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## COAST GUARD

# Observations on the Fiscal Year 2008 Budget, Performance, Reorganization, and Related Challenges

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# Highlights

Highlights of [GAO-07-489T](#), a statement for the record to the Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard, Committee on Commerce, Science, and Transportation, U.S. Senate

## Why GAO Did This Study

The U. S. Coast Guard is a multimission agency responsible for maritime safety, security, and stewardship. It performs these missions, relating to homeland security and non-homeland security in U.S. ports and inland waterways, along the coasts, and on international waters.

The President's budget request, including the request for the Coast Guard, was transmitted to Congress on February 5, 2007.

This testimony, which is based on current and past GAO work, synthesizes the results of this work as it pertains to the following:

- budget requests and performance goals,
- organizational changes and related management initiatives,
- current acquisition efforts and challenges, and
- challenges related to performing traditional legacy missions.

## What GAO Recommends

While this statement makes no recommendations, in the past GAO has made a number of recommendations on issues covered in this statement. The Coast Guard is in various stages of implementing these recommendations.

[www.gao.gov/cgi-bin/getrpt?GAO-07-489T](http://www.gao.gov/cgi-bin/getrpt?GAO-07-489T).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Stephen Caldwell at (202) 512-9610 or [caldwells@gao.gov](mailto:caldwells@gao.gov).

## COAST GUARD

# Observations on the Fiscal Year 2008 Budget, Performance, Reorganization, and Related Challenges

## What GAO Found

The Coast Guard's fiscal year 2008 budget request totals \$8.7 billion, an increase of 3 percent over the enacted budget for fiscal year 2007 and a slowing of the agency's budget increases over the past 3 fiscal years. The Coast Guard expects to meet its performance goals in 6 of 11 mission areas in fiscal year 2006, down from 8 in 2005. Trends indicate increased homeland security activities have not prevented meeting non-homeland security goals.

Two new reorganization efforts are under way. One creates a single command for all specialized deployable units, such as those for responding to pollution or terrorist incidents. However, experience with an effort to reorganize field units suggests there may be challenges in such matters as merging different operating approaches and addressing resource issues. The other effort merges the Coast Guard's various acquisition management efforts under a single Chief Acquisition Officer. The reorganization of acquisition management is in part a response to past troubled acquisition efforts. This change in the acquisition structure is too new to assess.

Current major acquisitions include Deepwater for cutters and aircraft, the Rescue 21 communication system, and the National Automatic Identification System for vessel tracking. Deepwater and Rescue 21 have had schedule delays and performance reductions in the past, but the Coast Guard has been taking actions to improve oversight. Installation of equipment for the first phase of the National Automatic Identification System is under way, but the Coast Guard is still determining which types of vessels will have to participate. All three programs have also accumulated sizeable carryover balances of unspent moneys from previous years.

Competing funding priorities have placed aging polar icebreakers and aids-to-navigation assets at risk. Many aids-to-navigation vessels are near the end of their service lives. The Coast Guard is exploring alternatives for replacement or extending their service. Similarly, high maintenance costs prompted the Coast Guard to take one of two Antarctic icebreakers out of service, increasing reliance on the remaining one.

**Competing priorities have reduced funds to maintain or replace aging Coast Guard assets, such as aids-to-navigation vessels and polar icebreakers.**



Source: Coast Guard.

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Madame Chair and Members of the Subcommittee:

I am pleased to provide this statement for the record about the President's fiscal year 2008 budget request for the Coast Guard. As you know, the Coast Guard has grown significantly since September 11, 2001, to help meet its responsibility to protect America's ports, waterways, and waterside facilities from terrorist attacks while maintaining responsibility for many other programs important to the nation's interests, such as helping stem the flow of illegal drugs and illegal immigration, protecting important fishing grounds, and responding to marine pollution. While the Coast Guard budget request continues to increase in fiscal 2008, it also shows shifts in direction. By placing less emphasis on acquiring new assets and reorganizing some of its functional areas, the Coast Guard is attempting to rectify some of its management concerns of the past while better preparing itself for the challenges of the future.

My statement today provides:

- an overview of the Coast Guard's fiscal year 2008 budget request and key performance indicators,
- a discussion of various organizational changes and related management initiatives,
- a status update on some current acquisition efforts and challenges, and
- a look at additional challenges related to traditional legacy missions.

My statement is based in part on prior GAO work focusing on the Coast Guard's programmatic and management initiatives (a listing of related reports is included at the end of my statement). Additionally, we conducted interviews with headquarters, Pacific Area, and Sector San Francisco personnel, and reviewed budget, performance, and acquisition documents. The scope of our work did not include evaluating whether the proposed funding levels are commensurate with the Coast Guard's stated needs. Our scope was limited due to the short time available between the release of the President's fiscal year 2008 budget request and the hearing date of mid-April. All work for this statement was conducted in accordance with generally accepted government auditing standards between February and March 2007.

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## Summary

The Coast Guard's fiscal year 2008 budget request is moderately higher than its fiscal year 2007 budget, but it increased at a lower rate, mainly reflecting a slowing in requests for funding acquisition, construction, and improvement (AC&I) projects. The 2008 overall budget request of \$8.73 billion is approximately 3 percent higher than the 2007 enacted budget, but unlike in prior years, the AC&I budget decreased by 19 percent. According to Coast Guard officials, this decrease is in part due to some recognized problems with ongoing acquisition programs and the desire to strengthen operating capabilities, including contract and acquisition oversight. While the AC&I budget request is down, a substantial pool of unspent funds appropriated for acquisition projects in previous years remains available to the Coast Guard. Current unobligated balances in these projects total \$1.96 billion, of which \$1.63 billion is associated with Integrated Deepwater System acquisitions. The Coast Guard expects to meet its performance goals in 6 of the 11 mission areas in fiscal 2006 (as compared to meeting performance goals in 8 of 11 missions in fiscal 2005). Performance trends over the past 5 years also show that increased homeland security activities have not prevented the Coast Guard from meeting its non-homeland security mission goals. The Coast Guard continues to develop ways to better understand the links between resources it expends and the results it achieves.

The budget request reflects a continued emphasis on reorganization efforts, all of which carry ongoing challenges. These efforts began with the combination of marine safety offices and Coast Guard groups into sectors in 2006. While the Coast Guard has completed its organizational changes to place local units under sector commands, not all of the units have been able to move to a single location, a key ingredient in bringing about the improved integration expected from the realignment. Funding was not provided in the fiscal year 2008 budget to complete the desired colocation. A reorganization effort that is to begin this year is designed to bring the different mobile deployable units responsible for such actions as pollution response, law enforcement, port security, and counterterrorism under a single command rather reporting to three different authorities. The Coast Guard hopes to gain more effective management, oversight, and coordination of these deployable forces. Challenges here include addressing "buy-in" and related issues from units affected by the changes, ensuring that mission performance of sectors that previously made use of these units for everyday activities is not compromised, and effectively establishing and operating the new centralized command. A third organizational effort to improve Coast Guard operations—in this case, to improve its troubled acquisition contract management—is the merging of the various acquisition management efforts under a Chief Acquisitions

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Officer. One challenge in making this move effective is the need to build a more robust cadre of acquisition management professionals.

Three major Coast Guard acquisition projects are making progress at varying rates, but challenges remain for all three in the future. The record for Deepwater has been mixed. Seven of 10 asset classes being acquired are on or ahead of schedule. Three classes, however, are behind schedule for various reasons and several factors add to the uncertainty about the delivery schedule of other Deepwater assets. Contract management issues, accountability of the contractor, and cost control through competition have been recurring challenges for the Coast Guard. Separate from Deepwater, the National Automatic Identification System (NAIS), a program designed to allow the Coast Guard to monitor and track vessels as far as 2,000 nautical miles off the U.S. coast, is under way, and infrastructure for the first phase of the system is currently being installed. The Coast Guard is considering whether to require more types of vessels to install and operate tracking equipment—an issue that affects the extent to which the system will provide information on the location of vessels of interest. The Coast Guard’s timeline for achieving full operating capability for its search and rescue communications system, Rescue 21, was delayed from 2006 to 2011, and the estimated total acquisition cost increased from 1999 to 2005, but according to Coast Guard officials, many of the issues that led to these problems are being addressed. Coast Guard acquisition officials said they are providing more oversight to the contractor after we reported on contract management shortcomings. According to Coast Guard officials, the contracts that would set specific schedules and budgets for the last 25 regions in which the system will be installed have yet to be signed. Also, there has been a reduction in promised improvements to limit communications gaps; originally, Rescue 21 was intended to limit communications gaps to 2 percent, and that target was reduced to less than 10 percent.

Some of the Coast Guard’s non-homeland security missions are facing challenges based on competition for resources with homeland security-oriented funding needs. Many domestic icebreaking and aids-to-navigation vessels are also reaching the end of their designed service lives. While these vessels have been able to meet mission goals to date, without major rehabilitation or replacement, their ability to carry out their designated missions will likely decline in the future. The Coast Guard is currently examining options for addressing this issue. Similarly, the inability to obtain needed maintenance funding has led the Coast Guard to take one Polar-class icebreaker out of service to keep its remaining aging Polar-class vessel, the *Polar Sea*, operational. With only one icebreaker capable

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of keeping access to Antarctica open, there is a greater possibility that mechanical problems or other maintenance issues could affect this mission.

