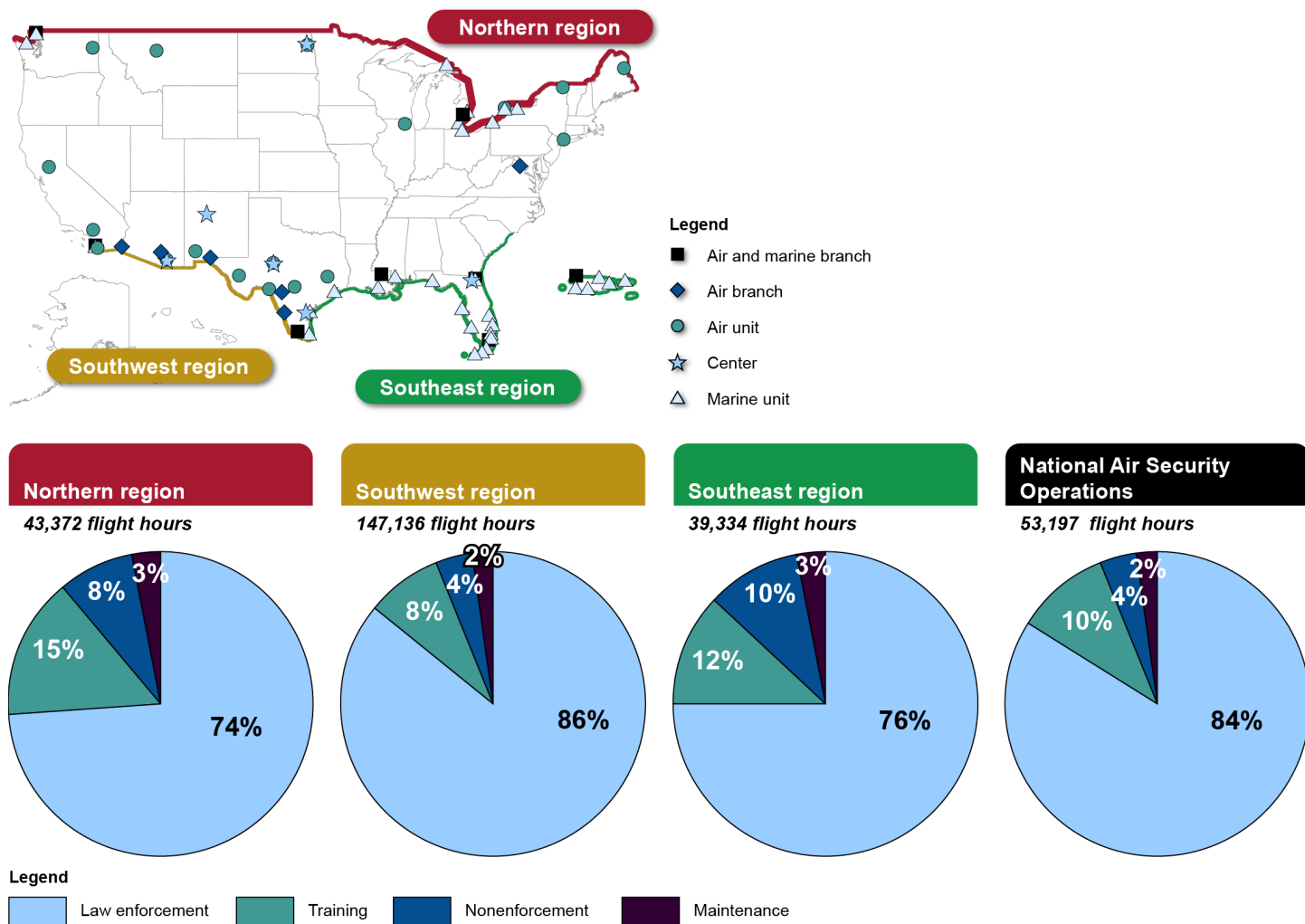
Notes: The sum of the percentages in the table does not equal 100 percent due to rounding.

Air and Marine Operations (AMO) law enforcement missions include use of aircraft for surveillance and reconnaissance activities to detect and support the interdiction of illicit cross-border activity. AMO training missions include use of aircraft for pilots to meet and maintain Federal Aviation Administration certification. AMO nonenforcement missions include use of aircraft to support search and rescue activities and other agencies relating to natural, humanitarian, environmental or other disasters. AMO maintenance missions include use for aircraft to facilitate inspection, repair, and servicing of such aircraft.

In addition, we found AMO flight hours across National Air Security Operations and three regions varied slightly across mission types from fiscal years 2016 through 2018; for example, training mission hours ranged from 8 percent to 15 percent of total flight hours, as shown in figure 4 below.

¹⁴We found less than 1 percent (1,482 of 283,039 flight hours) of AMO's total air missions were for search and rescue missions, a subset of the nonenforcement mission category; for example, aerial support to locate and transport injured individuals requiring medical assistance in remote border areas.

Figure 4: Air and Marine Operations (AMO) Flight Hours by Mission Types and Region, Fiscal Years 2016 through 2018



Source: GAO analysis of U.S. Customs and Border Protection data; U.S. Census Bureau (state boundaries). | GAO-20-663

Notes: The sum of the percentages in the figure do not equal 100 percent due to rounding.

AMO law enforcement missions include use of aircraft for surveillance and reconnaissance activities to detect and support the interdiction of illicit cross-border activity. AMO training missions include use of aircraft for pilots to meet and maintain Federal Aviation Administration certification. AMO nonenforcement missions include use of aircraft to support search and rescue activities and other agencies relating to natural, humanitarian, environmental or other disasters. AMO maintenance missions include use for aircraft to facilitate inspection, repair, and servicing of such aircraft.

AMO air operating location mission results include a variety of law enforcement events, such as support for the apprehension of individuals,

seizure of drugs and contraband, and other events.¹⁵ For example, AMO provides surveillance capabilities to Border Patrol agents to locate individuals illegally crossing U.S. borders between ports of entry. In addition, AMO provides aerial support to law enforcement agencies during investigations, including U.S. Immigration and Customs Enforcement's Homeland Security Investigations and the Drug Enforcement Administration.

AMO Marine Mission Activities

According to our analysis of AMO marine mission activity data, AMO branches reported a total of 99,728 float hours from fiscal years 2016 through 2018.¹⁶ Further, among regional branches, AMO's southeast region reported the greatest proportion, or 60 percent (59,292 of 99,728 float hours), of total float hours from fiscal years 2016 through 2018. Table 6 shows the total float hours across AMO regions by fiscal year.

Table 6: Air and Marine Operations—Float Hours by Region, Fiscal Years 2016 through 2018

Float hours

Region	Fiscal year			Total	Percent of total
	2016	2017	2018		
Northern Region	8,695	7,197	6,538	22,430	23
Southeast Region	18,439	19,417	21,436	59,292	60
Southwest Region	6,253	5,873	5,880	18,006	18
Total	33,387	32,487	33,854	99,728	100

Source: GAO analysis of U.S. Customs and Border Protection data. | GAO-20-663

Note: The sum of the percentages in the table does not equal 100 percent due to rounding.

We found that 81 percent (81,099 of 99,728 float hours) of AMO's marine missions from fiscal years 2016 through 2018 were for law enforcement mission activities, such as detecting and interdicting illicit cross-border activity and supporting investigations (see table 7). Training missions accounted for 15 percent (14,925 of 99,728 float hours), maintenance missions accounted for 2 percent (2,088 of 99,728 float hours), and nonenforcement missions accounted for 2 percent (1,616 of 99,728 float

¹⁵According to AMO data, known mission results attributed to air operating locations included support for 137,952 apprehensions of individuals and 8,774 seizures (2,849,199 pounds of drugs; \$102,485,716 of currency; 3,212 weapons; 43 aircraft; and 306 vessels) from fiscal years 2016 through 2018.

¹⁶Branch float hours include hours from subunit marine units.

hours) of AMO's total marine mission activities from fiscal years 2016 through 2018 (see table 7).¹⁷

Table 7: Air and Marine Operations—Float Hours by Mission Category, Fiscal Years 2016 through 2018

Float hours

Fiscal year	Mission category				Total
	Law enforcement	Maintenance	Nonenforcement	Training	
2016	27,706	790	558	4,333	33,387
2017	26,268	645	576	4,998	32,487
2018	27,125	653	482	5,594	33,854
Total	81,099	2,088	1,616	14,925	99,728
Percent of total	81	2	2	15	100

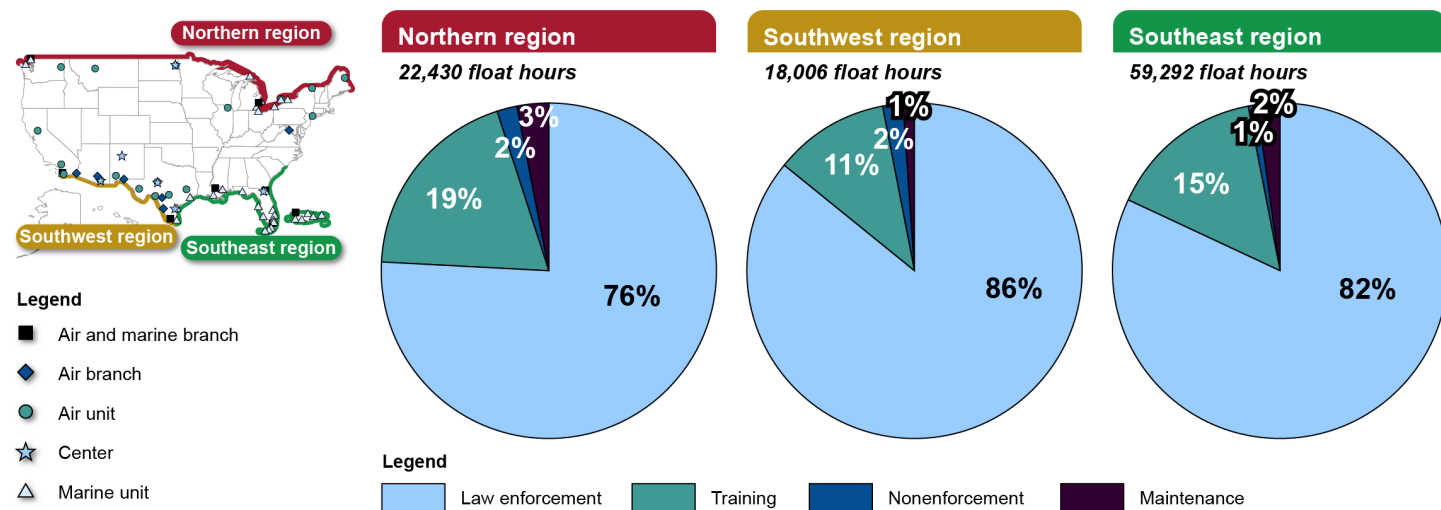
Source: GAO analysis of U.S. Customs and Border Protection data. | GAO-20-663

Note: Air and Marine Operations (AMO) law enforcement missions include use of vessels for surveillance and reconnaissance activities to detect and support the interdiction of illicit cross-border activity. AMO training missions include use of vessels to meet currency hour requirements, a specified amount of time an agent must have onboard a vessel while underway over a 90 or 180 day period. AMO nonenforcement missions include use of vessels to support search and rescue activities. AMO maintenance missions include use for vessels to facilitate inspection, repair, and servicing of such vessels.

