



# Coast Guard Deepwater Acquisition Programs: Background, Oversight Issues, and Options for Congress

Ronald O'Rourke  
Specialist in Naval Affairs

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## Summary

The term Deepwater refers to more than a dozen separate Coast Guard acquisition programs for replacing and modernizing the service's aging fleet of deepwater-capable ships and aircraft. Until April 2007, the Coast Guard pursued these programs as a single, integrated acquisition program that was known as the Integrated Deepwater System (IDS) program or Deepwater program for short. The now-separated Deepwater acquisition programs include plans for, among other things, 91 new cutters, 124 new small boats, and 247 new or modernized airplanes, helicopters, and unmanned aerial vehicles (UAVs).

The year 2007 was a watershed year for Deepwater acquisition. The management and execution of what was then the single, integrated Deepwater program was strongly criticized by various observers. House and Senate committees held several oversight hearings on the program. Bills were introduced to restructure or reform the program in various ways. Coast Guard and industry officials acknowledged certain problems in the program's management and execution and defended the program's management and execution in other respects. The Coast Guard announced a number of reform actions that significantly altered the service's approach to Deepwater acquisition (and to Coast Guard acquisition in general). Among these was the change from a single, integrated Deepwater acquisition program to a collection of separate acquisition programs.

The Coast Guard's management of Deepwater acquisition programs, including implementation of recommendations made by the Government Accountability Office (GAO), is a topic of continuing congressional oversight. Additional oversight issues include cost growth in Deepwater acquisition programs.

The Coast Guard's proposed FY2012 budget submission states that it "proposes the elimination of the Integrated Deepwater System (IDS) sub-appropriation and disaggregation of the IDS construct from the Coast Guard's Acquisition, Construction and Improvement (AC&I) appropriation.... Consistent with the dissolution of Integrated CG Systems and the disaggregation of the Deepwater Acquisition into asset-based Acquisition Program Baselines, the proposed changes align projects that were formerly grouped under Integrated Deepwater Systems (IDS) with the existing authorized structure for Vessels, Aviation, Shore, Other Equipment, and Personnel and Management."

The Coast Guard's FY2012 budget appears to request \$975.5 million in acquisition funding for Deepwater programs, including \$289.9 million for aircraft, \$512.0 million for surface ships and boats, and \$173.6 million for other items.

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## **Introduction**

This report provides background information and oversight issues for Congress on the Coast Guard's Deepwater acquisition programs for replacing and modernizing the service's aging fleet of deepwater-capable ships and aircraft. The Coast Guard's FY2012 budget appears to request \$975.5 million in acquisition funding for Deepwater programs, including \$289.9 million for aircraft, \$512.0 million for surface ships and boats, and \$173.6 million for other items. Congress's decisions on Deepwater acquisition programs could substantially affect Coast Guard capabilities and funding requirements, as well as contractors involved in these programs.

## **Background**

### **Deepwater Missions**

The Coast Guard performs a variety of missions in the deepwater environment, which generally refers to waters more than 50 miles from shore. These missions include search and rescue, drug interdiction, alien migrant interdiction, fisheries enforcement, marine pollution law enforcement, enforcement of lightering (i.e., at-sea cargo-transfer) zones, the International Ice Patrol in northern waters, overseas inspection of foreign vessels entering U.S. ports, overseas maritime intercept (sanctions-enforcement) operations, overseas port security and defense, overseas peacetime military engagement, and general defense operations in conjunction with the Navy. Deepwater-capable assets are also used closer to shore for various operations.

### **Origin of Deepwater Acquisition Effort**

The Coast Guard initiated the Deepwater acquisition effort in the late 1990s, following a determination by the Coast Guard that many of its existing (i.e., "legacy") deepwater-capable legacy assets were projected to reach their retirement ages within several years of one another. The Coast Guard's legacy assets at the time included 93 aging cutters and patrol boats and 207 aging aircraft. Many of these ships and aircraft are expensive to operate (in part because the cutters require large crews), increasingly expensive to maintain, technologically obsolete, and in some cases poorly suited for performing today's deepwater missions.