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## Background

The U.S. Coast Guard is a multimission, maritime military service within the Department of Homeland Security (DHS). To accomplish its responsibilities, the Coast Guard is organized into two major commands that are responsible for overall mission execution—one in the Pacific area and the other in the Atlantic area. These commands are divided into 9 districts, which in turn are organized into 35 sectors that unify command and control of field units and resources, such as multimission stations and patrol boats. In fiscal year 2005, the Coast Guard had over 46,000 full-time positions—about 39,000 military and 7,000 civilians. In addition, the agency had about 8,100 reservists who support the national military strategy or provide additional operational support and surge capacity during times of emergency, such as natural disasters. Furthermore, the Coast Guard also had about 31,000 volunteer auxiliary personnel help with a wide array of activities, ranging from search and rescue to boating safety education. The Coast Guard has responsibilities that fall under two broad missions—homeland security and non-homeland security. The Coast Guard responsibilities are further divided into 11 programs, as shown in table 1.

**Table 1: Homeland Security and Non-Homeland Security Programs by Mission Area**

Mission and program	Activities and functions of each program
Homeland security missions	
<ul style="list-style-type: none"> <li>Ports, waterways, and coastal security</li> </ul>	Conducting harbor patrols, vulnerability assessments, intelligence gathering and analysis, and other activities to prevent terrorist attacks and minimize the damage from attacks that occur.
<ul style="list-style-type: none"> <li>Undocumented migrant interdiction</li> </ul>	Deploying cutters and aircraft to reduce the flow of undocumented migrants entering the United States by maritime routes.
<ul style="list-style-type: none"> <li>Defense readiness</li> </ul>	Participating with the Department of Defense (DOD) in global military operations, deploying cutters and other boats in and around harbors to protect DOD force mobilization operations.
Non-homeland security missions	
<ul style="list-style-type: none"> <li>Search and rescue</li> </ul>	Operating multimission stations and a national distress and response communication system, conducting search and rescue operations for mariners in distress.
<ul style="list-style-type: none"> <li>Living marine resources</li> </ul>	Enforcing domestic fishing laws and regulations through inspections and fishery patrols.
<ul style="list-style-type: none"> <li>Aids to navigation</li> </ul>	Managing U.S. waterways and providing a safe, efficient, and navigable marine transportation system, maintaining the extensive system of navigation aids, monitoring marine traffic through vessel traffic service centers.
<ul style="list-style-type: none"> <li>Ice operations</li> </ul>	Conducting polar operations to facilitate the movement of critical goods and personnel in support of scientific and national security activity, conducting domestic icebreaking operations to facilitate year-round commerce, conducting international ice operations to track icebergs below the 48th north latitude.
<ul style="list-style-type: none"> <li>Marine environmental protection</li> </ul>	Preventing and responding to marine oil and chemical spills, preventing the illegal dumping of plastics and garbage in U.S. waters, preventing biological invasions by aquatic nuisance species.
<ul style="list-style-type: none"> <li>Marine safety</li> </ul>	Setting standards and conducting vessel inspections to better ensure the safety of passengers and crew aboard commercial vessels, partnering with states and boating safety organizations to reduce recreational boating deaths.
<ul style="list-style-type: none"> <li>Illegal drug interdiction</li> </ul>	Deploying cutters and aircraft in high drug-trafficking areas and gathering intelligence to reduce the flow of illegal drugs through maritime transit routes.
<ul style="list-style-type: none"> <li>Other law enforcement (foreign fish enforcement)</li> </ul>	Protecting U.S. fishing grounds by ensuring that foreign fishermen do not illegally harvest U.S. fish stocks.

Source: Coast Guard.

Note: The Coast Guard's homeland security and non-homeland security missions are delineated in section 888 of the Homeland Security Act of 2002 (P. L. 107-296, 116 Stat. 2135, 2249 (2002)). Starting with the fiscal year 2007 budget, however, the Office of Management and Budget (OMB) designated the Coast Guard's drug interdiction and other law enforcement as non-homeland security missions for budgetary purposes.

For these 11 programs, the Coast Guard has developed performance measure to communicate agency performance and provide information for the budgeting process to Congress, other policymakers, and taxpayers. The Coast Guard's performance measures are published in various

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documents, including the Coast Guard's fiscal year Budget-in-Brief. The Coast Guard's Budget-in-Brief reports performance information to assess the effectiveness of the agency's performance as well as a summary of the agency's most recent budget request. This, and other documents, reports the performance measures for each of the Coast Guard's programs, as well as descriptions of the measures and explanations of performance results.

To continue executing its missions, the Coast Guard has programs to acquire a number of assets such as vessels, aircraft, and command, control, communications, computer, intelligence surveillance, and reconnaissance (C4ISR) systems. The Coast Guard's Deepwater program is a 25-year, \$24 billion effort to upgrade or replace existing vessels and aircraft in order to carry out its missions along our coastlines and farther out at sea. The program is eventually to include 10 major classes of new or upgraded vessels and aircraft. The Coast Guard also has an acquisition program called the National Automatic Identification System to identify and track vessels bound for or within U.S. waters. Another acquisition program is called Rescue 21, a program to replace the Coast Guard's 30-year-old search and rescue communications systems. Rescue 21 was to be used not only for search and rescue, but to support other Coast Guard missions, including those involving homeland security.

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## Budget Places More Emphasis on Operational Expenses; Overall Performance Trends Remain Positive

The Coast Guard's fiscal year 2008 budget request reflects a smaller increase than in years past. Requests for new capital spending are down, as the agency slows the pace of new acquisitions for Deepwater and other capital projects. Instead, several of the budget initiatives being emphasized reflect a reorganization of internal operations and support command infrastructure. Although the Coast Guard met fewer performance targets than last year, overall performance trends for most mission programs remain positive. That is, many of the measures that Coast Guard uses to evaluate performance have improved since last year, even though the agency did not meet as many of its performance targets in 2006 as in the year before.



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## Overall Budget Request Is 3.3 Percent Higher than Previous Year's

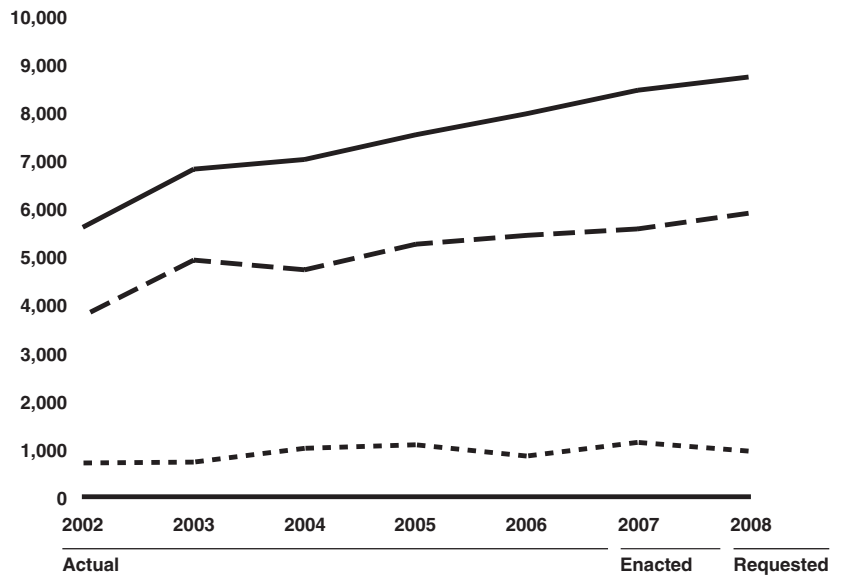
The Coast Guard's budget request in fiscal year 2008 is \$8.73 billion, approximately \$275 million, or 3.3 percent, more than in fiscal year 2007 (see fig. 1).<sup>1</sup> About \$5.9 billion, or approximately 68 percent, is for operating expenditures (OE). This funding supports its 11 statutorily identified mission programs; increases in cost of living, fuel, and maintenance costs; and previous administration and congressional initiatives. The greatest change from the previous year is in the AC&I request, which at \$949 million reflects about a 19 percent decrease from fiscal year 2007. According to Coast Guard officials, no new appropriations are requested in fiscal year 2008 for several Deepwater assets until business case reviews can be completed to assess the viability of technology and contracting oversight. The remaining part of the request consists primarily of funds requested for retiree pay and health care fund contributions. If the Coast Guard's total budget request is granted, overall funding will have increased by over 55 percent since 2002, an increase of \$3.1 billion.

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<sup>1</sup>GAO's analysis of the Coast Guard's fiscal year 2008 budget request is presented in nominal terms. Supplemental funding received for Operation Iraqi Freedom and Hurricane Katrina are not included in the analysis, except where noted.

**Figure 1: Coast Guard Budget from Fiscal Year 2002 to Fiscal Year 2008**

Dollars in millions (in nominal terms)



Source: GAO analysis of Coast Guard data.