In addition, we found AMO float hours across its three regions varied slightly across mission types from fiscal years 2016 through 2018; for example, training mission hours ranged from 11 percent to 19 percent of total flight hours, as shown in figure 5 below.

¹⁷We found 1 percent (1,299 of 99,728 float hours) of AMO's total marine missions were for search and rescue missions, a subset of the nonenforcement mission category; for example, responding to requests for assistance by individuals on stranded vessels.

Figure 5: Air and Marine Operations (AMO) Float Hours by Mission Types and Region, Fiscal Years 2016 through 2018



Source: GAO analysis of U.S. Customs and Border Protection data; U.S. Census Bureau (state boundaries). | GAO-20-663

Note: AMO law enforcement missions include use of vessels for surveillance and reconnaissance activities to detect and support the interdiction of illicit cross-border activity. AMO training missions include use of vessels to meet currency hour requirements, a specified amount of time an agent must have onboard a vessel while underway over a 90- or 180-day period. AMO nonenforcement missions include use of vessels to support search and rescue activities. AMO maintenance missions include use for vessels to facilitate inspection, repair, and servicing of such vessels.

Similar to air operating locations, missions completed by AMO marine operating locations resulted in a variety of law enforcement events, such as the apprehension of individuals, seizure of drugs and contraband, and other events.¹⁸ For example, AMO marine missions include boarding and searching vessels during suspected maritime smuggling events that result in the seizure of narcotics and arrest of associated individuals.

Border Patrol Riverine Mission Activities

According to our analysis of Border Patrol riverine mission activity data, we found that stations reported a total of 230,961 riverine float hours from fiscal years 2016 through 2018. Further, we found Border Patrol stations along the U.S.-Mexico border reported the greatest proportion, or 82 percent (188,577 of 230,961 riverine float hours), of total riverine float hours (see table 8).

¹⁸According to AMO data, known mission results attributed to marine operating locations included support for 2,724 apprehensions of individuals and 2,920 seizures (194,823 pounds of drugs; \$28,943,088 of currency; 785 weapons; and 379 vessels) from fiscal years 2016 through 2018.

Table 8: U.S. Border Patrol—Riverine Float Hours by Border Region, Fiscal Years 2016 through 2018

Riverine float hours

Border region	Fiscal year			Total	Percent of total
	2016	2017	2018		
U.S.-Canada border	14,005	13,981	14,398	42,384	18
U.S.-Mexico border	64,239	59,506	64,832	188,577	82
Total	78,244	73,487	79,230	230,961	100

Source: GAO analysis of U.S. Customs and Border Protection data. | GAO-20-663

We found 95 percent of Border Patrol’s riverine float hours from fiscal years 2016 through 2018 were for law enforcement mission activities, such as detecting and interdicting illicit cross-border activity (see table 9). Training missions accounted for 5 percent (10,380 of 230,961 riverine float hours) and nonenforcement missions accounted for less than 1 percent (756 of 230,961 riverine float hours) of Border Patrol’s total riverine mission activities from fiscal years 2016 through 2018.¹⁹

Table 9: U.S. Border Patrol—Riverine Float Hours by Mission Category, Fiscal Years 2016 through 2018

Riverine Float Hours

Fiscal year	Mission Category				Total
	Law enforcement	Maintenance	Nonenforcement	Training	
2016	73,265	15	257	4,707	78,244
2017	70,992	13	268	2,214	73,487
2018	75,525	15	231	3,459	79,230
Total	219,782	43	756	10,380	230,961
Percent of total	95.2	0.0	0.3	5	100

Source: GAO analysis of U.S. Customs and Border Protection data. | GAO-20-663

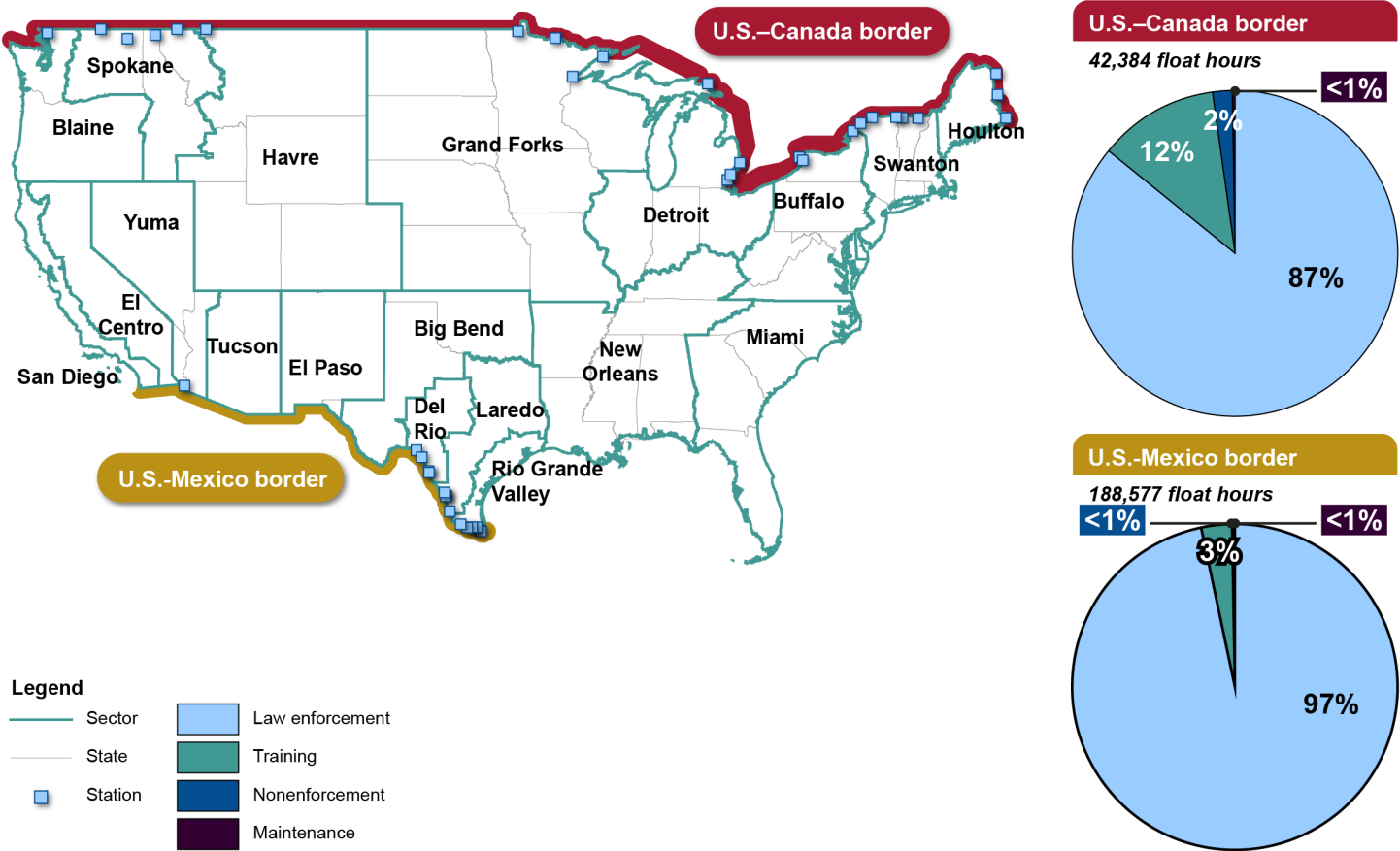
Notes: The sum of the percentages in the table does not equal 100 percent due to rounding.

U.S. Border Patrol (Border Patrol) law enforcement missions include use of vessels for surveillance and reconnaissance activities to detect and support the interdiction of illicit cross-border activity. Border Patrol training missions include use of vessels to meet currency hour requirements—a specified amount of time an agent must have onboard a vessel while underway over a 90- or 180-day period—and prepare for annual training certification courses. Border Patrol nonenforcement missions include use of vessels to support search and rescue activities. Border Patrol maintenance missions include use for vessels to facilitate inspection, repair, and servicing of such vessels.

¹⁹We found less than 1 percent (90 of 230,961 riverine float hours) of Border Patrol’s riverine float hours were for search and rescue mission activities, a subset of the nonenforcement mission category, from fiscal years 2016 through 2018.

In addition, we found Border Patrol riverine float hours across U.S.-Canada and U.S.-Mexico border regions varied slightly across mission types from fiscal years 2016 through 2018, as shown in figure 6 below.

Figure 6: U.S. Border Patrol (Border Patrol) Riverine Float Hours by Mission Types and Border Region, Fiscal Years 2016 through 2018



Source: GAO analysis of U.S. Customs and Border Protection data; U.S. Census Bureau (state boundaries). | GAO-20-663

Note: Border Patrol law enforcement missions include use of vessels for surveillance and reconnaissance activities to detect and support the interdiction of illicit cross-border activity. Border Patrol training missions include use of vessels to meet currency hour requirements—a specified amount of time an agent must have onboard a vessel while underway over a 90 or 180 day period—and prepare for annual training certification courses. Border Patrol nonenforcement missions include use of vessels to support search and rescue activities. Border Patrol maintenance missions include use for vessels to facilitate inspection, repair, and servicing of such vessels.