### **Structure of Deepwater Acquisition Effort**

#### **Structure Until 2007**

Until 2007, the Coast Guard pursued Deepwater acquisition through a single, performance-based, system-of-systems acquisition program that used a private-sector lead system integrator (LSI):

- **System-of-Systems Acquisition.** Rather than replacing its deepwater-capable legacy assets through a series of individual acquisition programs, the Coast Guard initially decided to pursue the Deepwater acquisition effort as an integrated, system-of-systems acquisition, under which a combination of new and

modernized cutters, patrol boats, and aircraft, along with associated C4ISR<sup>1</sup> systems and logistics support, would be procured as a single, integrated package (i.e., a system of systems). The Coast Guard believed that a system-of-systems approach would permit Deepwater acquisition to be optimized (i.e., made most cost effective) at the overall Deepwater system-of-systems level, rather than suboptimized at the level of individual Deepwater platforms and systems.

- **Private-Sector Lead Systems Integrator (LSI).** To execute this system-of-systems acquisition approach, the Coast Guard initially decided to use a private-sector lead system integrator (LSI)—an industry entity responsible for designing, building, and integrating the various elements of the package so that it met the Coast Guard’s projected deepwater operational requirements at the lowest possible cost.<sup>2</sup> The Coast Guard decided to use a private-sector LSI in part because the size and complexity of the Deepwater program was thought to be beyond the system-integration capabilities of the Coast Guard’s then-relatively small in-house acquisition work force.
- **Performance-Based Acquisition.** The Coast Guard initially pursued the Deepwater program as a performance-based acquisition, meaning that the Coast Guard set performance requirements for the program and permitted the private-sector LSI some latitude in determining how the various elements of the Deepwater system would meet those requirements.

The Coast Guard conducted a competition to select the private-sector LSI for the Deepwater program. Three industry teams competed, and on June 25, 2002, the Coast Guard awarded the role to Integrated Coast Guard Systems (ICGS)—an industry team led by Lockheed Martin and Northrop Grumman Ship Systems (NGSS). ICGS was awarded an indefinite delivery, indefinite quantity (ID/IQ) contract for the Deepwater program that included a five-year baseline term that ended in June 2007, and five potential additional award terms of up to five years (60 months) each. On May 19, 2006, the Coast Guard announced that it was awarding ICGS a 43-month first additional award term, reflecting good but not excellent performance by ICGS. With this additional award term, the contract has been extended to January 2011.

## Revised Structure Since 2007

In 2007, as the Coast Guard’s management and execution of the then-integrated Deepwater program was being strongly criticized by various observers, the Coast Guard announced a number of reform actions that significantly altered the service’s approach to Deepwater acquisition (and to acquisition in general). As a result of these reforms, the Coast Guard, among other things, stopped pursuing Deepwater acquisition through a single, performance-based, system-of-systems acquisition program that used a private-sector LSI, and began pursuing Deepwater acquisition as a collection of individual, defined-based acquisition programs, with the Coast Guard assuming the lead role as systems integrator for each:

- **Individual Programs.** Although Deepwater acquisition programs still appear in the budget under the common heading IDS, the Coast Guard is now pursuing

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<sup>1</sup> C4I stands for command, control, communications, computers, intelligence, surveillance, and reconnaissance.

<sup>2</sup> For more on private-sector LSIs, see CRS Report RS22631, *Defense Acquisition: Use of Lead System Integrators (LSIs)—Background, Oversight Issues, and Options for Congress*, by Valerie Bailey Grasso.

Deepwater acquisition programs as individual programs, rather than as elements of a single, integrated program. The Coast Guard states that it is still using a systems approach to optimizing its acquisition programs, including the Deepwater acquisition programs, but that the system being optimized is now the Coast Guard as a whole, as opposed to the Deepwater subset of programs.