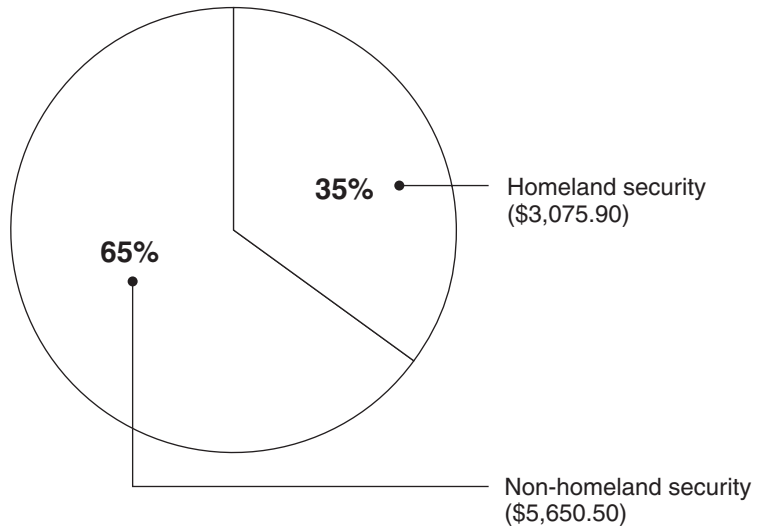
Note: The Coast Guard's budget consists of discretionary and mandatory funding line items. The operating expenses and acquisition, construction, and improvements line items make up the biggest portion of discretionary funding. Other line items in the Coast Guard's discretionary budget include environmental compliance and restoration, health care contributions, research and development, and reserve training costs. Retiree pay is the largest item the Coast Guard's mandatory funding budget, and the Coast Guard is requesting \$1.18 billion for retiree pay in 2008. Other mandatory funding line items include boating safety, oil spill liability trust fund, and the gift fund.

The Coast Guard's budget request for homeland security missions represents approximately 35 percent of the overall budget.<sup>2</sup> Figure 2 illustrates the percentage of funding requested for homeland security versus non-homeland security funding, and figure 3 shows the funding levels by each mission program.

<sup>2</sup>Beginning with the fiscal year 2007 budget, the Office of Management and Budget designated the Coast Guard's drug interdiction and other law enforcement programs as non-homeland security missions for budgetary purposes. If these two programs are included as homeland security missions, overall homeland security funding in the fiscal year 2008 budget request is approximately 52 percent of the total budget.

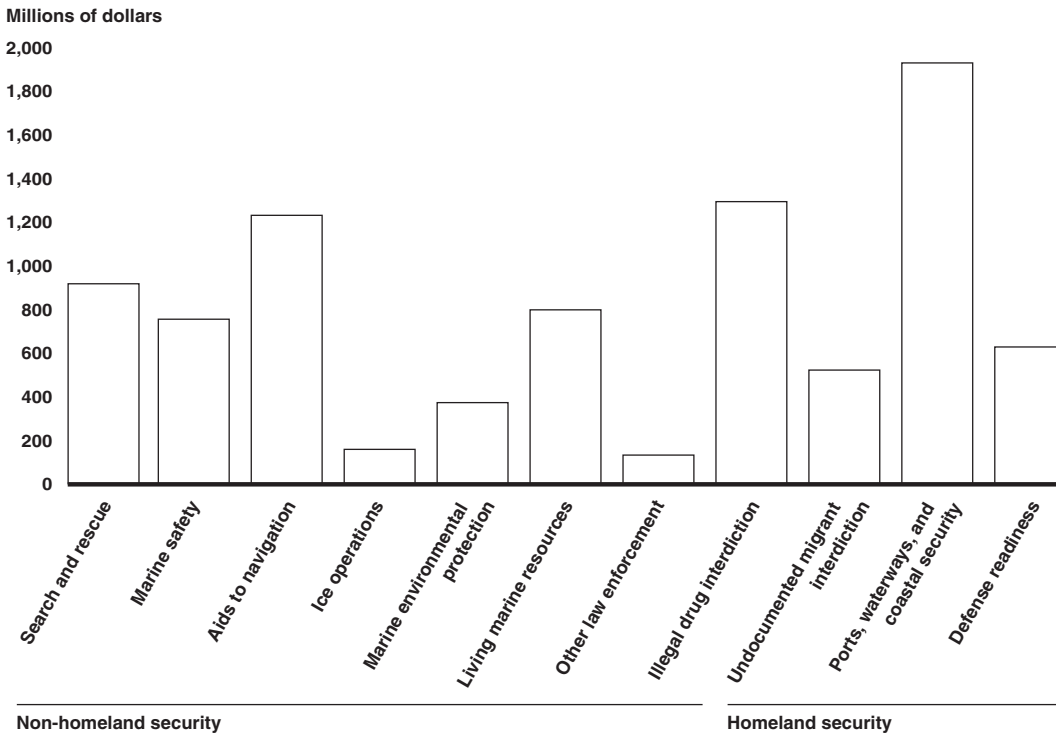
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**Figure 2: Amount (in millions of dollars) and Percentage of Homeland Security versus Non-Homeland Security Funding**



Source: GAO analysis of Coast Guard data.

**Figure 3: Coast Guard Fiscal Year 2008 Budget Request by Mission Program**



Source: GAO analysis of Coast Guard data.

### Budget Includes Reallocations to Match Reorganization

Two key budget initiatives—both reallocations rather than increases—reflect reorganization efforts. First, a major budget reallocation within the operating expenditures category establishes a single unified command for the agency’s deployable specialized forces. These are the Coast Guard’s response teams that can deploy wherever needed for natural disasters, terrorism incidents, and other concerns. According to senior Coast Guard officials, this initiative entails a onetime, budget-neutral reallocation of \$132.7 million from the Atlantic and Pacific Area Commands to a new deployable operations command, which will be located in Ballston, Virginia. No new funds have been requested for this initiative. This initiative is discussed in more detail later in this testimony. The second reallocation involves an \$80.5 million transfer from AC&I into the operating expense appropriation. The operational aspect of this reallocation is associated with creating a new consolidated acquisition function, also discussed in further detail below. Coast Guard officials said this reallocation consolidates all personnel funding into the operating expense appropriation and enables the Coast Guard to manage one

personnel system for the entire agency. They said although this reallocation is budget neutral in 2008, future budget requests may include financial incentives that will enable the Coast Guard to develop a more robust cadre of acquisition professionals.

**Acquisition Budget Request Declines, but Substantial Unobligated Balances Are Also Available**

The 19 percent decrease in fiscal year 2008 for AC&I reflects a slowing in the pace of acquisition efforts, which, according to Coast Guard officials, is an attempt to address technology issues and contracting oversight associated with Deepwater programs such as the Vertical Unmanned Aerial Vehicle and Fast Response Cutter. The Coast Guard also recognizes that it is carrying significant unobligated balances for a number of its acquisition projects. These balances reflect money appropriated but not yet spent for projects included in previous years' budgets. During our work for this testimony, we reviewed budget data and Coast Guard documentation showing the current status of the agency's unobligated balances. We found, for example, that the current unobligated balances total \$1.96 billion for all acquisition projects. The Deepwater acquisition alone has \$1.6 billion in total unobligated balances, which is nearly double the Coast Guard's fiscal year 2008 request for the Deepwater project. Other acquisition programs, such as the Nationwide Automatic Identification System and Rescue 21, also have unobligated balances, but these are considerably lower (see table 2). The unobligated balance for Rescue 21, for example, is \$30.5 million.

**Table 2: Total Unobligated Balances for Selected Acquisition Projects (dollars in millions)**

<b>Acquisition project</b>	<b>Fiscal year 2008 request</b>	<b>Unobligated balance</b>
Integrated Deepwater Systems	\$836.9	\$1,632.6
Shore Facilities and Aids to Navigation	37.9	156.8
Nationwide Automatic Identification System	12.0	36.0
Rescue 21	80.8	30.5
Vessels and Critical Infrastructure Projects	9.2	30.3

Source: GAO analysis of Coast Guard data.

These unobligated balances have accumulated for a variety of reasons as the Coast Guard has found itself unable to spend previous-year acquisition appropriations. For example, we and others have documented technical

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design issues involving the Coast Guard's 123-foot patrol boat and the Fast Response Cutter. These problems have led to major delays in some programs and outright cancellations in others. We asked Coast Guard officials about their plans to spend these unobligated balances either in fiscal year 2008 or beyond, but at this point they were unable to provide us with detailed plans for doing so. To the agency's credit, steps have been taken to address the issue, including reporting quarterly acquisition spending levels. Since these unobligated balances represent a significant portion of the Coast Guard's entire budget, the degree to which the Coast Guard spends these balances in fiscal year 2008 could have a substantial impact on the overall level of capital spending for the year.

According to senior Coast Guard officials, each acquisition project is now receiving more scrutiny and oversight of how previous funds are spent. The Coast Guard is not requesting additional funds for the Offshore Patrol Cutter, Fast Response Cutter, and Vertical Unmanned Aerial Vehicle in the fiscal year 2008 budget request until business case reviews are completed to assess the viability of the technology and contracting oversight.