Border Patrol collects and maintains data on known asset assists for apprehensions of individuals and seizures of drugs attributed to station

riverine missions.²⁰ For example, Border Patrol riverine agents may apprehend individuals attempting to illegally enter the United States from Mexico between ports of entry by crossing the Rio Grande River in Texas.

**Training Missions
Accounted for the Largest
Proportion of Coast Guard
Air and Marine Mission
Activities across Operating
Locations**

Coast Guard tracks its air and marine operations by collecting data on (1) the number of hours its aircraft and boats operate (flight or float hours) and, separately, (2) the number of hours associated with each type of mission activity (mission hours), such as the mission activities associated with its 11 statutory missions and training, among others.²¹ We found training missions accounted for the greatest proportion, about half, of total mission hours across air and marine operating locations from fiscal years 2016 through 2018.

**Coast Guard Air Mission
Activities**

According to our analysis of Coast Guard air mission activity data, Coast Guard air stations reported a total of 284,081 flight hours from fiscal years 2016 through 2018.²² Further, air stations located in District Seven's area of responsibility reported the greatest proportion, or 30 percent (84,827 of the 284,081 flight hours), of total flight hours from fiscal years 2016 through 2018. Air Stations Clearwater and Miami in District Seven each reported 10 percent of total flight hours from fiscal years 2016 through 2018. Table 10 shows the total flight hours for air stations across Coast Guard District by fiscal year.

²⁰Asset assists are instances in which a technological or nontechnological asset assisted in the apprehension of individuals, seizure of drugs or other contraband, or other event. Border Patrol's data on known riverine mission asset assists from DHS's Enforcement Integrated Database were current as of March 6, 2019. According to Border Patrol data from fiscal years 2016 through 2018, known asset assists for riverine missions included 13,051 apprehensions of individuals and 157 drug seizures (38,757 pounds).

²¹Coast Guard's mission activities are recorded in its system of record—Asset Logistics Management Information System—which 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. Asset Logistics Management Information System data provided by Coast Guard were current as of December 3, 2019. According to Coast Guard officials, recorded mission hours may exceed total flight and float hours to account for simultaneous mission activities, such as training missions for both pilots and air crew.

²²Air station flight and mission hours include hours from subunit air facilities.

Table 10: U.S. Coast Guard—Air Station Flight Hours by District, Fiscal Years 2016 through 2018

Flight hours

District	Fiscal year			Total	Percent of total
	2016	2017	2018		
District 1	5,367	4,700	4,459	14,526	5
District 5	13,620	13,333	12,718	39,671	14
District 7	29,158	28,701	26,968	84,827	30
District 8	9,478	10,603	9,872	29,953	11
District 9	5,869	5,223	4,840	15,932	6
District 11	11,082	10,871	11,495	33,448	12
District 13	7,034	6,713	7,205	20,952	7
District 14	5,423	5,256	5,029	15,708	6
District 17	10,430	9,210	9,424	29,064	10
Total	97,461	94,610	92,010	284,081	100

Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663

Notes: The sum of the percentages in the table does not equal 100 percent due to rounding.

Air station flight hours shown above also include flight hours from subunit air facilities.

This table excludes mission activity data for Air Station Washington, located in District Five, as those data were not included in information provided by the U.S. Coast Guard.

Additionally, we found training missions comprised about half (52 percent or 152,739 of 296,220 air mission hours) of total mission hours at air stations from fiscal years 2016 through 2018. As mentioned previously, Coast Guard tracks the number of hours its aircraft spend conducting missions associated with each type of mission (air mission hours) separate from the total number of hours aircraft were operated (flight hours). We also found that law enforcement mission activities—drug and migrant interdiction and domestic fisheries and commercial fishing vessel safety—accounted for 21 percent of total mission hours and search and rescue activities accounted for 16 percent of total mission hours from fiscal years 2016 through 2018.²³ Table 11 below shows total Coast

²³Coast Guard law enforcement missions involve use of aircraft to prevent, detect, and suppress violations of all applicable U.S. laws and treaties, including for illicit drug trafficking, unlawful migration, and violations of laws and regulations relating to domestic fisheries and commercial fishing vessel safety. Drug interdiction missions accounted for 8 percent (24,017 air mission hours), migrant interdiction missions accounted for 7 percent (19,707 air mission hours), and domestic fisheries and commercial fishing vessel safety missions accounted for 6 percent (17,644 air mission hours) of total air mission hours from fiscal years 2016 through 2018.

Guard air station mission hours by mission type from fiscal years 2016 through 2018.

Table 11: U.S. Coast Guard—Air Station Mission Hours by Mission Type, Fiscal Years 2016 through 2018

Air mission hours

Mission type	Fiscal year			Total	Percent of total
	2016	2017	2018		
Training	51,891	49,797	51,051	152,739	52
Law enforcement	22,511	19,852	19,503	61,866	21
Search and rescue	16,024	18,126	14,449	48,599	16
Ports, waterways, and coastal security	4,712	3,794	3,678	12,184	4
Maintenance	1,450	1,401	1,377	4,228	1
Other	5,177	5,629	5,798	16,604	6
Total	101,765	98,599	95,856	296,220	100

Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663

Notes: U.S. Coast Guard (Coast Guard) training missions include use of aircraft for pilot and air crew proficiency training and recurring standardization checks. Coast Guard law enforcement missions involve use of aircraft to prevent, detect, and suppress violations of all applicable U.S. laws and treaties, including for illicit drug trafficking, unlawful migration, and violations of laws and regulations relating to domestic fisheries and commercial fishing vessel safety. Coast Guard search and rescue missions include use of aircraft to assist persons or property in potential or actual distress. Coast Guard ports, waterways, and coastal security missions include use of aircraft to maintain a varied and unpredictable presence to detect, deter, or disrupt the surveillance, planning, or execution of activities by adversaries in the maritime domain. Coast Guard maintenance missions include use of aircraft for flight activities associated with the testing or examining of aircraft or aircraft components following instances of modification, maintenance, or overhaul. Mission activities in the "other" category include use of aircraft to provide support upon request to other government agencies; aerial support to assist in maintaining fixed and floating aids to navigation; aerial surveillance in response to a report of polluting discharges, among others.

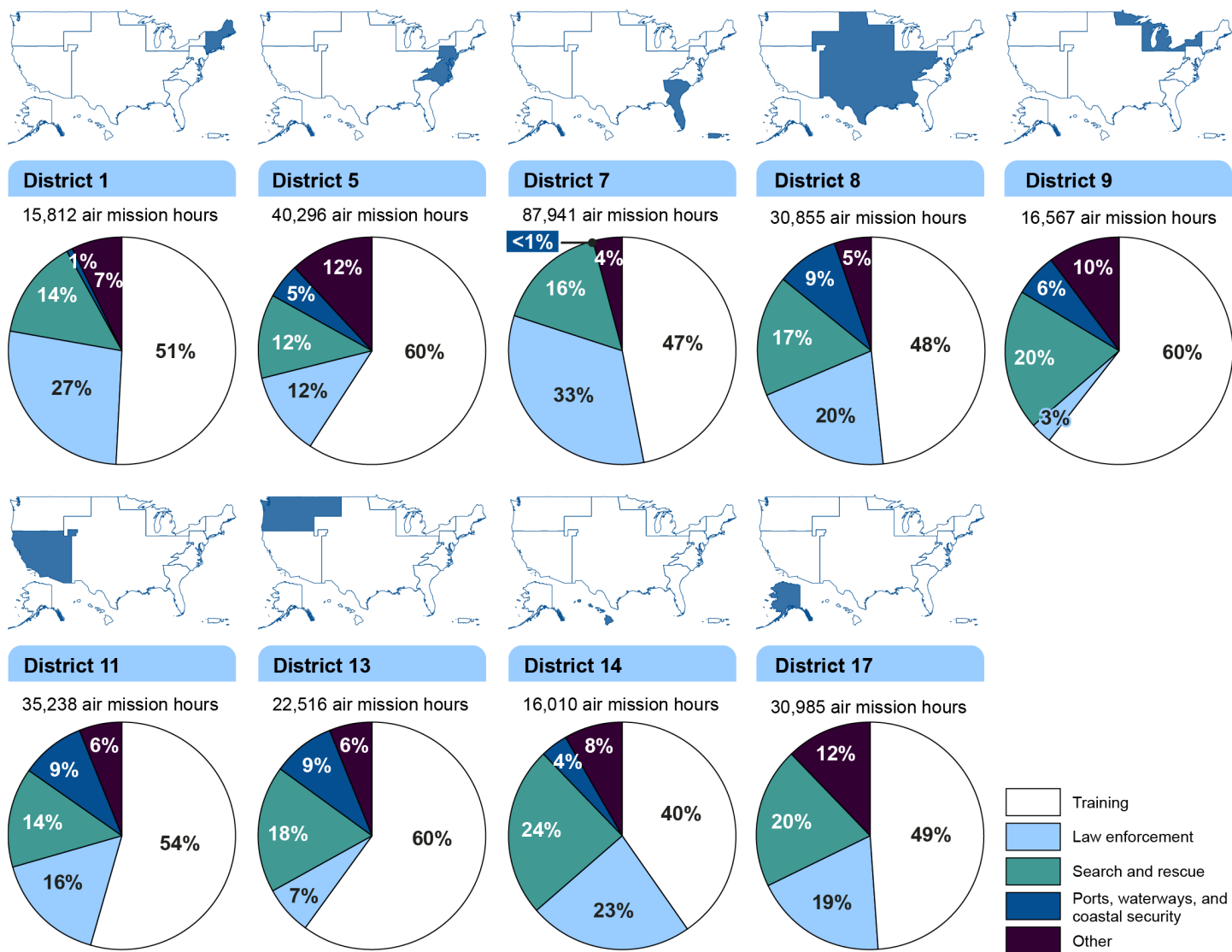
Air station mission hours shown above include mission hours from subunit air facilities.

This table excludes mission activity data for Air Station Washington, located in District Five, as those data were not included in information provided by Coast Guard.

We found air station mission hours varied by mission type across districts from fiscal years 2016 through 2018; for example, training mission hours ranged from 40 percent to 60 percent of each district's total mission hours, as shown in figure 7 below.²⁴

²⁴Coast Guard headquarters officials stated that training mission hours are set by station commanders to reflect the needs of assigned personnel, including an early career workforce that requires extensive training to become proficient in various skillsets and completing missions in severe weather conditions.