- **Coast Guard as System Integrator.** The Coast Guard announced in April 2007 that, among other things, it would assume the lead role as systems integrator for all Coast Guard Deepwater assets (as well as other major Coast Guard acquisitions as appropriate). The Coast Guard is phasing out its reliance on ICGS as a private-sector LSI for Deepwater acquisition, and shifting system-integration responsibilities to itself. To support this shift, the Coast Guard is increasing its in-house system-integration capabilities.
- **Defined-Based Acquisition.** The Coast Guard has decided to shift from performance-based acquisition to the use of more-detailed specifications of the capabilities that various Deepwater assets are to have. The Coast Guard states that although this new approach involves setting more-detailed performance specifications, it does not represent a return to minutely detailed specifications such as the Military Specification (MilSpec) system once used in Department of Defense (DOD) acquisition programs. The Coast Guard refers to its new approach as defined-based acquisition.

Reflecting the 2007 change to a collection of separate acquisition programs, the Coast Guard's FY2012 budget submission

proposes the elimination of the Integrated Deepwater System (IDS) sub-appropriation and disaggregation of the IDS construct from the Coast Guard's Acquisition, Construction and Improvement (AC&I) appropriation. Enacting this proposal will further enhance acquisition management and accountability by aligning the appropriations structure with how the projects are managed. This initiative also enhances accountability by establishing a stronger linkage between appropriations and specific asset acquisition projects, promotes better alignment with the authorized appropriation structure, and is a natural outcome of the Coast Guard's ongoing efforts to reform acquisition management and oversight....

Consistent with the dissolution of Integrated CG Systems and the disaggregation of the Deepwater Acquisition into asset-based Acquisition Program Baselines, the proposed changes align projects that were formerly grouped under Integrated Deepwater Systems (IDS) with the existing authorized structure for Vessels, Aviation, Shore, Other Equipment, and Personnel and Management.<sup>3</sup>

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<sup>3</sup> (Department of Homeland Security, *United States Coast Guard, Fiscal Year 2012 Congressional Justification*, pp. CG-AC&I-3 and CG-AC&I-13)

## Deepwater Assets Planned for Acquisition<sup>4</sup>

### 2006 Acquisition Program Baseline

**Table 1** shows the Deepwater assets planned for acquisition under a November 2006 Deepwater Acquisition Program Baseline (APB), and the acquisition cost of these assets in then-year dollars as estimated at that time. As shown in the table, the total acquisition cost of these assets was estimated at the time at \$24.23 billion in then-year dollars. Acquisition funding for Deepwater assets was scheduled at the time to be completed in FY2025, and the buildout of the assets was scheduled at the time to be completed in 2027.

**Table 1. Deepwater Assets Planned for Acquisition (2006 Baseline)**

(with acquisition costs in millions of then-year dollars, as estimated at the time the Acquisition Program Baseline was published)

Qty.	Item	Cost
<b>Air assets</b>		
6	Missionized HC-130J Long Range Surveillance (LRS) aircraft (cost of missionization)	11
16	Modernized and upgraded HC-130H LRS aircraft (cost of modernization and upgrading)	610
36	New HC-144A Medium Range Surveillance (MRS) aircraft (also called Maritime Patrol Aircraft, or MPA) based on the European Aeronautic Defence and Space Company (EADS)/CASA CN-235 Persuader MPA aircraft design	1,706
42	Modernized and upgraded MH-60T Medium Range Recovery (MRR) helicopters (cost of modernization and upgrading)	451
102	Modernized and upgraded HH-65C Multi-Mission Cutter Helicopters (MCHs) (cost of modernization and upgrading)	741
45	New vertical take-off unmanned aerial vehicles (VUAVs), also called unmanned aircraft systems (UASs)	503
<b>Subtotal air assets</b>		<b>4,022</b>
<b>Surface assets</b>		
8	New National Security Cutters, or NSCs, displacing about 4,000 tons each (i.e., ships analogous to today's high-endurance cutters)	3,450
25	New Offshore Patrol Cutters, or OPCs, displacing about 3,200 tons each (i.e., ships analogous to today's medium-endurance cutters)	8,098
46	New Fast Response Cutters—Class A (FRC-As) displacing roughly 200 tons each, to replace most of the Coast Guard's existing 110-foot Island-class patrol boats	2,613
12	New Fast Response Cutters—Class B (FRC-Bs) displacing roughly 200 tons each, to replace the rest of the Coast Guard's existing 110-foot Island-class patrol boats	593
27	Medium Endurance Cutters (MECs) upgraded with a Mission Effectiveness Project (MEP) (cost of upgrading)	317
17	Patrol boats (PBs) upgraded with a MEP (cost of upgrading)	117
124	New small boats for Deepwater cutters, including 33 Long-Range Interceptors (LRIs) and 91 Short-	110