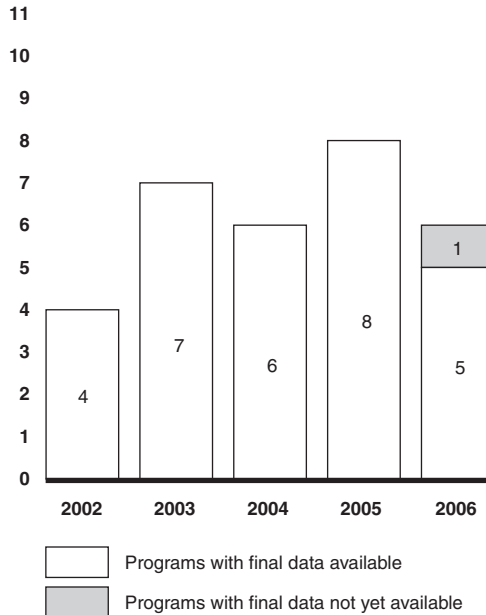
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## Performance Trends Generally Positive and Non-Homeland Security Measures Generally Sound

Despite the fact that Coast Guard met fewer performance targets than last year, overall performance trends for most mission programs remain positive. Performance in 7 of 11 Coast Guard mission areas increased in the last year, but the Coast Guard also set performance targets at a higher level than it did last year. Coast Guard's performance did not improve sufficiently for the Coast Guard to meet as many of its higher performance targets in 2006 as it did in 2005. In fiscal year 2006, the Coast Guard reported that 5 of its 11 programs met or exceeded program performance targets. In addition, agency officials reported that the Coast Guard expected to meet the target for 1 additional program when results become available in August 2007, potentially bringing the total met targets to 6 out of 11 (see fig. 4). In comparison, last year we reported that in fiscal year 2005, Coast Guard met 8 out of 11 targets. In fiscal year 2006, the agency narrowly missed performance targets for 3 programs—Search and Rescue, Living Marine Resources, and Aids to Navigation. In fiscal year 2005, it missed only 1 of these 3, Living Marine Resources. The Coast Guard more widely missed performance targets for 2 programs, Defense Readiness and Marine Safety. In fiscal year 2005, Coast Guard met its Marine Safety target, but missed on Defense Readiness. See appendix I for more information on Coast Guard performance results.

**Figure 4: Number of Performance Targets the Coast Guard Met, or Anticipates Meeting, for the Coast Guard's 11 Programs for Fiscal Years 2002 through 2006**

Number of performance targets the Coast Guard met and anticipates meeting



Source: GAO analysis of Coast Guard data.

Congressional committees have previously expressed concern that Coast Guard's shift in priorities and focus toward homeland security missions following the events of September 11, 2001, may have affected the agency's ability to successfully perform its non-homeland security missions. However, the Coast Guard's performance on its non-homeland security indicators has not changed substantially over the past 5 years.

This past year, we also completed an examination of some of the performance indicators themselves.<sup>3</sup> We found that while the Coast Guard's non-homeland security measures are generally sound and the data used to collect them are generally reliable, there are challenges associated with using performance measures to link resources to results. Such challenges include comprehensiveness (that is, using a single measure per mission area may not convey complete information about overall

<sup>3</sup>GAO, *Coast Guard: Non-Homeland Security Performance Measures Are Generally Sound, but Opportunities for Improvement Exist*, [GAO-06-816](#) (Washington, D.C.: August 2006).

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performance) and external factors outside agency control, (such as weather conditions, which can affect the amount of ice that needs to be cleared or the number of mariners who must be rescued). The Coast Guard continues to work on these measures through such efforts as the following:

- *Standardized reporting.* The Coast Guard is currently developing a way to standardize the names and definitions for all Coast Guard activities across the agency, creating more consistent data collection throughout the agency.
- *Measurement readiness.* The Coast Guard is developing a tool to track the agency's readiness capabilities with up-to-date information on resource levels at each Coast Guard unit as well as the certification and skills of all Coast Guard uniformed personnel.
- *Framework for analyzing risk, readiness, and performance.* The Coast Guard is developing a model for examining the links among risk, readiness management, and agency performance. This model is intended to help the Coast Guard better understand why events and outcomes occur, and how these events and outcomes are related to resources.

While the Coast Guard appears to be moving in the right direction and is about done with some of these efforts, it remains too soon to determine how effective the Coast Guard's larger efforts will be at clearly linking resources to performance results. These initiatives are not expected to be fully implemented until 2010.<sup>4</sup>

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<sup>4</sup>For more details on the Coast Guard's efforts to match resources to performance results, see appendix III in [GAO-06-816](#).



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## Coast Guard Continues to Make Organizational Changes Designed to Improve Operational Effectiveness and Resource Management

The 2008 budget request reflects a multiyear effort to reorganize the Coast Guard's command and control and mission support structures. Three efforts are of note here—reorganizing shore-based forces into sector commands, placing all deployable specialized forces under a single nationwide command, and consolidating acquisitions management programs. Each of these efforts faces challenges that merit close attention.

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## Further Action Needed to Ensure Operational Benefits from Sector Reorganization

As we reported for the last 2 years, the Coast Guard has implemented a new field command structure that is designed to unify previously disparate Coast Guard units, such as air stations and marine safety offices, into 35 different integrated commands, called sectors. At each of these sectors, the Coast Guard has placed management and operational control of these units and their associated resources under the same commanding officer. Coast Guard officials told us that this change helped their planning and resource allocation efforts. For instance, Coast Guard field officials told us the sector command structure has been valuable in helping to meet new homeland security responsibilities, and in facilitating their ability to manage incidents in close coordination with other federal, state, and local agencies. Our follow-up work found, however, that work remains to ensure the Coast Guard is able to maximize the potential benefits of sector realignment. In particular, Coast Guard officials reported that some sectors had yet to colocate their vessel tracking system (VTS) centers with the rest of their operational command centers. According to field officials, the lack of colocation has hindered communications between staff that formerly were from different parts of the agency.

According to Coast Guard officials, competing acquisition priorities are limiting the progress in obtaining funding needed to colocate these facilities. The fiscal year 2008 budget does not provide funds to colocate the VTS centers and command centers. Coast Guard headquarters officials told us they would work to address this challenge as part of the capital investment plan to build interagency operational centers for port security,

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as required under the SAFE Port Act, but they had not yet developed specific plans, timelines, and cost estimates.<sup>5</sup>

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### Unified Command Structure for Deployable Forces Is Being Developed

The Coast Guard is planning to reorganize its deployable specialized forces under a single unified command, called the Deployable Operations Group (DOG). This change is reportedly budget neutral in the fiscal year 2008 request, but it bears attention for operational effectiveness reasons. According to Coast Guard officials, the agency is making this change based on lessons learned from the federal response to Hurricane Katrina. They said the response highlighted the need to improve effectiveness of day-to-day operations and to enhance flexibility and interoperability of forces responding to security threats and natural disasters. Currently, there are five different types of Coast Guard specialized forces, totaling about 2,500 personnel. Their roles and missions vary widely, ranging from conducting antiterrorism operations to conducting environmental response and cleanup operations (see table 3).

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<sup>5</sup>Pub. L. No. 109-347, 120 Stat. 1884 (2006).

**Table 3: Coast Guard Deployable Specialized Forces, Mission Area and Primary Operational Activity, and Force Size**

<b>Specialized force</b>	<b>Mission area and primary operational activities</b>	<b>Force size</b>
National strike force (NSF)	Marine environmental protection <ul style="list-style-type: none"> <li>• Domestic and international response for oil spills</li> <li>• Hazardous material cleanup</li> <li>• Chemical, biological, and radiological response</li> </ul>	3 strike teams / 328 personnel
Tactical law enforcement teams (TACLET)	Law enforcement <ul style="list-style-type: none"> <li>• Maritime interception operations</li> </ul>	2 units / 180 personnel
Port security units (PSU)	Defense readiness <ul style="list-style-type: none"> <li>• Expeditionary port security</li> </ul>	8 units / 1,144 personnel
Maritime safety and security teams (MSST)	Ports, waterways, and coastal security <ul style="list-style-type: none"> <li>• Domestic port security</li> <li>• Antiterrorism</li> </ul>	12 units / 924 personnel
Maritime security response team (MSRT)	Ports, waterways, and coastal security Counterterrorism	1 unit / 208 personnel

Source: Coast Guard.

The Coast Guard’s existing structure divides operational control of specialized forces into three different command authorities—headquarters, Pacific Area, and Atlantic Area. Under the planned realignment, these forces would be available under a single operational command, with the expectation of more effective resource management, oversight, and coordination.<sup>6</sup> The Coast Guard plans to establish operating capability for this unified approach by July 20, 2007, with an initial command center located in Ballston, Virginia. Officials told us they were well under way in planning for this reorganization. Officials expect about 100 staff will be assigned to the center when it reaches its initial operating

<sup>6</sup>Although the deployable forces will be reorganized under a single command authority, officials told us the units would remain based in their current locations. However, personnel on these teams may be rotated or cross-deployed with other specialized teams. For example, an MSST located at Seattle will remain based in that location, but the personnel attached to that MSST may be rotated or mixed with other MSST units to meet ongoing needs.

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capability, growing to about 150 personnel once the command structure is completed. According to officials, all administrative staff selected for the center will be drawn from headquarters, district, and area levels.