Figure 7: U.S. Coast Guard (Coast Guard) Air Station Mission Hours by Mission Types and Districts, Fiscal Years 2016 through 2018



Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663

Notes: The sum of the percentages in the figure do not equal 100 percent due to rounding.

Coast Guard training missions include use of aircraft for pilot and air crew proficiency training and recurring standardization checks. Coast Guard law enforcement missions involve use of aircraft to prevent, detect, and suppress violations of all applicable U.S. laws and treaties, including for illicit drug trafficking, unlawful migration, and violations of laws and regulations relating to domestic fisheries and commercial fishing vessel safety. Coast Guard search and rescue missions include use of aircraft to assist persons or property in potential or actual distress. Coast Guard ports, waterways, and coastal security missions include use of aircraft to maintain a varied and unpredictable presence to detect, deter, or disrupt the surveillance, planning, or execution of activities by adversaries in the maritime domain. Coast Guard maintenance missions include use of aircraft for flight activities

associated with the testing or examining of aircraft or aircraft components following instances of modification, maintenance, or overhaul. Mission activities in the “other” category include use of aircraft to provide support upon request to other government agencies; aerial support to assist in maintaining fixed and floating aids to navigation; and aerial surveillance in response to a report of polluting discharges, among others.

Air station mission hours shown above include mission hours from subunit air facilities.

This figure excludes mission activity data for Air Station Washington, located in District Five, as those data were not included in information provided by Coast Guard.

Coast Guard air station mission results include a variety of events such as lives saved and aerial support for Coast Guard vessel law enforcement activities.²⁵ For example, during search and rescue mission activities, Coast Guard rotary-wing aircraft crew may recover victims of injury or medical emergencies from recreational vessels. Air station missions also include, for example, providing aerial support to Coast Guard vessels to detect and board vessels to enforce domestic fisheries laws, issue violations, and seize illegal catches.

Coast Guard Marine Mission Activities

According to our analysis of Coast Guard boat mission activity data, Coast Guard boat stations reported a total of 724,425 boat float hours from fiscal years 2016 through 2018.²⁶ As shown in table 12 below, boat stations in four districts’ areas of responsibility—One, Five, Seven, and Nine—reported 67 percent of total boat float hours (488,042 of 724,425 float hours) from fiscal years 2016 through 2018. Individually, Districts One, Five, Seven, and Nine accounted for 16 percent to 18 percent of total float hours from fiscal years 2016 through 2018, in part, as those districts had the greatest number of marine operating locations or 71 percent (137 of 191 Coast Guard marine operating locations) of total marine operating locations.²⁷ Table 12 shows the total float hours for boat stations across Coast Guard districts by fiscal year.

²⁵Coast Guard’s mission results data from its Marine Information for Safety and Law Enforcement system were current as of December 17, 2019. According to Coast Guard summary data provided to us for fiscal years 2016 through 2018, air stations and facilities reported a total of 2,617 lives saved and 4,360 lives assisted.

²⁶Boat station float and mission hours include hours from subunit small boat stations.

²⁷District One, District Five, District Seven, and District Nine each had 34, 36, 20, and 47 boat stations, respectively.

Table 12: U.S. Coast Guard—Boat Station Float Hours by District, Fiscal Years 2016 through 2018

Float hours

District	Fiscal year			Total	Percent of total
	2016	2017	2018		
District 1	38,608	40,589	38,385	117,582	16
District 5	45,390	44,039	40,800	130,229	18
District 7	40,530	38,464	39,830	118,824	16
District 8	30,154	32,398	33,818	96,370	13
District 9	44,041	40,803	36,563	121,407	17
District 11	17,893	17,620	17,286	52,799	7
District 13	21,072	20,211	20,463	61,746	9
District 14	4,642	4,708	4,741	14,091	2
District 17	3,875	3,667	3,835	11,377	2
Total	246,205	242,499	235,721	724,425	100

Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663

Note: Boat station float hours shown above include float hours from subunit small boat stations.

Similar to Coast Guard’s air mission activities described above, we found that training missions comprised 43 percent (317,878 of 737,819 boat mission hours) of Coast Guard boat mission activities from fiscal years 2016 through 2018. As mentioned previously, Coast Guard tracks the number of hours its boats spend conducting missions associated with each type of mission (boat mission hours) separate from the total number of hours boats were operated (float hours). We also found recreational boat safety missions (20 percent of total mission hours); ports, waterways, and coastal security missions (15 percent of total mission hours); and search and rescue missions (10 percent of total mission hours) accounted for a total of 45 percent of Coast Guard boat station mission activities from fiscal years 2016 through 2018. Table 13 below shows Coast Guard boat station total mission hours by mission type from fiscal years 2016 through 2018.

Table 13: U.S. Coast Guard—Boat Station Mission Hours by Mission Type, Fiscal Years 2016 through 2018

Boat mission hours

Mission type	Fiscal year			Total	Percent of total
	2016	2017	2018		
Training	106,351	105,542	105,978	317,871	43
Recreational boat safety	48,739	50,307	50,197	149,243	20
Ports, waterways, and coastal security	34,950	36,470	36,189	107,609	15
Search and rescue	26,475	24,760	22,617	73,852	10
Law enforcement	20,006	17,260	15,925	53,191	7
Other	13,486	12,013	10,554	36,053	5
Total	250,007	246,352	241,460	737,819	100

Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663

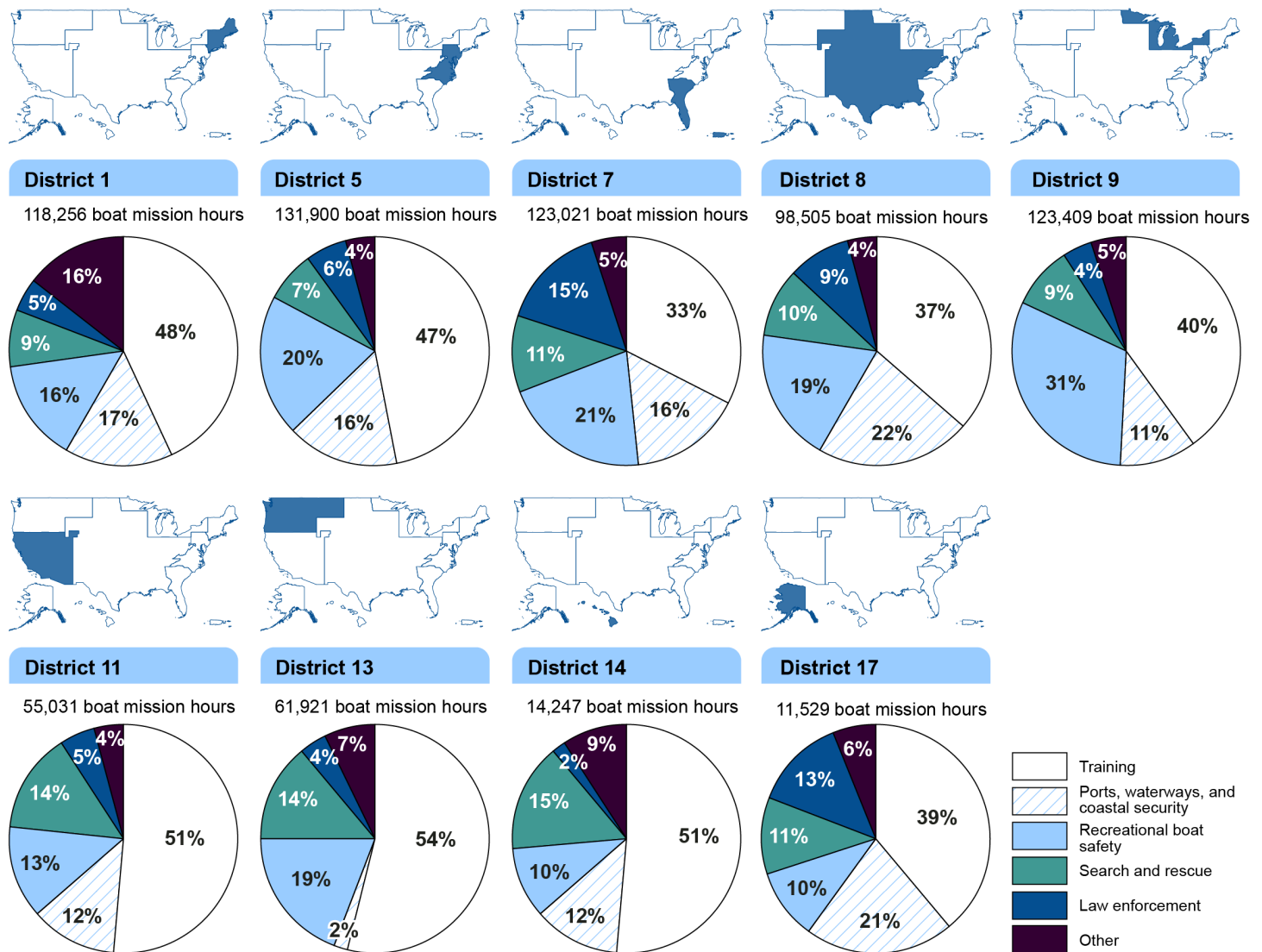
Notes: U.S. Coast Guard (Coast Guard) training missions include use of vessels for boat crew qualifications and proficiencies. Coast Guard recreational boat safety missions include use of vessels to prevent recreational boating accidents through the enforcement of boating safety laws and regulations, such as boardings and terminations for unsafe use and "boating under the influence" cases. Coast Guard ports, waterways, and coastal security missions include use of vessels to maintain a varied and unpredictable presence to detect, deter, or disrupt the surveillance, planning, or execution of activities by adversaries in the maritime domain. Coast Guard search and rescue missions include use of vessels to assist persons or property in potential or actual distress. Coast Guard law enforcement missions involve use of vessels to prevent, detect, and suppress violations of all applicable U.S. laws and treaties, including for illicit drug trafficking, unlawful migration, and violations of laws and regulations relating to domestic fisheries and commercial fishing vessel safety. Mission activities in the "other" category include use of vessels to provide support upon request to other government agencies; maintaining fixed and floating aids to navigation; and periodic test and evaluation of vessel components, among others.