<sup>4</sup> Additional background information on Deepwater acquisition programs is available at the Coast Guard's acquisition website at <http://www.uscg.mil/acquisition/>.

Qty.	Item	Cost
	Range Prosecutors (SRPs)	
8	110-foot Island-class PBs converted into 123-foot PBs (cost of conversion; program not successful and halted after 8 boats)	95
	<b>Subtotal surface assets</b>	<b>15,393</b>
	<b>C4ISR systems</b>	
—	Common operational picture	1,071
—	Shore systems	102
—	Cutter upgrades	180
	<b>Subtotal C4ISR systems</b>	<b>1,353</b>
	<b>Integration and oversight</b>	
—	System engineering and oversight	1,118
—	Government program management	1,518
—	Technology obsolescence prevention	345
—	Logistics and infrastructure upgrades	481
	<b>Subtotal integration and oversight</b>	<b>3,462</b>
	<b>TOTAL</b>	<b>24,230</b>

**Source:** Deepwater Acquisition Program Baseline (APB) approved November 7, 2006.

Although **Table 1** shows 12 FRCs and 46 FRC-Bs, the Coast Guard's Request for Proposals (RFP) for the FRC-B program included options for building up to 34 FRC-Bs (which, if exercised, would reduce the number of FRC-As to as few as 24). The Coast Guard has also stated that if the FRC-Bs fully meet the requirements for the FRC, all 58 of the FRCs might be built to the FRC-B design.

A version of the baseline approved by the Department of Homeland Security (DHS) in May 2007 shows some different quantities compared to those shown above—specifically, 20 patrol boats upgraded with a MEP (rather than the 17 shown above); a figure to be determined for an unmanned aerial system (UAS) (rather than 45 VUAVs shown above); and no 110/123-foot modernized Island class patrol boats (rather than the 8 shown above).<sup>5</sup>

## Fleet Mix Analysis

As a consequence of assuming the role of lead system integrator for Deepwater acquisition programs, the Coast Guard is performing a fleet mix analysis to review its requirements for Deepwater assets. The analysis could lead to changes in the planned mix of Deepwater assets.<sup>6</sup>

<sup>5</sup> Government Accountability Office, *Coast Guard[:] Update on Deepwater Program Management, Cost, and Acquisition Workforce*, GAO-09-620T, April 22, 2009, p. 4.

<sup>6</sup> Rebekah Gordon, "Coast Guard Conducting Fleet-Mix Analysis for Deepwater Assets," *Inside the Navy*, April 6, 2009.

## Examples of Deepwater Deliveries and Other Milestones<sup>7</sup>

Examples of deliveries and other milestones for Deepwater assets include the following:

- **NSC:** The Coast Guard commissioned the first and second NSCs, *Bertholf* and *Waesche*, into service on August 4, 2008, and May 7, 2010, respectively. The third, *Stratton*, had its keel laying on July 20, 2009, and was 86% complete as of June 3, 2011.
- **OPC:** The Coast Guard released the draft specification for the OPC on May 2, 2011.
- **FRC:** As of December 22, 2010, the first six FRCs were 85%, 68%, 55%, 37%, 12%, and 1% complete, respectively. The Coast Guard testified in April 2011 that “delivery of the first FRC is scheduled for the fall of 2011.”<sup>8</sup> The first FRC was launched (meaning that it was put into the water for the final phase of its construction) on April 21, 2011.
- **HC-144A:** The first HC-144A Ocean Sentry MPA aircraft was accepted by the Coast Guard on March 10, 2008. On February 6, 2009, an HC-144A officially stood watch for the first time on a scheduled operational patrol. The HC-144A achieved Initial Operational Capability (IOC) on April 22, 2009. The 11<sup>th</sup> HC-144A was delivered on October 5, 2010. The 12<sup>th</sup> HC-144A Mission System Pallet (MSP) was delivered on December 20, 2010.
- **HC-130J/H:** The first missionized HC-130J LRS aircraft was accepted by the Coast Guard on February 29, 2008; the sixth was accepted on May 18, 2010. Two more HC-130Js are on order.<sup>9</sup> As of May 31, 2011, new surface search radars had been installed on 23 of 23 HC-130H aircraft.
- **MH-60T:** The first production MH-60T Jayhawk Medium Range Recovery Helicopter was delivered on June 3, 2009, and the MH-60T achieved Initial Operational Capability (IOC) on October 1, 2009. As of May 25, 2011, 19 had been delivered to the Coast Guard.
- **MH-65C/D:** The Coast Guard received its first MH-65C Multi-Mission Cutter Helicopter (MCH) in October 2007. As of May 19, 2011, the Coast Guard had configured and delivered 78 MH-65Cs and 10 MH-65Ds.

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<sup>7</sup> Except where indicated, information in this section is taken from the Coast Guard Acquisition Directorate’s web page on acquisition programs and projects (<http://www.uscg.mil/acquisition/programs/acquisitionprograms.asp>).

<sup>8</sup> [Statement of] Vice Admiral John P. Carrier, Deputy Commandant for Mission Support, Before the [House] Committee [on] Transportation & Infrastructure, Subcommittee on Coast Guard and Maritime Transportation, April 13, 2011, p. 7.

<sup>9</sup> [Statement of] Vice Admiral John P. Carrier, Deputy Commandant for Mission Support, Before the [House] Committee [on] Transportation & Infrastructure, Subcommittee on Coast Guard and Maritime Transportation, April 13, 2011, p. 8.

## Deepwater Acquisition Funding

### Prior-Year Funding

Table 2 below shows prior-year acquisition funding for Deepwater acquisition programs.

**Table 2. Prior-Year Acquisition Funding For Deepwater Programs**

(in millions of dollars, rounded to nearest tenth)

	Prior <sup>a</sup>	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Request	n/a	320.2	500.0	500.0	678	966.0	934.4	836.9	990.4	1,051.5	1,112.5
Appropriation	n/a	320.2	478.0	668.2	724.0	933.1	1065.9	783.3	1034.0	1,123.0	1,266.5
Rescissions	n/a		3.1	57.6	38.9	98.7		132.4			
Transfers	n/a				49.7	77.8	78.7				
Supplemental appropriations	n/a					124.2					
<b>Total<sup>b</sup></b>	<b>117.0</b>	<b>320.2</b>	<b>474.9</b>	<b>610.6</b>	<b>734.8</b>	<b>1036.4</b>	<b>1144.6</b>	<b>650.8</b>	<b>1034.0</b>	<b>1,123.0</b>	<b>1,266.5</b>

**Source:** Prepared by CRS using Coast Guard data provided on January 29, 2007 (FY2007 and prior years), and FY2008-FY2011 appropriations acts. Totals may not add due to rounding.

**Note:** n/a=not available.

- Pre-award funding prior to 2002.
- Excludes HC-130J funding prior and airborne use-of-force funding prior to FY2007. The figure for FY2010 excludes \$4.0 million funding for High Endurance Cutter sustainment and \$27.3 million in funding for polar icebreaker sustainment. Although these funds were appropriated in FY2010 under the surface category of the Integrated Deepwater System (IDS), the Coast Guard, as part of its FY2011 budget display of its Acquisition, Construction and Improvement (AC&I) account, shows these two line items outside the IDS collection of line items.