We have not studied this reorganization, but our prior work on other aspects of Coast Guard operations suggests that the Coast Guard may face a number of implementation challenges. Some may be similar to those that Coast Guard faced when it created its sector commands, such as obtaining buy-in from personnel that will be affected by the reorganization or addressing realignment issues at the district level. Another challenge is to ensure that the change does not adversely affect mission performance at the sector and field unit levels. Currently, for example, sector commanders make use of available local MSST units—made available by district and area commanders—to help meet shortfalls in resource availability for everyday missions, such as conducting high-risk vessel escorts and harbor security patrols. If these units were not available to support mission needs, additional strain could be put on the performance of these local units.

These changes to the command structure are part of plans that extend beyond fiscal year 2008. In his recent State of the Coast Guard speech, the Commandant of the Coast Guard unveiled a proposal to combine the Coast Guard's Atlantic and Pacific Area command functions into a single Coast Guard operations command for mission execution. In addition, the Coast Guard plans to establish a new mission support command, which will have responsibility for nationwide maintenance, logistics, and supply activities. According to Coast Guard officials, the current structure is not well suited to responding to post-September 11 transnational threats. For example, Coast Guard officials said the current structure at times works against the Coast Guard in operations with Joint Interagency Task Forces, whose operating areas are not the same as the Coast Guard's established area boundaries. Coast Guard officials told us a working group had developed a blueprint of the new operational force structure, but the Coast Guard is not ready to release it. Guard officials told us they expected the reorganization would be implemented during the current Commandant's 4-year term.

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## Consolidation of Acquisitions Oversight Management Challenged By Staffing Shortfalls

The Coast Guard also plans to consolidate its acquisitions management offices, placing all major acquisitions programs and oversight functions under the control of a single acquisitions officer. The goals of this consolidation are to improve Coast Guard oversight of acquisitions, better balance contracting officers and acquisition professionals among its major acquisition projects, and address staff retention and shortage problems

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associated with the acquisitions management program. However, the Coast Guard has not adequately staffed the acquisitions management program to meet its current workload, and maintaining an appropriate staff size will be challenging, despite the reorganization. For example, a February 2007 independent analysis found that the Coast Guard does not possess a sufficient number of acquisition personnel or the right level of experience needed to manage the Deepwater program.<sup>7</sup> Headquarters officials told us the reorganization would address retention problems by creating a new acquisitions specialty career ladder that could attract new pools of talent. Still, given its past history of staff shortages and difficulties retaining acquisition staff, the Coast Guard will face challenges maintaining an appropriately sized acquisition staff, at least in the near term. Coast Guard headquarters officials told us the Deepwater program had pushed other important acquisitions priorities aside, and this new organization would help the Coast Guard advance these other priorities, such as boats, piers, and other shoreside physical infrastructure. In our view, it is unclear how the reorganization of the acquisition function will improve the prospects for these other programs, given Coast Guard's priorities and ongoing constraints on funding.

The reorganized acquisition office is expected to merge the now stand-alone Deepwater acquisition project with the existing acquisition directorate and research and development centers. The new office is expected to be led by a new Coast Guard Chief Acquisition Officer who will have responsibility over all procurement projects and by a deputy who will deal largely with Deepwater issues. At the program management level, Coast Guard is establishing four program managers to lead each acquisitions area, including (1) surface assets; (2) air assets; (3) command, control, communications, computers, intelligence, surveillance, and reconnaissance; and (4) small boats and shore-based infrastructure, such as command centers and boathouses. The Coast Guard plans to begin implementing this reorganization in July 2007. It is too early to tell if the Coast Guard's reorganization will enable it to achieve its goals—notably, better balance of acquisitions support between Deepwater and the Coast Guard's other acquisitions programs.

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<sup>7</sup>Defense Acquisition University, *Quick Look Study: United States Coast Guard Deepwater Program*, (Fort Belvoir, Virginia, 2007).

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## Acquisition Challenges Continue as Several Programs Make Progress

While some Coast Guard major acquisition projects continue to face challenges, especially the Deepwater program, several of these projects are making progress. The record for Deepwater has been mixed, with 7 of 10 asset classes on or ahead of schedule. Three classes, however, are behind schedule for various reasons and several factors add to the uncertainty about the delivery of other Deepwater assets. Contract management issues that we have reported on previously continue to be challenges to the Coast Guard. Installation of equipment for the initial phase of NAIS, an acquisition that is designed to allow the Coast Guard to monitor and track vessels as far as 2,000 nautical miles off the U.S. coast, is currently under way, but without changes to existing regulations, some vessels will be able to avoid taking part in the system. The Coast Guard's timeline for achieving full operating capability for its search and rescue communications system, Rescue 21, was delayed from 2006 to 2011, and the estimated total acquisition cost increased from 1999 to 2005, but according to Coast Guard officials, many of the issues that led to these problems are being addressed. Coast Guard acquisition officials said they are providing more oversight to the contractor after we reported on contract management shortcomings.

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## Coast Guard Continues to Face Acquisition Challenges with Deepwater Program

The Coast Guard continues to face challenges in managing the Deepwater program. The delivery record for assets is mixed and technology and funding uncertainties, recent changes to Coast Guard plans for procuring Deepwater assets, as well as the 25-year time frame for asset delivery add to uncertainties about the delivery schedule for future Deepwater assets. We have reported concerns about management of the Deepwater program for several years now and have made recommendations aimed at improving the program. The Coast Guard continues to address these recommendations as it seeks to better manage the Deepwater program. In addition to these program management issues, performance and design problems for certain Deepwater assets have created additional operational challenges for the Coast Guard. The Coast Guard is taking steps to mitigate these problems, but challenges remain. Below is a summary of our recent Deepwater work.<sup>8</sup>

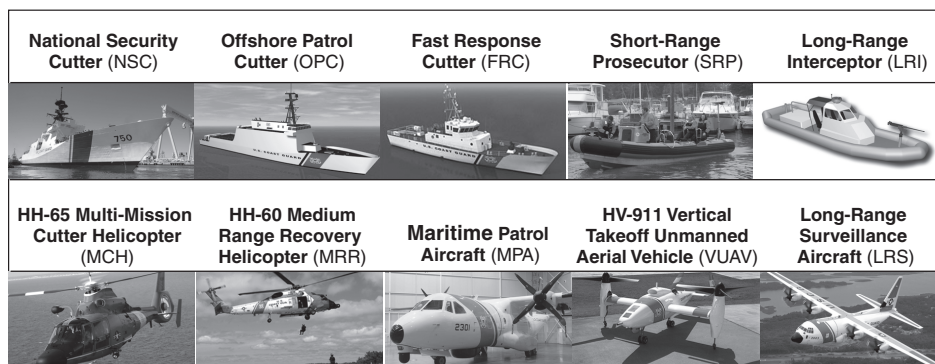
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<sup>8</sup>For a more complete description of our reviews of the Deepwater program, see GAO, *Coast Guard: Preliminary Observations on Deepwater Program Assets and Management Challenges*, [GAO-07-446T](#) (Washington, D.C.: Feb. 15, 2007).

**Deepwater Asset Delivery Schedule Is Mixed and Somewhat Uncertain**

The Coast Guard’s Deepwater program is a 25-year, \$24 billion plan to replace or upgrade its fleet of vessels and aircraft. Upon completion, the Deepwater program is to consist of 5 new classes of vessels—the National Security Cutter (NSC), Offshore Patrol Cutter (OPC), Fast Response Cutter (FRC), Short-Range Prosecutor (SRP), and Long-Range Interceptor (LRI); 1 new class of fixed-wing aircraft—the Maritime Patrol Aircraft (MPA); 1 new class of unmanned aerial vehicles—the Vertical Unmanned Aerial Vehicle (VUAV); 2 classes of upgraded helicopters—the Medium-Range Recovery Helicopter (MRR) and the Multi-Mission Cutter Helicopter (MCH); and 1 class of upgraded fixed-wing aircraft—the Long-Range Surveillance Aircraft (LRS).<sup>9</sup> Figure 5 illustrates the 10 classes of Deepwater assets.

**Figure 5: Deepwater Vessel and Aircraft Classes**



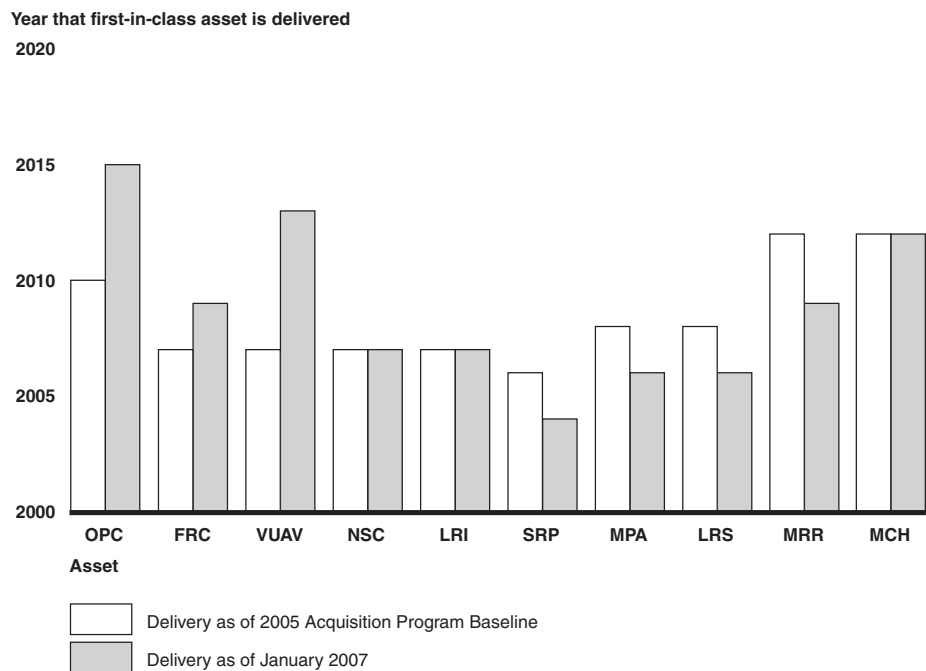
Source: U.S. Coast Guard.