Boat station mission hours include mission hours from subunit small boat stations.

We found boat station mission hours varied across districts from fiscal years 2016 through 2018; for example, training mission hours ranged from 33 percent to 54 percent of each district's total mission hours, as shown in figure 8.²⁸

²⁸Coast Guard headquarters officials stated that training mission hours are set by station commanders to reflect the needs of assigned personnel, including an early career workforce that requires extensive training to become proficient in various skillsets, familiar with waterways and navigable routes, and completing missions in severe weather conditions.

Figure 8: U.S. Coast Guard (Coast Guard) Boat Station Mission Hours by Mission Types and Districts, Fiscal Years 2016 through 2018



Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663

Notes: The sum of the percentages in the figure do not equal 100 percent due to rounding.

Coast Guard training missions include use of vessels for boat crew qualifications and proficiencies. Coast Guard recreational boat safety missions include use of vessels to prevent recreational boating accidents through the enforcement of boating safety laws and regulations, such as boardings and terminations for unsafe use and "boating under the influence" cases. Coast Guard ports, waterways, and coastal security missions include use of vessels to maintain a varied and unpredictable presence to detect, deter, or disrupt the surveillance, planning, or execution of activities by adversaries in the maritime domain. Coast Guard search and rescue missions include use of vessels to assist persons or property in potential or actual distress. Coast Guard law enforcement missions involve use of vessels to prevent, detect, and suppress violations of all applicable U.S. laws and treaties, including

for illicit drug trafficking, unlawful migration, and violations of laws and regulations relating to domestic fisheries and commercial fishing vessel safety. Mission activities in the “other” category include use of vessels to provide support upon request to other government agencies; maintaining fixed and floating aids to navigation; and periodic test and evaluation of vessel components, among others.

Boat station mission hours include mission hours from subunit small boat stations.

Coast Guard boat station mission results include a variety of events such as lives and property saved and boarding of vessels to issue safety violations.²⁹ For example during a search and rescue mission, a Coast Guard boat crew provides direct support to a vessel and persons in distress. An example of a recreational boat safety mission result is the boarding of a vessel by a Coast Guard boat crew and issuing a safety violation for lack of life jackets.³⁰

CBP and Coast Guard Use Various Coordination Mechanisms for Air and Marine Mission Activities and Identified Actions to Address Coordination Challenges

CBP and Coast Guard use various mechanisms to coordinate air and marine mission activities, and DHS officials identified actions to address coordination challenges for air and marine mission activities. These coordination mechanisms include participation in collaborative efforts, technology and communication equipment, and joint operations, among others. DHS headquarters officials identified actions to improve air and marine mission coordination between CBP and Coast Guard. These include ongoing actions to deploy technology to facilitate coordination and information-sharing.

CBP and Coast Guard Use a Variety of Mechanisms to Coordinate Missions Activities

Collaborative Efforts

CBP and Coast Guard participate in collaborative efforts—including task forces and partnerships—to support cross-agency law enforcement activities that also include mechanisms to coordinate and plan air and

²⁹Coast Guard’s mission results data from its Marine Information for Safety and Law Enforcement system were current as of December 17, 2019. According to Coast Guard summary data provided to us for fiscal years 2016 through 2018, boat stations and small boat stations reported a total of 7,628 lives saved and 33,891 lives assisted.

³⁰See 46 C.F.R. § 180.71.

Technology and Communication Equipment

marine mission activities. Examples of collaborative efforts used by CBP and Coast Guard to coordinate air and marine mission activities include:

- **Joint Task Force-East:** Through DHS's Joint Task Force-East, CBP and Coast Guard field units coordinate air and marine mission activities to address threats along the southern maritime border of the United States.³¹ For example, CBP and Coast Guard participated in surge operations to support intelligence collection through vessel boardings and maritime interdiction of narcotics in the Caribbean Sea through coordinated use of air and marine assets.
- **Integrated Border Enforcement Team Program:** Through the Integrated Border Enforcement Team Program, CBP and Coast Guard field units, along with Canadian law enforcement agencies, coordinate air and marine mission activities to address threats along the U.S.-Canada border.³² Integrated Border Enforcement Team Program activities may include real-time tactical intelligence-sharing between Canadian and U.S. law enforcement agencies and periodic meetings to coordinate operations.
- **Regional Coordinating Mechanisms:** Through Coast Guard-led Regional Coordinating Mechanisms, CBP and Coast Guard field units plan and coordinate air and marine mission activities to target the threat of transnational terrorist and criminal acts along the U.S. coastal borders.³³ According to Coast Guard and CBP officials, Regional Coordinating Mechanisms with activities to coordinate asset deployment and schedules to deconflict missions were active in Puerto Rico, Florida, California, Washington, Texas, and Louisiana.

CBP and Coast Guard use technology and communication equipment to coordinate air and marine mission activities, such as the BigPipe System. CBP's BigPipe System distributes real-time and recorded mission information, including information from sensors on AMO aircraft. CBP and

³¹DHS's Joint Task Force-East was established by DHS as part of its Southern Border and Approaches Campaign Plan in 2014. See GAO, *Drug Control: Certain DOD and DHS Joint Task Forces Should Enhance Their Performance Measures to Better Assess Counterdrug Activities*, [GAO-19-441](#) (Washington, D.C.: July 9, 2019).

³²The Integrated Border Enforcement Team Program was established through the Smart Border Declaration and Action Plan signed on December 21, 2001, between the United States and Canada to seek and identify mutual national security threats and combat illicit cross-border activity.

³³Regional Coordinating Mechanisms were established in 2011 through the Maritime Operations Coordination Plan.

Coast Guard also use CBP's Air and Marine Operations Surveillance System to track and locate, in real-time, other agency vessels underway and aircraft flight location information.³⁴ CBP and Coast Guard also use mobile radios deployed on vessels and aircraft to communicate between agencies and Team Awareness Kit applications to allow real-time messaging and information-sharing during mission activities.

Joint Operations

CBP and Coast Guard conduct joint operations that facilitate air and marine mission coordination.³⁵ Joint operations include co-crewed missions with personnel from multiple agencies on a vessel or aircraft. For example, officials from 9 of 12 Border Patrol sectors identified co-crewing riverine missions with Coast Guard, such as Coast Guard boarding officers serving as crew members on Border Patrol riverine vessels to support maritime law enforcement mission activities and interdiction of cross-border illicit activity. Similarly, officials from 6 of 14 AMO branches also identified co-crewing missions with Coast Guard, such as missions with Coast Guard boarding officers to help mitigate staffing shortages and enhance intelligence collection activities. At AMO National Air Security Operations Centers, AMO officials stated that Border Patrol agents served as sensor operators and Coast Guard pilots operated Predator B unmanned aircraft. CBP and Coast Guard officials also conduct joint training missions, which, according to Coast Guard and CBP officials, helps to familiarize personnel with each agency's assets and techniques.

Other Coordination Mechanisms

In addition to collaborative efforts, technology and communication equipment, and joint operations, CBP and Coast Guard use other coordination mechanisms, such as liaison officers, facility and resource sharing, and coordination procedures, as detailed below:

- **Liaison officers:** CBP and Coast Guard use liaison officers—individuals assigned to other agency operating locations—to coordinate mission activities. For example, Border Patrol agents at Sector Corpus Christi and Coast Guard members at Buffalo Border

³⁴CBP's Air and Marine Operating Surveillance System provides a common operating picture from sensors for air and maritime domain awareness, including tracking vessels and aircraft.

³⁵The term "joint operation" refers to law enforcement actions between two or more law enforcement agencies or law enforcement actions involving one or more law enforcement agencies and one or more of the U.S. Armed Services.

Patrol Sector help to coordinate mission activities and information-sharing.

- **Facility and resource-sharing:** According to CBP and Coast Guard officials, facility and resource sharing between both components also facilitates mission coordination. Examples of facility and resource-sharing include use of vessel docking and storage areas between Coast Guard boat stations, Border Patrol riverine units, and AMO marine units.
- **Coordination procedures:** CBP and Coast Guard have developed coordination procedures that outline roles, responsibilities, and procedures for mission coordination. These documented coordination procedures also include coordination for prosecution of maritime-related offenses and standard operating procedures for mission coordination.

CBP and Coast Guard Identified Actions to Address Air and Marine Mission Coordination Challenges

CBP and Coast Guard identified challenges for mission coordination and actions to address them. Officials from several CBP and Coast Guard field units we met with identified challenges with technology and communication equipment used to coordinate air and marine mission activities between agencies.³⁶ Officials also stated that personnel at operating locations lack access to interoperable radios to communicate with partner agencies within their area of operations. In its fiscal year 2020 congressional budget justification, CBP identified actions to improve communication with partner agencies through replacing mobile radios on aircraft and vessels to improve communication during air and marine mission activities. DHS officials also identified actions to address coordination challenges, including deployment of technology on AMO and Coast Guard aircraft to allow integration and sharing of surveillance technology during mission activities.

³⁶Field units included officials from Coast Guard districts, Border Patrol sectors, and AMO branches and centers. Not all CBP and Coast Guard officials we met with identified challenges for air and marine mission coordination or provided a response.

DHS Has Assessed Operating Locations but Does Not Have a Mechanism to Compare Marine Operating Costs

DHS Has Conducted Various Assessments of Component Air and Marine Operating Locations

DHS has completed a variety of studies to assess its air and marine operating locations since it began operations. DHS completed a study in 2004 to assess, among other things, its air operations and identified opportunities for cost savings by colocation of CBP and Coast Guard air operating locations in close proximity across 11 potential sites in Arizona, California, Florida, Louisiana, Michigan, New York, Texas, and Washington.³⁷ In 2010, DHS also completed an assessment of CBP and Coast Guard air operating locations in Puerto Rico for potential colocation and cost savings. Table 14 provides an overview of DHS's past six studies, including assessments of its air and marine operating locations.