### FY2012 Acquisition Funding Requests

Table 3 shows acquisition funding requested for Deepwater programs for FY2012. As mentioned earlier, reflecting the 2007 change to a collection of separate acquisition programs, the Coast Guard's FY2012 budget submission

proposes the elimination of the Integrated Deepwater System (IDS) sub-appropriation and disaggregation of the IDS construct from the Coast Guard's Acquisition, Construction and Improvement (AC&I) appropriation. Enacting this proposal will further enhance acquisition management and accountability by aligning the appropriations structure with how the projects are managed. This initiative also enhances accountability by establishing a stronger linkage between appropriations and specific asset acquisition projects, promotes better alignment with the authorized appropriation structure, and is a natural outcome of the Coast Guard's ongoing efforts to reform acquisition management and oversight....

Consistent with the dissolution of Integrated CG Systems and the disaggregation of the Deepwater Acquisition into asset-based Acquisition Program Baselines, the proposed changes align projects that were formerly grouped under Integrated Deepwater Systems

(IDS) with the existing authorized structure for Vessels, Aviation, Shore, Other Equipment, and Personnel and Management.<sup>10</sup>

As a matter of convenience, **Table 3** arranges the FY2012 requests for Deepwater acquisition programs in the Deepwater budget-presentation format used in FY2011 and prior years.

**Table 3. FY2012 Acquisition Funding Requested for Deepwater Programs**  
(in millions of dollars, rounded to nearest tenth)

<b>Program</b>	<b>FY12 requested<sup>a</sup></b>
Maritime Patrol Aircraft (MPA)	129.5
HH-60 Conversion Projects	74.4 <sup>b</sup>
HH-65 Conversion/Sustainment Projects	24.0
HC-130H Conversion/Sustainment Projects	62.0
HC-130J Fleet Introduction	0
<b>Subtotal aircraft</b>	<b>289.9</b>
National Security Cutter (NSC)	77.0
Offshore Patrol Cutter (OPC)	25.0
Fast Response Cutter (FRC)	358.0
Deepwater small boats	5.0
Medium-endurance cutter sustainment	47.0
Patrol boats sustainment	0
<b>Subtotal surface ships</b>	<b>512.0</b>
Government program management	35.0
Systems engineering and integration	17.1
C4ISR	34.5
Deepwater logistics	87.0 <sup>c</sup>
Technology obsolescence prevention	0
<b>Subtotal other</b>	<b>173.6</b>
<b>TOTAL</b>	<b>975.5</b>

**Source:** Table prepared by CRS based on Coast Guard FY2011 and FY2012 budget submissions. C4ISR means Command and control, communications, computers, intelligence, surveillance and reconnaissance.

- a. The Coast Guard's FY2012 budget submission states: "The Coast Guard FY 2012 budget proposes the elimination of the Integrated Deepwater System (IDS) sub-appropriation and disaggregation of the IDS construct from the Coast Guard's Acquisition, Construction and Improvement (AC&I) appropriation. Enacting this proposal will further enhance acquisition management and accountability by aligning the appropriations structure with how the projects are managed. This initiative also enhances accountability by establishing a stronger linkage between appropriations and specific asset acquisition projects, promotes better alignment with the authorized appropriation structure, and is a natural outcome of the Coast Guard's ongoing efforts to reform acquisition management and oversight.... Consistent with the dissolution of Integrated CG Systems and the disaggregation of the Deepwater Acquisition into asset-based Acquisition

<sup>10</sup> (Department of Homeland Security, *United States Coast Guard, Fiscal Year 2012 Congressional Justification*, pp. CG-AC&I-3 and CG-AC&I-13)

Program Baselines, the proposed changes align projects that were formerly grouped under Integrated Deepwater Systems (IDS) with the existing authorized structure for Vessels, Aviation, Shore, Other Equipment, and Personnel and Management.” (Department of Homeland Security, *United States Coast Guard, Fiscal Year 2012 Congressional Justification*, pp. CG-AC&I-3 and CG-AC&I-13.)