Our preliminary observations indicated that, as of January 2007, of the 10 classes of Deepwater assets to be acquired or upgraded, the delivery record for first-in-class assets (that is, the first of multiple aircraft or vessels to be delivered in each class) was mixed. Specifically, 7 of the 10 asset classes were on or ahead of schedule. Among these, 5 first-in-class assets had been delivered on or ahead of schedule; and 2 others remained on schedule but their planned delivery dates were in 2009 or beyond. In contrast, 3 Deepwater asset classes were behind schedule due to various

<sup>9</sup>In addition to these asset classes, the Deepwater program includes other projects such as Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems. For example, the Coast Guard plans to procure surveillance data from another unmanned aerial vehicle, the RQ-4A. Because this is not to be acquired as a capital investment, we do not include it among the assets to be acquired or upgraded.

problems related to designs, technology, or funding. Using the 2005 Deepwater Acquisition Program Baseline as the baseline, figure 6 indicates, for each asset class, whether delivery of the first in class asset was ahead of schedule, on schedule, or behind schedule as of January 2007.

**Figure 6: Comparison of the Estimated Delivery Dates for the First-in-Class Deepwater Assets from the 2005 Deepwater Acquisition Baseline and as of January 2007**



Source: GAO analysis of documentation provided by U.S. Coast Guard.

As part of our ongoing work, we are analyzing Coast Guard planning documents to evaluate the current estimates of Deepwater asset delivery dates. Several factors add to the uncertainty about the delivery schedule of Deepwater assets. First, the Coast Guard is still in the early phases of the 25-year Deepwater acquisition program and the potential for changes in the program over such a lengthy period of time make it difficult to forecast the ability of the Coast Guard to acquire future Deepwater assets according to its published schedule. For example, technology changes since the award of the original Deepwater contract in 2002 have already, in part, delayed delivery of the VUAV, and the Coast Guard is currently studying the potential use of an alternative unmanned aerial vehicle. Second, changes to funding levels can impact the future delivery of



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Deepwater assets. For example, despite earlier plans, the fiscal year 2008 Department of Homeland Security congressional budget justification indicates that the Coast Guard does not plan to request funding for some Deepwater assets in FY 2008, such as the OPC and the VUAV. Acquisition of these two Deepwater assets has now been delayed until FY 2013, at the earliest. Finally, the Coast Guard has recently made a number of program management and asset-specific changes that could impact the delivery schedules for its Deepwater assets. For example, the Coast Guard has begun to bring all acquisition efforts under one organization. Further, the Coast Guard announced that it has terminated acquisition of the FRC-B, an off-the-shelf patrol boat that is intended to serve as an interim replacement for the Coast Guard's deteriorating fleet of 110-foot patrol boats, through the system integrator and plans to assign responsibility for the project to the Coast Guard's acquisition directorate. These types of programmatic changes will take time to implement, and thus add to uncertainty about the specific delivery dates of certain Deepwater assets.

Deepwater Program  
Management, Contractor  
Accountability, and Cost  
Control

In 2001, we described the Deepwater program as “risky” due to the unique, untried acquisition strategy for a project of this magnitude within the Coast Guard.<sup>10</sup> The Coast Guard used a system-of-systems approach to replace or upgrade assets with a single, integrated package of aircraft, vessels, and unmanned aerial vehicles, to be linked through systems that provide C4ISR and supporting logistics. In a system of systems, the deliveries of Deepwater assets are interdependent, thus schedule slippages and uncertainties associated with potential changes in the design and capabilities of any one asset increases the overall risk that the Coast Guard might not meet its expanded homeland security missions within given budget parameters and milestone dates. The Coast Guard also used a systems integrator—which can give the contractor extensive involvement in requirements development, design, and source selection of major system and subsystem subcontractors. The Deepwater program is also a performance-based acquisition, meaning that it is structured around the results to be achieved rather than the manner in which the work is performed. If performance-based acquisitions are not appropriately planned and structured, there is an increased risk that the government may receive products or services that are over cost estimates, delivered late, and of unacceptable quality.

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<sup>10</sup>GAO, *Coast Guard: Progress Being Made on Deepwater Project, but Risks Remain*, GAO-01-564 (Washington, D.C.: May 2, 2001).

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Deepwater Performance and Design Problems Creating Operational Challenges for Coast Guard

In 2004 and in subsequent assessments in 2005 and 2006, we reported concerns about the Deepwater program related to three main areas—program management, contractor accountability, and cost control.<sup>11</sup> The Coast Guard’s ability to effectively manage the program has been challenged by staffing shortfalls and poor communication and collaboration among Deepwater program staff, contractors, and field personnel who operate and maintain the assets. Despite documented problems in schedule, performance, cost control, and contract administration, measures for holding the contractor accountable resulted in an award fee of \$4 million (of the maximum \$4.6 million) for the first year. Through the first 4 years of the Deepwater contract, the systems integrator received award fees that ranged from 87 percent to 92 percent of the total possible award fee (scores that ranged from “very good” to “excellent” based on Coast Guard criteria), for a total of over \$16 million. Further, the program’s ability to control Deepwater costs is uncertain given the Coast Guard’s lack of detailed information on the contractor’s competition decisions. While the Coast Guard has taken some actions to improve program outcomes, our assessment of the program and its efforts to address our recommendations continues, and we plan to report on our findings later this year.

In addition to the program management issues discussed above, there have been problems with the performance and design of Deepwater patrol boats that have created operational challenges for the Coast Guard. The Deepwater program’s bridging strategy to convert the legacy 110-foot patrol boats into 123-foot patrol boats has been unsuccessful. The Coast Guard had originally intended to convert all 49 of its 110-foot patrol boats into 123-foot patrol boats in order to increase the patrol boats’ annual operational hours and to provide additional capabilities, such as small boat stern launch and recovery and enhanced and improved C4ISR. However, the converted 123-foot patrol boats began to display deck cracking and hull buckling and developed shaft alignment problems, and the Coast Guard elected to stop the conversion process at eight hulls upon

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<sup>11</sup>GAO, *Contract Management: Coast Guard’s Deepwater Program Needs Increased Attention to Management and Contractor Oversight*, [GAO-04-380](#) (Washington, D.C.: Mar. 9, 2004); *Coast Guard: Progress Being Made on Addressing Deepwater Legacy Asset Condition Issues and Program Management, but Acquisition Challenges Remain*, [GAO-05-757](#) (Washington, D.C.: Jul. 22, 2005); and *Coast Guard: Changes in Deepwater Plan Appear Sound, and Program Management Has Improved, but Continued Monitoring is Warranted*, [GAO-06-546](#) (Washington, D.C.: Apr. 28, 2006).

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determining that the converted patrol boats would not meet their expanded post-September 11 operational requirements.

These performance problems have had operational consequences for the Coast Guard. The hull performance problems with the 123-foot patrol boats led the Coast Guard to remove all of the eight converted normal 123-foot patrol boats from service effective November 30, 2006. The Commandant of the Coast Guard has stated that having reliable, safe cutters is “paramount” to executing the Coast Guard’s missions.<sup>12</sup> Thus, removing these patrol boats from service affects the Coast Guard’s operations in its missions, such as search and rescue and alien and migrant interdiction. The Coast Guard is taking actions to mitigate the operational impacts resulting from the removal of the 123-foot patrol boats from service. Specifically, in recent testimony, the Commandant of the Coast Guard stated that the Coast Guard has taken the following actions:

- multicrewing eight of the 110-foot patrol boats with crews from the 123-foot patrol boats that have been removed from service so that patrol hours for these vessels can be increased;
- deploying other Coast Guard vessels to assist in missions formerly performed by the 123-foot patrol boats;
- securing permission from the U.S. Navy to continue using three 179-foot cutters on loan from the Navy (these were originally to be returned to the Navy in 2008) to supplement the Coast Guard’s patrol craft; and
- compressing the maintenance and upgrades on the remaining 110-foot patrol boats.

The FRC, which was intended as a long-term replacement for the legacy patrol boats, has experienced design problems that have operational implications as well. As we reported in 2006, the Coast Guard suspended design work on the FRC due to design risks such as excessive weight and horsepower requirements.<sup>13</sup> Coast Guard engineers raised concerns about the viability of the FRC design (which involved building the FRC’s hull,

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<sup>12</sup>U.S. Coast Guard, Office of Public Affairs, *Coast Guard Suspends Converted Patrol Boat Operations*, (Washington, D.C., 2006).

<sup>13</sup>GAO, *Coast Guard: Status of Deepwater Fast Response Cutter Design Efforts*, [GAO-06-764](#) (Washington, D.C.: June 23, 2006).