Table 14: Department of Homeland Security (DHS) Assessments of Air and Marine Operating Locations

DHS study	Description of study
Booz Allen Hamilton, <i>DHS Assessment of Aviation Operations and Support</i> (2004).	<ul style="list-style-type: none">Assessment was conducted to evaluate DHS aviation capabilities and identify overlaps in aviation capability, assets, training, maintenance/logistics, facilities, and acquisition.Identified 11 air operating locations for further consideration of colocation in Arizona, California, Florida, Louisiana, Michigan, New York, Texas, and Washington.In response to a recommendation in this study, DHS issued an aviation concept of operations plan in April 2005 to establish a framework for collaboration between agency components.

³⁷At the time of our review, DHS had not consolidated and colocated any component air operating locations. However, at the time of our review among marine operating locations, AMO marine units were colocated at three Border Patrol stations and one Coast Guard location. See app. III for potential impacts of consolidation and colocation of air and marine operation locations identified by CBP and Coast Guard officials.

DHS study	Description of study
DHS, Office of Program Analysis and Evaluation, <i>Fiscal Years 11-15 Program Review Board Decision Brief, Air Coordination Issue Team</i> (2009).	<ul style="list-style-type: none"> Identified five factors that limit efficiency, effectiveness, or interoperability of DHS aviation forces, including mission overlap, duplication of ground facilities, fleet structure and acquisition, modular equipment diversity, and duplication of information management systems. Identified air operating locations for potential colocation in California, Florida, and Michigan; however, colocation was considered unfeasible due to upfront investment and renovation costs.
DHS, Office of Program Analysis and Evaluation, <i>Fiscal Years 11-15 Program Review Board Decision Brief, Small Boat Coordination Issue Team</i> (2009).	<ul style="list-style-type: none"> Identified four factors that limit efficiency, effectiveness, or interoperability of DHS small boat forces, related to training, operations, procurement, and maintenance. Indicated potential future DHS examination of small boat forces including assessing mission sets and identifying potential facility colocation and consolidation opportunities.
DHS, <i>Aviation, Marine, Logistics Playbook</i> (2010).	<ul style="list-style-type: none"> Established a guide for DHS aviation and marine programs to promulgate program policy, ensure policy compliance, increase accountability, and provide oversight of aviation and marine programs.
DHS, <i>Cost-Benefit Analysis: U.S. Customs and Border Protection Office of Air and Marine and U.S. Coast Guard Colocation Alternatives Borinquen, Puerto Rico</i> (2010).	<ul style="list-style-type: none"> For DHS air operating locations in Puerto Rico, the study identified colocation alternatives, including use of leased aircraft hangar space versus construction of a new facility.
DHS, <i>Integrated Domain Awareness: Summary of Findings Report</i> (2011).	<ul style="list-style-type: none"> Identified gaps and overlaps in air, land, and maritime domain in response to the 2010 Quadrennial Homeland Security Review and recommended development of common operating models for air, land, and maritime domain awareness and actions to facilitate greater DHS component coordination and unity of effort, among others.

Source: GAO review of Department of Homeland Security documents. | GAO-20-663

DHS Does Not Have a Mechanism to Compare Marine Operating Location Costs across Components and Operating Locations

While DHS is currently examining benefits and costs for consolidating its air and marine operating locations and has implemented a standard cost per flight hour reporting methodology, it does not have comparable marine operating cost information between CBP and Coast Guard. Specifically, in July 2019, DHS began an OCRSO-led study of CBP and Coast Guard air and marine operating locations to support implementation of cross-component integration efforts, including opportunities for colocation and best practices in operational, management and mission support efficiency nationwide. According to OCRSO officials, this study will also support DHS's efforts to implement its air and maritime initiatives in its agency reform plan pursuant to

Executive Order 13781.³⁸ Specifically, one of the air and maritime initiatives in DHS's agency reform plan is to integrate and consolidate nearby operating locations. This contracted study will examine mission activities, estimates for the benefits and costs for consolidating air and marine operating locations, and agency performance under current and consolidated operations, among other things. OCRSO officials stated that the study is expected to be completed by August 2020.

Moreover, in 2015, DHS developed and implemented a standard cost per flight hour reporting methodology in response to the explanatory statement accompanying the DHS Appropriations Act, 2015.³⁹ The explanatory statement directed CBP, in coordination with DHS's Aviation Governance Board, to establish policies and define responsibilities for the development and management of a CBP aircraft flight hour and marine vessel underway hour program. The Office of Management and Budget Circular A-94 identified guidelines for benefit-cost and cost-effective analyses for federal programs, including estimating imputed costs, which may include costs not directly associated with facilities for air and marine mission activities.⁴⁰ For example, DHS's cost per flight hour methodology includes costs elements for facilities as well as training of personnel and maintenance of aircraft, among others.⁴¹

DHS has not, however, developed a standard cost per float (vessel underway) hour methodology or incorporated such a methodology in its study plan for assessing benefits and costs for consolidating air and

³⁸Comprehensive Plan for Reorganizing the Executive Branch, Exec. Order No. 13781, 82 Fed. Reg. 13,959 (Mar. 16, 2017) (issued Mar. 13). Department of Homeland Security, *Memorandum Directing Continued Support of the Agency Reform Plan on Air and Maritime Initiatives* (Dec. 21, 2018). DHS's agency reform plan for air and maritime initiatives includes seven initiatives: (1) align information management systems; (2) establish common standardized metrics; (3) enable informed resource prioritization; (4) improve operations coordination; (5) pursue joint acquisitions and maintenance; (6) integrate and consolidate nearby operating locations; and (7) improve data sharing.

³⁹See 161 Cong. Rec. H275, H279 (daily ed. Jan. 13, 2015), accompanying Pub. L. No. 114-4, 129 Stat. 39.

⁴⁰Office of Management and Budget, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, OMB Circular No. A-94 (trans. 64) (October 1992; discount rates revised December 2019).

⁴¹Department of Homeland Security, *Aviation Governance Board Bulletin 2015-001: DHS Standard Aviation Comparable Cost per Flight Hour Reporting Methodology* (Sept. 28, 2015). DHS's cost per flight hour cost elements include organizational overhead, unit-level operational overhead, personnel, maintenance, commercial aviation services, training, health care, personnel transfer costs, petroleum, oil, lubricants, and consumables.

marine operating locations. OCRSO officials stated that a standard DHS cost per vessel underway hour methodology has not been developed due to differences among components in marine operations for calculating costs. Further, OCRSO officials stated that unlike the standard cost per flight hour methodology that includes fewer asset types, it would be challenging to develop a standard vessel underway hour methodology due to the numerous different types of CBP and Coast Guard vessels which vary in size and capabilities, such as number of engines with differing fuel and maintenance requirements. According to CBP officials, it has not developed a standard cost per vessel underway hour methodology due to lack of DHS-wide guidance which limits the ability to compare costs among DHS's components due to differences in financial data and agency operations. To develop a cost per vessel underway hour methodology, DHS could use Coast Guard's reimbursement rate methodology, which was used to develop its cost per flight hour methodology. For example, Coast Guard developed and implemented a reimbursable rate methodology for its vessel types, some of which are similar to vessels used by AMO and Border Patrol.

Development and implementation of a DHS-wide cost per vessel underway hour reporting methodology would help ensure that DHS has key information to support its ongoing efforts to implement its air and maritime initiatives, including integration and consolidation of nearby operating locations. By using a standard cost per vessel underway hour methodology, DHS could estimate any impacts to marine operations costs, such as changes to vessel maintenance programs impacted by movement and consolidation of marine operating locations. For example, of the 147 CBP and Coast Guard air and marine operating locations we identified in close proximity, 76 percent or 112 locations were marine operating locations.⁴²

Conclusions

DHS's creation in 2003 aligned the legacy U.S. Customs Service and Immigration and Naturalization Service, as well as Coast Guard, among others, under a single agency, including their legacy air and marine operating locations. While DHS has ongoing efforts to integrate and consolidate nearby component air and marine operating locations and has comparable cost information for air operations, it currently lacks

⁴²The FAA Reauthorization Act of 2018 defines "applicable location" for our review as any location in which AMO is based within 45 miles of a location in which any other DHS agency also operates air and marine assets. See Pub. L. No. 115-254, div. J, § 1810(c), 132 Stat. at 3538. For the purposes of our review, we refer to air and marine operating locations within 45 miles of each other as being in close proximity.

comparable cost information for marine operations. This limits DHS's ability to fully evaluate the benefits and costs of consolidating AMO, Border Patrol, and Coast Guard marine operating locations.

Recommendation for Executive Action

We are making the following recommendation to DHS:

The Under Secretary for Management should develop and implement a mechanism to compare component marine operating costs across components and locations, including a cost per vessel underway (float) hour methodology (Recommendation 1).

Agency Comments

We provided a draft of this report to DHS for review and comment. DHS's comments are reproduced in appendix IV. In its comments, DHS concurred with our recommendation and described planned actions to support development and implementation of a cost per vessel underway hour methodology across components. DHS also provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees and the Acting Secretary of Homeland Security. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. If you or your staff have any questions about this report, please contact me at (202) 512-8777 or gablerr@gao.gov. GAO staff who made key contributions to this report are listed in appendix V.



Rebecca Gambler
Director, Homeland Security and Justice

List of Committees

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

The Honorable Ron Johnson
Chairman
The Honorable Gary Peters
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Bennie Thompson
Chairman
The Honorable Mike Rogers
Ranking Member
Committee on Homeland Security
House of Representatives

The Honorable Peter DeFazio
Chairman
The Honorable Sam Graves
Ranking Member
Committee on Transportation and Infrastructure
House of Representatives

Appendix I: Objectives, Scope, and Methodology

This report examines: (1) U.S. Customs and Border Protection (CBP) and U.S. Coast Guard (Coast Guard) air and marine mission activities across operating locations; (2) coordination mechanisms used by CBP and Coast Guard for air and marine mission activities; and (3) Department of Homeland Security (DHS) assessments of its components' operating locations for air and marine mission activities.

To identify CBP and Coast Guard air and marine mission activities across operating locations, we collected and analyzed Air and Marine Operations (AMO), U.S. Border Patrol (Border Patrol), and Coast Guard operating location information and mission activity and results data from fiscal years 2016 through 2018.¹ This was the time period when comparable data were available across each agency and through the most recent fiscal year available at the time of our review. Mission activity data included flight and float hours by operating location, type of aircraft or vessel, and mission activity type. Mission results data included events attributed to air and marine operating locations, including drug seizures, apprehensions of individuals, and lives saved, among other events.