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decks, and bulkheads out of composite materials rather than steel) beginning in January 2005. In February 2006, the Coast Guard suspended FRC design work after an independent design review by third party consultants demonstrated, among other things, that the FRC would be far heavier and less efficient than a typical patrol boat of similar length, in part, because it would need four engines to meet Coast Guard speed requirements.

One operational challenge related to the FRC is that the Coast Guard will end up with two classes of FRCs. The first class of FRCs to be built would be based on an adapted design from a patrol boat already on the market to expedite delivery. The Coast Guard would then pursue development of a follow-on class that would be completely redesigned to address the problems in the original FRC design plans. Coast Guard officials recently estimated that the first FRC delivery will slip to fiscal year 2009, at the earliest, rather than 2007 as outlined in the 2005 Revised Deepwater Implementation Plan. Thus, the Coast Guard is also facing longer-term operational gaps related to its patrol boats.

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### Initial Deployment of Nationwide Automatic Identification System Is Under Way, with Decisions Still to Come about Extending Coverage to Additional Vessels

Outside Deepwater, one acquisition project included in the fiscal year 2008 budget is the Nationwide Automatic Identification System, a system designed to identify, track, and communicate with vessels bound for or within U.S. waters and forwarding that information for additional analysis. NAIS uses a maritime digital communication system that transmits and receives vessel position and voyage data. The Coast Guard describes NAIS as its centerpiece in its effort to build Maritime Domain Awareness, its ability to know what is happening on the water.

NAIS is not expected to reach full capability until 2014, when the system will be able to track ships as far as 2,000 nautical miles away and communicate with them when they are within 24 nautical miles of the U.S. coast. It is being implemented in three phases, the first of which is scheduled to be fully operational in September 2007. At that time, the Coast Guard expects to have the ability to track—but not communicate with—vessels in 55 ports and 9 coastal areas. The largest areas of the continental U.S. coastline that will remain without coverage after this first phase are the Pacific Northwest and Gulf coasts. The second phase calls for being able to track ships out to 50 nautical miles from the entire U.S. coast and communicate with them as far as 24 nautical miles out. This is the phase addressed in the fiscal year 2008 budget.

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The \$12 million fiscal year 2008 AC&I request for NAIS is expected to pay for implementing the initial operating capability for phase two. The Coast Guard has received approval from the Department of Homeland Security to issue solicitations and award contracts for this initial capability, and the agency has held information sessions to gauge industry interest in participating and to help refine its statement of work for the initial solicitation. The initial solicitation will provide requirements for full receiving and transmitting capability for two sectors within one Coast Guard area and one sector in another area. With this infrastructure in place the Coast Guard expects to be able to test identification, tracking, and communication performance, including such features as the ability to determine if the vessel transmissions are accurately reflecting the actual location of a vessel.

The Coast Guard is considering whether to require additional types of vessels to install and use the equipment needed for the Coast Guard to track vessels and communicate with them. Current regulations require certain vessels (such as commercial vessels over 65 feet in length) traveling on international voyages or within VTS areas to install and operate the transmission equipment.<sup>14</sup> Vessels that are not subject to current regulations generally include noncommercial and fishing vessels and commercial vessels less than 65 feet long. This means that many domestic vessels are not required to transmit the vessel and voyage information and therefore will be invisible to the NAIS. The Coast Guard has indicated in the *Federal Register* that it is considering expanding the requirements to additional vessels.<sup>15</sup>

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<sup>14</sup>Vessel traffic services areas are locations where the Coast Guard monitors and communicates with vessels using AIS, radar, and other technologies to prevent collisions and other accidents.

<sup>15</sup>In our previous report we recommended that the Coast Guard should pursue opportunities to cost-share with private entities that were interested in receiving vessel and voyage information transmissions. According to Coast Guard officials, subsequent to the publication of the report they have partnered with private entities in Tampa, Florida, and Alaska.

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## Coast Guard Has Taken Actions to Improve Oversight of Rescue 21 Contracts, but System Coverage Has Been Reduced

Another non-Deepwater project covered in the budget request is Rescue 21, the Coast Guard's command, control, and communication infrastructure used primarily for search and rescue. The fiscal year 2008 AC&I budget includes \$81 million for continued development of Rescue 21. In May 2006 we reported that shortcomings in Coast Guard's contract management and oversight efforts contributed to program cost increases from \$250 million in 1999 to \$710.5 million in 2005 and delays in reaching full operating capability from 2006 to 2011.<sup>16</sup> Our recommendations included better oversight of the project, completion of an integrated baseline review of existing contracts, and development of revised cost and schedule estimates. According to the Coast Guard, it has taken a series of actions in response, including program management reviews and oversight meetings, conducting integrated baseline reviews on existing contracts, and meeting regularly to assess project risks.

According to the Coast Guard officials we met with, the contractor is currently on time and on budget for installing the full system in 11 Rescue 21 regions, including such regions as New Orleans, Long Island/New York, and Miami. The last of the 11 regions covered by current contracts is scheduled to be completed by October 2008. Contracts for the 25 regions that remain have not been signed. To keep to current project cost and schedule baselines, however, the Coast Guard has reduced the required performance of the system. Originally, Rescue 21 was supposed to limit coverage gaps to 2 percent, meaning that the system had to be able to capture distress calls in 98 percent of the area within 20 nautical miles of the coast and within navigable rivers and other waterways. The current contract calls for coverage gaps of less than 10 percent. Rescue 21 was also intended to have the capability to track Coast Guard vessels and aircraft and provide data communication with those assets. Neither the capability to track the Coast Guard's own assets nor data communications is included in the current technology being installed.

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<sup>16</sup>GAO, *United States Coast Guard: Improvements Needed in Management and Oversight of Rescue System Acquisition*, [GAO-06-623](#) (Washington, D.C.: May 2006).

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## Coast Guard Faces Additional Challenges Addressing Traditional Missions

While the fiscal year 2008 budget request contains funding for specifically addressing the projects discussed above, certain other projects were judged by Coast Guard officials to be lower in priority and were not included. We have examined two of these areas in recent work—vessels for aids to navigation and domestic icebreaking activity, and vessels for icebreaking in polar areas.

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## Decline in Condition of Some ATON and Domestic Icebreaking Assets May Require More Attention for Recapitalization or Outsourcing Options

Last September, we completed work for this committee on the condition of Coast Guard aids-to-navigation (ATON) and icebreaking assets.<sup>17</sup> More than half of these assets have reached or will be approaching the end of their designed service lives. In 2002, the Coast Guard proposed options for systematically rehabilitating or replacing 164 cutters and boats in these fleets after determining that the age, condition, and cost of operating these assets would diminish the capability of the Coast Guard to carry out ATON and domestic icebreaking missions. We noted that no funds had been allocated to pursue these options, apparently due to competing needs for replacing or rehabilitating other Coast Guard assets. These competing needs, reflected largely in the Coast Guard's expensive and lengthy Deepwater asset replacement program, will continue for some time, as will other pressures on the federal budget. The Coast Guard is requesting no additional spending for ATON assets or infrastructure in fiscal year 2008.

Without specific funding to move forward, the Coast Guard has attempted to break the project into smaller components and pursue potential funding from within the Coast Guard's budget, focusing on the assets most in need of maintenance or replacement. In February 2006, the Coast Guard began a project to replace its fleet of 80 trailerable aids-to-navigation boats with new boats that have enhanced capabilities to do ATON work as well as other missions.<sup>18</sup> According to a Coast Guard official, this acquisition would cost approximately \$14.4 million if all 80 boats are purchased and would bring on new boats over a 5-year period as funds allow. The Coast Guard official responsible for the project said the Coast Guard intends to make the purchases using a funding stream appropriated for the maintenance of nonstandard boats that can be allocated to the boats with the most pressing maintenance or recapitalization needs. Availability of

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<sup>17</sup>GAO, *Coast Guard: Condition of Some Aids-to-Navigation and Domestic Icebreaking Vessels Has Declined; Effect on Mission Performance Appears Mixed*, [GAO-06-979](#) (Washington, D.C.: Sept. 22, 2006).

<sup>18</sup>These boats can be placed on trailers and transported on land by truck.

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these funds, however, depends on the condition and maintenance needs of other nonstandard boats; if this funding has to be applied to meet other needs, such as unanticipated problems, it may not be available for purchasing these boats.

In addition to carrying out their primary missions of ATON and domestic icebreaking, these assets have also been used in recent years for other missions such as homeland security. The Coast Guard's ATON and domestic icebreakers saw a sharp increase in use for homeland security missions after the attacks of September 11, and while this trend has moderated somewhat, the use of some assets in these missions continues well above pre-September 11 levels. This increase is most prominent for domestic icebreakers, which are being operated more extensively for other purposes at times of year when no icebreaking needs to be done. Newer ATON vessels, which have greater multimission capabilities than older vessels, tend to be the ATON assets used the most for other missions.

In addition to considering options for replacing or rehabilitating its ATON assets, the Coast Guard also has examined possibilities for outsourcing missions. In 2004 and 2006, the Coast Guard completed analyses of what ATON functions could be feasibly outsourced. Although possibilities for outsourcing were identified for further study, Coast Guard officials noted that outsourcing also carries potential disadvantages. For example, they said it could lead to a loss of "surge" capacity—that is the capacity to respond to emergencies or unusual situations. Coast Guard officials noted that outsourcing or finding a contractor to do work after an event such as Katrina is difficult due to the increased demand for their services as well as the fact that the labor pool may have been displaced. When a contractor is found, it usually takes a long time to get the work completed due to the backlog of work and tends to be very expensive. In addition, this surge capability may be needed for other missions, such as those that occur when ATON assets can be used to support search and rescue efforts. In the aftermath of Hurricane Katrina, for example, some ATON assets provided logistical support for first responders or transported stranded individuals. Coast Guard officials stated that after Hurricane Katrina, its own crews were able to begin work immediately to repair damaged aids and get the waterways open to maritime traffic again. Coast Guard officials also indicated that outsourcing may adversely affect the Coast Guard's personnel structure by reducing opportunities to provide important experience for personnel to advance in their careers.



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## Coast Guard Faces Decision on Future of Polar Icebreakers

The Coast Guard confronts ongoing maintenance challenges that have left its polar icebreaking capability diminished. The Coast Guard has two Polar-class icebreakers for breaking channels in the Antarctic.<sup>19</sup> Both are reaching the end of their design service lives, and given the funding challenges associated with maintaining them, the Coast Guard decided to deactivate one of the two, the *Polar Star*, in 2006. This reduced icebreaking capability since only one Polar-class icebreaker, the *Polar Sea*, was available, and for the *Polar Sea* it increased maintenance needs while reducing time available to conduct maintenance.<sup>20</sup>

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<sup>19</sup>In addition to the Polar-class icebreakers, the Coast Guard acquired a third icebreaker, the *Healy*, in 2000. Unlike the Polar-class icebreakers, the *Healy* was designed to be an Arctic scientific platform and does not have the capabilities to break ice in the Antarctic under most conditions. According to Coast Guard officials, although the *Healy* also has maintenance issues, the condition and extent of maintenance needed for the Polar-class icebreakers is more severe.

<sup>20</sup>Coast Guard officials estimated it would require \$40 million to \$50 million and 2 to 3 years of service to refurbish the deactivated Polar-class icebreaker—the *Polar Star*—to a capability level commensurate with its other Polar-class icebreaker. Coast Guard officials noted that this funding would cover upgrades to systems and to replace vessel infrastructure and parts that Coast Guard had cannibalized over the past years to replace parts on the *Polar Sea*.

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**Figure 7: Coast Guard Polar-class Icebreaker**



Source: Coast Guard.

Coast Guard officials and others have reported that failure to address these challenges could leave the nation without heavy icebreaking capability and could jeopardize the investment made in the nation's Antarctic Program.<sup>21</sup> According to Coast Guard officials, the remaining Polar-class icebreaker's age and increased operational tempo have left it unable to continue the mission in the long term without a substantial investment in maintenance and equipment renewal. One option, refurbishing the two existing Polar-class icebreakers for an additional 25 years of service, is estimated to cost between \$552 million and \$859

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<sup>21</sup>In the Antarctic, the United States maintains three year-round scientific stations. Coast Guard Polar-class icebreakers provide heavy icebreaking support necessary to open a shipping channel and allow maritime resupply of fuel, food, and cargo to these scientific stations. Polar icebreakers deploy to support primary missions such as the U.S. Antarctic Program, but while present in the polar region, they often support secondary missions such as search and rescue or respond to maritime environmental response situations as situations arise.

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million. Another option, building new assets, would cost an estimated \$600 million per vessel, according to Coast Guard officials.<sup>22</sup>

Coast Guard officials have begun planning a transition strategy to help keep the sole operating Polar-class icebreaker mission-capable until new or refurbished assets enter service, which would take an estimated 8 to 10 years.<sup>23</sup> According to officials, this 10-year recapitalization plan will identify current and projected maintenance service needs and equipment renewal projects and associated costs, alternatives to address these needs, and timelines for completing these projects.

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Madam Chair and members of the subcommittee, this completes my statement for the record.

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<sup>22</sup>According to the Coast Guard, this estimate is based on *Healy* construction costs, making adjustments for increased structural and power requirements.

<sup>23</sup>In 2007, the National Research Council of the National Academies issued a final report on the condition of the U.S. polar icebreaking fleet (*Polar Icebreakers in a Changing World: An Assessment of U.S. Needs*). This report corroborated Coast Guard's assessment of the increased risks faced by the deteriorating condition of these vessels and recommended that Congress immediately take action to design, plan, and build two replacement polar icebreaking vessels to replace the aging Polar-class vessels. Moreover, because these new vessels would not be available for another 8 to 10 years, the report recommends that Congress provide the Coast Guard with a sufficient operations and maintenance budget to address maintenance backlogs on the two operating polar icebreakers to ensure a minimum level of icebreaking capability during this period. The report also recommends leaving the *Polar Star* in caretaker status until the new vessels enter service.

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## **GAO Contacts and Staff Acknowledgments**

For information about this statement, please Contact Stephen L. Caldwell, Acting Director, Homeland Security and Justice Issues, at (202) 512-9610, or [caldwells@gao.gov](mailto:caldwells@gao.gov). Contact points for our Office of Congressional Relations and Public Affairs may be found on the last page of this statement. Individuals making key contributions to this testimony include Penny Augustine, Jonathan Bachman, Jason Berman, Steven Calvo, Jonathan Carver, Christopher Conrad, Adam Couvillion, Geoffrey Hamilton, John Hutton, Christopher Hatscher, Tonia Johnson, and Stan Stenersen.

# Appendix I: Performance Results by Program from Fiscal Year 2002 through Fiscal Year 2006

Appendix I provides a detailed list of Coast Guard performance results for the Coast Guard's 11 programs from fiscal year 2002 through 2006.

Program	Program performance measure	2002	2003	2004	2005	2006	Performance target for 2006
<b>Programs meeting 2006 targets:</b>							
U.S. Exclusive Economic Zone Enforcement	Number of detected Exclusive Economic Zone (EEZ) incursions by foreign fishing vessels	250	<b>152</b>	247	<b>174</b>	164	≤199
Ice Operations (domestic icebreaking)	Number of waterway closure days	7	7	4	0	0	≤2 <sup>a</sup>
Marine Environmental Protection	Average of oil and chemical spills greater than 100 gallons per 100 million tons shipped	<b>35.1</b>	<b>29.4</b>	<b>22.1</b>	<b>18.5</b>	16.3	≤19
Ports, Waterways, and Coastal Security	Percent reduction in maritime terrorism risk over which the Coast Guard has influence	n/a	n/a	n/a	<b>14%</b>	17%	≥14%
Undocumented migrant interdiction	Percentage of interdicted illegal migrants entering the United States through illegal means	88.3%	85.3%	87.1%	85.5	89.1	≥89%
<b>Program expected to meet 2006 target:</b>							
Illegal Drug Interdiction	Percentage of cocaine removed out of total estimated cocaine entering the United States through maritime means <sup>b</sup>	Not reported	Not reported	<b>30.7%</b>	<b>27.3%</b>	TBD <sup>c</sup>	≥22%
<b>Programs that did not meet their 2005 targets:</b>							
Aids to Navigation	Number of collisions, allisions, and grounding	<b>2,098</b>	<b>2,000</b>	<b>1,876</b>	<b>1,825</b>	1,765	≤1748
Defense Readiness	Percentage of time that units meet combat readiness level	70%	78%	76%	67%	62%	100%
Living Marine Resources	Percentage of fisherman found in compliance with federal regulations	<b>97.3%</b>	<b>97.1%</b>	96.3%	96.4%	96.6%	≥97%
Marine Safety	5-year average annual mariner, passenger, and boating deaths and injuries	5,766	5,561	5,387	5,169	5,036	≤4721
Search and Rescue	Percentage of distressed mariners' lives saved	84.4%	87.7%	<b>86.8%</b>	<b>86.1%</b>	85.3%	≥86%

Source: GAO analysis of Coast Guard data.

Note: TBD, to be determined; n/a, not available. Bold numbers indicate that performance targets were met previously.

<sup>a</sup>The target for ice operations noted here is for domestic icebreaking only, and the target level varies according to the index for an entire winter. Thus, for those winters designated as severe, the target is 8 or fewer closure days. For winters designated as average, the target is 2 or fewer closure days. Because 2002 and 2004 were designated as average winters, the 7 and 4 days did not meet the target.

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<sup>b</sup>The performance measure for the illegal drug interdiction program, the percentage of cocaine removed, was revised in fiscal year 2004 from the percentage of cocaine seized in order to more accurately report the impact Coast Guard counterdrug activities have on the illicit drug trade. As a result, the cocaine removal rates for fiscal year 2002-2003 are not available.

<sup>c</sup>Complete data are not yet available for the illegal drug interdiction program. However, the Coast Guard anticipates meeting the performance target for this program based on past performance.

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# Related GAO Products

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*Homeland Security: Observations on the Department of Homeland Security's Acquisition Organization and on the Coast Guard's Deepwater Program.* [GAO-07-453T](#). Washington, D.C.: Feb. 8, 2007.

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*Coast Guard: Key Management and Budget Challenges for Fiscal Year 2005 and Beyond.* [GAO-04-636T](#). Washington, D.C.: April 7, 2004.

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