- To analyze AMO air and marine mission activities and results across operating locations, we obtained data from CBP's Tasking, Operations, and Management Information System from fiscal year 2016 through 2018.²
- To analyze Border Patrol riverine mission activities and results across operating locations, we obtained mission activity data from CBP's Tasking, Operations, and Management Information System and

¹Coast Guard operating locations for the purposes of our review included air stations, air facilities, boat stations, and small boat stations and excluded training, maintenance, and logistics centers and deployable specialized forces. At the time of our review, Coast Guard had 31 small boat stations, 160 boat stations, seven air facilities, and 25 air stations. AMO operating locations for the purposes of our review included air branches, air and marine branches, National Air Security Operations Centers, air units, and marine units and excluded training centers. At the time of our review, AMO had eight air and marine branches, six air branches, 18 air units, six National Air Security Operations Centers, and 31 marine units. Border Patrol operating locations for the purposes of our review included Border Patrol stations that conduct riverine operations and excluded use of vessels by Special Operations Groups. At the time of our review, there were a total of 40 Border Patrol stations that conducted riverine operations.

²Data provided by CBP from Tasking, Operations, and Management Information System were current as of February 26, 2019.

results data from DHS' Enforcement Integrated Database from fiscal year 2016 through 2018.³

- To analyze Coast Guard air and marine mission activities and results across operating locations, we obtained mission activity data from Coast Guard's Asset Logistics Management Information System and results data from Coast Guard's Marine Information for Safety and Law Enforcement system from fiscal years 2016 through 2018.⁴

We assessed the reliability of mission activity and results data by checking for missing data and obvious errors; reviewing guidance, documents, and summary data; and interviewing AMO, Border Patrol, and Coast Guard officials about how the data were compiled. We found AMO and Border Patrol mission activity and results data were sufficiently reliable for our reporting purposes of providing summary mission activity and results across operating locations. We found Coast Guard's mission activity data were sufficiently reliable for our reporting purposes of providing summary mission activity data across operating locations. We found Coast Guard's mission results data for the total of number of lives saved and assisted across air and marine operating locations were sufficiently reliable for our reporting purposes.

To determine how CBP and Coast Guard coordinate air and marine mission activities, we reviewed CBP and Coast Guard policies and procedures and DHS Office of Inspector General reports and our past work on DHS collaborative efforts involving air and marine mission activities.⁵ We interviewed officials from AMO, Border Patrol, Coast Guard and DHS headquarters and officials from all nine Coast Guard Districts, all 20 AMO branches and centers, and the 12 Border Patrol

³Data provided by CBP from Tasking, Operations, and Management Information System were current as of February 26, 2019, and data from Enforcement Integrated Database were current as of March 6, 2019.

⁴Data provided by Coast Guard from Asset Logistics Management Information System were current as of December 3, 2019, and data provided by Coast Guard from Marine Information for Safety and Law Enforcement system were current as of December 17, 2019.

⁵GAO, *Border Security: Opportunities Exist to Ensure More Effective Use of DHS's Air and Marine Assets*, [GAO-12-518](#) (Washington, D.C.: Mar. 30, 2012); and *Border Security: Opportunities to Increase Coordination of Air and Marine Assets*, [GAO-05-543](#) (Washington, D.C.: Aug. 12, 2005). Department of Homeland Security, Office of Inspector General, *CBP Should Improve Its Air Coordination in the Rio Grande Valley Sector*, [OIG-19-02](#) (Washington, D.C.: Oct. 18, 2018); and *AMO and Coast Guard Maritime Missions Are Not Duplicative, But Could Improve with Better Coordination*, [OIG-17-03](#) (Washington, D.C.: Oct. 14, 2016).

sectors that conduct riverine operations. We also conducted site visits to northern, southeast, and southwest border DHS air and marine operating locations. Specifically, we met with officials and toured 28 air and marine operating locations in Florida, Texas, and Michigan. We selected these locations based on a variety of factors, to include a range of geographic locations; a mix of Coast Guard, AMO, and Border Patrol mission activities; and proximity to other agency locations. The information gathered from our observations and interviews during our site visits cannot be generalized to all DHS air and marine operating locations along the northern, southeast and southwest borders, but provide valuable insights into how Coast Guard, AMO, and Border Patrol conduct air and marine operations. See table 15 below for a list of operating locations we visited during our site visits.

Table 15: List of U.S. Customs and Border Protection and U.S. Coast Guard Air and Marine Operating Locations Visited

Agency	Operating location name	Location
U.S. Customs and Border Protection/Air and Marine Operations	Miami Air and Marine Branch	Florida
	Jacksonville Air and Marine Branch	Florida
	National Air Security Operations Center - Jacksonville	Florida
	Miami Marine Unit	Florida
	Fort Lauderdale Marine Unit	Florida
	Jacksonville Marine Unit	Florida
	Great Lakes Air and Marine Branch	Michigan
	Sault Sainte Marie Marine Unit	Michigan
	Port Huron Marine Unit	Michigan
	McAllen Air and Marine Branch	Texas
	National Air Security Operations Center - Corpus Christi	Texas
	Brownsville Marine Unit	Texas
	Corpus Christi Marine Unit	Texas
U.S. Customs and Border Protection/U.S. Border Patrol	McAllen U.S. Border Patrol Station	Texas
	Sault Sainte Marie U.S. Border Patrol Station	Michigan
	Detroit U.S. Border Patrol Station	Michigan
	Marysville U.S. Border Patrol Station	Michigan
U.S. Coast Guard	Station Miami Beach	Florida
	Air Station Miami	Florida
	Station Fort Lauderdale	Florida
	Station Mayport	Florida
	Air Station Corpus Christi	Texas
	Station Port Aransas	Texas

Appendix I: Objectives, Scope, and Methodology

Agency	Operating location name	Location
	Station South Padre Island	Texas
	Air Station Detroit	Michigan
	Station Sault Sainte Marie	Michigan
	Station Port Huron	Michigan
	Station Belle Island	Michigan

Source: GAO. | GAO-20-663

To examine DHS’s efforts to assess its components’ air and marine operating locations, we reviewed past and ongoing assessments of CBP and Coast Guard air and marine operating locations. We also interviewed officials from DHS, CBP, AMO, Coast Guard, and Border Patrol headquarters and field locations. For DHS’s ongoing assessment of its air and marine operating locations, we reviewed information on DHS’s air and maritime initiatives included in its agency reform plan and statement of work for a study to examine operating locations in Fort Lauderdale and Jacksonville, Florida, and Sault Sainte Marie, Michigan. We compared DHS’s ongoing efforts to assess air and marine operating locations against guidance in Office of Management and Budget Circular A-94.⁶ In addition, we collected and reviewed CBP and Coast Guard reports and data on obligations and expenditures including air and marine mission activities and operating locations from fiscal years 2016 through 2018. We also collected and reviewed DHS reports on AMO and Coast Guard costs per flight hour from fiscal years 2015 through 2017 and associated methodology.⁷ Further, we collected and reviewed information on Coast Guard’s cost per flight and float hour, including reimbursable standard rates from 2015 through 2018 and associated methodology.⁸

⁶Office of Management and Budget, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, OMB Circular No. A-94 (trans. 64) (October 1992; discount rates revised December 2019).

⁷Department of Homeland Security, *Common Flight Hour Program Report Annual Report to DHS Leadership - Fiscal Year 2015*; *Common Flight Hour Program Report, Report to DHS Leadership - Fiscal Year 2016*; *Common Flight Hour Program Report, Report to DHS Leadership - Fiscal Year 2017*; and *Aviation Governance Board Bulletin 2015-001: DHS Standard Aviation Comparable Cost per Flight Hour Reporting Methodology* (Sept. 28, 2015).

⁸U.S. Coast Guard, *Reimbursable Standard Rates*, COMDTINST 7310.1Q (Oct. 16, 2015); *Reimbursable Standard Rates*, COMDTINST 7310.1R (March 29, 2017); *Reimbursable Standard Rates*, COMDTINST 7310.1S (April 25, 2018); and *Reimbursable Standard Rates*, COMDTINST 7310.1T (Nov. 29, 2018).

The performance audit upon which this report is based was conducted from November 2018 to May 2020 in accordance with generally accepted government auditing standards.⁹ 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. We subsequently worked with DHS from June 2020 to September 2020 to prepare this nonsensitive version of the original sensitive report for public release. This public version was also prepared in accordance with these standards.

⁹GAO, *Department of Homeland Security: Assessment of Air and Marine Operating Locations Should Include Comparable Costs across All DHS Marine Operations*, GAO-20-420SU (Washington, D.C.: May 27, 2020).

Appendix II: U.S. Coast Guard Cutter Mission Activities

The U.S. Coast Guard (Coast Guard) conducts missions using cutters, which are vessels greater than 65 feet in length with accommodations for crew to live on board.¹ Coast Guard tracks its cutter operations by collecting data on (1) the number of hours its cutters operate (float hours); and, separately, (2) the number of hours associated with each type of mission activity (mission hours), such as the mission activities associated with its 11 statutory missions and training, among others.² According to our analysis of Coast Guard mission activity data, 259 cutters conducted missions from fiscal years 2016 through 2018. See table 16 below for the types and numbers of Coast Guard cutters that conducted missions from fiscal years 2016 through 2018.

Table 16: U.S. Coast Guard—Cutter Types and Numbers, Fiscal Years 2016 through 2018

Asset class	Common name	Number of assets
Major Cutter	National Security Cutter	6
	High Endurance Cutter	6
	Medium Endurance Cutter	28
	Training Barque	1
Patrol Boat	Patrol Boat	102
Fast Response Cutter	Fast Response Cutter	29
Other cutters	Icebreaker ^a	3
	Icebreaking Tug	8
	Small Harbor Tug	11
	Inland Buoy Tender	4
	Inland Construction Tender	13
	River Buoy Tender	18
	Seagoing Buoy Tender	16
	Coastal Buoy Tender	14
Total		259

Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663
^aIcebreaker include one Domestic Icebreaker.

¹Coast Guard’s major cutters are over 179 feet in length generally under the control of Area Commands, armed with multiple crew-served weapons, carry small boats aboard, and can also deploy with a helicopter aboard.

²Coast Guard’s mission activities are recorded in its system of record—Asset Logistics Management Information System—which 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. Asset Logistics Management Information System data provided by Coast Guard were current as of July 15, 2019. Cutters that did not operate during fiscal years 2016 through 2018 were not included in our review.

Our analysis of cutter mission data shows that cutters reported a total of 1,216,233 float hours from fiscal years 2016 through 2018. Patrol boats, which make up 40 percent (102 of 259 cutters) of all cutters, comprised 39 percent (479,266 of 1,216,233 float hours) of total float hours, and medium endurance cutters accounted for additional 20 percent (247,184 of 1,216,233 float hours) of total cutters float hours from fiscal years 2016 through 2018 (see table 17 below).

Table 17: U.S. Coast Guard—Cutter Float Hours by Type, Fiscal Years 2016 through 2018

Float hours

Cutter type	Fiscal year			Total	Percent of total
	2016	2017	2018		
National Security Cutters	14,514	14,851	15,894	45,259	4
High Endurance Cutters	11,260	13,341	5,411	30,012	3
Medium Endurance Cutters	78,197	87,482	81,505	247,184	20
Patrol Boats	158,712	164,776	155,778	479,266	39
Fast Response Cutters	35,088	51,437	58,062	144,587	12
Buoy Tenders	52,925	60,556	54,179	167,660	14
Other cutters	29,391	36,007	36,867	102,265	8
Total	380,087	428,450	407,696	1,216,233	100

Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663

Note: Other cutters include: training barques, icebreakers, domestic icebreakers, icebreaking tugs, small harbor tugs, and inland construction tenders.

In addition, we found that law enforcement missions were 54 percent (664,294 of 1,231,279 mission hours) of total cutter mission hours from fiscal years 2016 through 2018.³ As mentioned previously, Coast Guard tracks the number of hours its cutters spend conducting missions associated with each type of mission (mission hours) separate from the total number of hours cutters were operated (float hours). In particular, law enforcement missions to prevent, detect, and suppress violations, illicit drug trafficking, and unlawful migration comprised approximately 31 percent (384,655 of 1,231,279 mission hours) of total cutter mission hours from fiscal years 2016 through 2018. Further, law enforcement missions to enforce domestic fisheries and commercial fishing vessel safety laws comprised 22 percent (275,853 of 1,231,279 mission hours) of total cutter mission hours from fiscal years 2016 through 2018. Table 18 below

³According to Coast Guard officials, recorded mission hours may exceed total float hours to account for simultaneous mission activities.

Appendix II: U.S. Coast Guard Cutter Mission Activities

describes Coast Guard cutter mission hours by type from fiscal years 2016 through 2018.

Table 18: U.S. Coast Guard—Cutter Mission Hours by Mission Type, Fiscal Years 2016 through 2018

Mission Hours

Mission type	Fiscal Year			Total	Percent of total
	2016	2017	2018		
Law enforcement	213,855	228,679	221,760	664,294	54
Aids to navigation	50,055	62,505	58,353	170,913	14
Ports, waterways, and coastal security	40,336	37,202	31,199	108,737	9
Training	34,992	32,493	34,656	102,141	8
Military operations	12,861	13,043	12,596	38,500	3
Search and rescue	10,944	13,945	9,626	34,515	3
Other	29,099	42,708	40,372	112,179	9
Total	392,142	430,575	408,562	1,231,279	100

Source: GAO analysis of U.S. Coast Guard data. | GAO-20-663

Note: U.S. Coast Guard (Coast Guard) law enforcement missions include use of cutters to prevent, detect, and suppress violations of all applicable U.S. laws and treaties, including for illicit drug trafficking (drug interdiction), unlawful migration (migrant interdiction), and violations of laws and regulations relating to domestic fisheries and commercial fishing vessel safety. Coast Guard aids to navigation missions include use of cutters to maintain buoys, beacons, lights, and other aids to mark channels and denote hazards. Coast Guard ports, waterways, and coastal security missions include use of cutters to secure U.S. waters, waterways, ports, and intermodal landside connections that comprise the marine transportation system. Coast Guard training missions include use of cutters for proficiency training and recurring standardization checks. Coast Guard search and rescue missions include use of cutters to assist persons or property in potential or actual distress. Military operations missions include use of cutters for direct participation in military operations or support operations and military incidents, among others. Mission activities in the “other” category include use of cutters to provide support upon request to other government agencies, domestic icebreaking, and polar operations, among others.

Appendix III: Perspectives on Consolidation and Colocation of Air and Marine Operating Locations

U.S. Customs and Border Protection (CBP) and U.S. Coast Guard (Coast Guard) officials we met with identified mission coordination, joint operations, physical security, and resource-sharing as potential positive impacts of consolidation and colocation of air and marine operating locations.¹

- **Mission coordination:** CBP and Coast Guard officials stated that consolidation and colocation of air and marine operating locations could increase mission coordination between both agencies, including mission-planning and information-sharing. For example, Air and Marine Operations (AMO) officials at an air and marine branch in the southeast region stated that colocation of both agencies at an operating location could promote a greater awareness of mission activities, including opportunities to assist during law enforcement mission activities and search and rescue events.
- **Joint operations:** CBP and Coast Guard officials stated that consolidation and colocation of air and marine operating locations could increase the number and frequency of joint operations between both agencies. For example, Coast Guard District One officials stated that colocation of both agencies at an operating location could increase the number of joint operations, such as Coast Guard boarding officers co-crewing on U.S. Border Patrol (Border Patrol) riverine vessels at certain locations in the northeast, and joint training exercises.
- **Physical security:** CBP officials stated that consolidation and colocation of marine operating locations could result in greater physical security of vessels. For example, Border Patrol officials at a northern border sector stated that use of vessel docking areas at Coast Guard boat stations would result in greater physical security of vessels compared to use of public marinas.
- **Resource-sharing:** CBP and Coast Guard officials stated that consolidation and colocation of marine operating locations could result in greater resource sharing between both agencies, such as shared use of storage and vessel docking areas. For example, AMO officials at an air and marine branch in the southeast region stated that

¹We interviewed officials from CBP and Coast Guard headquarters and field officials from Coast Guard's nine Districts, Air and Marine Operations' 20 branches and centers, and the 12 U.S. Border Patrol sectors that conduct riverine operations. The impacts and limitations related to consolidation and colocation of air and marine operating locations in this appendix include responses across the CBP and Coast Guard officials we interviewed. Not all CBP and Coast Guard officials we met with identified impacts and limitations related to consolidation and colocation of air and marine operating locations.

colocation would increase resource sharing, including access to secure vessel docking areas and office space.

CBP and Coast Guard officials we met with identified costs, countersurveillance, mission requirements, and response times as potential limitations for consolidation and colocation of air and marine operating locations.

- **Costs:** CBP and Coast Guard officials stated that costs to renovate existing or construct new facilities could limit consolidation and colocation of air and marine operating locations. Specifically, officials stated that existing operating locations were not designed to accommodate more than one agency's personnel and operations. Further, officials stated that consolidation and colocation at existing locations would require renovations or the construction of new facilities that would compete with limited funding available for maintenance and construction of other facilities across both agencies.
- **Countersurveillance:** CBP and Coast Guard officials stated that the risk of countersurveillance could impact consolidation and colocation of air and marine operating locations. For example, AMO officials at an air and marine branch in the northern region stated that colocation at a Coast Guard boat station could present difficulties during the course of investigations, as unmarked vessels would be readily identifiable at a law enforcement facility.
- **Mission requirements:** CBP and Coast Guard officials stated that differences in mission requirements could limit consolidation and colocation of air and marine operating locations. For example, Coast Guard officials at District Eleven stated that readiness standard differences between AMO and Coast Guard would impact use of shared facilities, such as the need for berthing areas.
- **Response times:** CBP and Coast Guard officials stated that increases in response times could limit consolidation and colocation of air and marine operating locations. For example, Coast Guard officials at District One stated that colocation at AMO facilities would move Coast Guard stations and vessels away from primary response locations and increase response times.

Appendix IV: Comments from the Department of Homeland Security

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



**Homeland
Security**

September 8, 2020

Rebecca Gambler
Director, Homeland Security & Justice
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Re: Management Response to Draft Report GAO-20-663 "DEPARTMENT OF
HOMELAND SECURITY: Assessment of Air and Marine Operating Locations Should
Include Comparable Costs Across all DHS Marine Operations"

Dear Ms. Gambler:

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

DHS is pleased to note GAO's recognition of the Department's ongoing initiatives to support integration and consolidation of nearby U.S. Customs and Border Protection (CBP) and U.S. Coast Guard (USCG) operating locations for air and marine mission activities. DHS remains committed to improving the efficiency, effectiveness, and accountability of each of its Components, in part, by reorganizing functions and eliminating unnecessary activities, as appropriate. This will help ensure not only that DHS continues to keep America safe, but that the Department remains a good steward of taxpayer funds.

The draft report contained one recommendation for DHS, with which the Department concurs. Attached, please find our detailed response to the recommendation. DHS previously submitted technical comments under a separate cover for GAO's consideration.

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

Sincerely,

JIM H

CRUMPACKER

JIM H. CRUMPACKER, CIA, CFE

Director

Departmental GAO-OIG Liaison Office

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Attachment

**Attachment: Management Response to Recommendation
Contained in GAO-20-663**

GAO recommended that the Under Secretary for Management:

Recommendation 1: Develop and implement a mechanism to compare Component marine operating costs across Components and locations, including a cost per vessel underway (float) hour methodology.

Response: Concur. The DHS Office of the Chief Readiness Support Officer has established a DHS Standard Boat Cost Work Group (SBCWG), which will operate under the guidance of the DHS Boat Forces Governance Board (BGB). The SBCWG held a kick-off meeting on June 24, 2020 with CBP and USCG personnel and has begun developing a methodology to compare float hour costs across marine Components. The BGB will coordinate with on-going co-location efforts to ensure access to information. Estimated Completion Date: September 30, 2021.

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Rebecca Gambler at (202) 512-8777 or GamblerR@gao.gov

Staff Acknowledgments

In addition to the contact named above, Kirk Kiester (Assistant Director), Chuck Bausell, Taylor Bright, Bruce Crise, Elizabeth Dretsch, Jamarla Edwards, Eric Hauswirth, John Mingus, Sasan J. “Jon” Najmi, and Carl Potenzieri made key contributions to this report.

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