- b. Includes \$56.1 million for HH-60 conversion projects and \$18.3 million for a project called CGNR 6017 to convert a retired Navy SH-60F helicopter into a Coast Guard MH-60T helicopter, so as to replace a Coast Guard MH-60T lost in a crash in 2010.
- c. The Coast Guard’s FY2012 budget submission states: “This is the first submission for CG-LIMS under the post-Integrated Deepwater Systems construct. Previous work managed under this program was conducted under the Deepwater Logistics Acquisition Project. Deepwater Logistics was disaggregated into CG-LIMS within the “Other” sub-appropriation and Major Acquisition Systems Infrastructure (MASI) within the ‘Shore and Aids to Navigation’ subappropriation.” The requested FY2012 figure shown in this table for Deepwater Logistics is the sum of the FY2012 funding requests for CG-LIMS (\$6.5 million) and for MASI projects relating to the NSC (\$18 million), the FRC (\$57 million), and the MPA (\$5.5 million).

## Criticism of Deepwater Management in 2007

The management and execution of the then-integrated Deepwater program was strongly criticized in 2007 by the DHS Inspector General (IG),<sup>11</sup> GAO,<sup>12</sup> the Defense Acquisition University (DAU) (whose analysis was requested by the Coast Guard),<sup>13</sup> several Members of Congress from committees and subcommittees that oversee the Coast Guard, and other observers. House and Senate committees held several oversight hearings on the program, at which non-Coast Guard, non-ICGS witnesses, as well as several Members of Congress, strongly criticized the management and execution of the program. Criticism focused on overall management of the program, and on problems in three cutter acquisition efforts—the NSC, the modernization of the 110-foot patrol boats, and the FRC. For a more detailed discussion, see **Appendix A**.

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<sup>11</sup> See, for example, Statement of Richard L. Skinner, Inspector General, U.S. Department of Homeland Security, Before the Committee on Transportation and Infrastructure, Subcommittee on Coast Guard and Maritime Transportation, U.S. House of Representatives, “Deepwater: 120-Day Update,” June 12, 2007; as well as Department of Homeland Security, Office of Inspector General, *Acquisition of the National Security Cutter*, OIG-07-23, January 2007 (available online at [http://www.dhs.gov/xoig/assets/mgmt/rpts/OIG\\_07-23\\_Jan07.pdf](http://www.dhs.gov/xoig/assets/mgmt/rpts/OIG_07-23_Jan07.pdf)); Department of Homeland Security, Office of Inspector General, 110/123’ Maritime Patrol Boat Modernization Project, OIG-07-27, January 2007 (available online at [http://www.dhs.gov/xoig/assets/mgmt/rpts/OIG\\_07-27\\_Feb07.pdf](http://www.dhs.gov/xoig/assets/mgmt/rpts/OIG_07-27_Feb07.pdf)); U.S. Department of Homeland Security, Office of Inspector General, *Major Management Challenges Facing the Department of Homeland Security (Excerpts from the FY 2006 DHS Performance and Accountability Report)*, December 2006. (OIG-07-12); and U.S. Department of Homeland Security, Office of Inspector General, *Improvements Needed in the U.S. Coast Guard’s Acquisition and Implementation of Deepwater Information Technology Systems*, August 2006. (Office of Information Technology, OIG-06-55).

<sup>12</sup> See, for example, Government Accountability Office, *Coast Guard[:] Challenges Affecting Deepwater Asset Deployment and Management and Efforts to Address Them*, GAO-07-874, June 2007; Government Accountability Office, *Coast Guard[:] Status of Efforts to Improve Deepwater Program Management and Address Operational Challenges*, Statement of Stephen L. Caldwell, Acting Director Homeland Security and Justice Issues, Testimony Before the Subcommittee on Coast Guard and Maritime Transportation, Committee on Transportation and Infrastructure, House of Representatives, GAO-07-575T, March 8, 2007; and Government Accountability Office, *Coast Guard[:] Coast Guard Efforts to Improve Management and Address Operational Challenges in the Deepwater Program*, Statement of Stephen L. Caldwell, Acting Director Homeland Security and Justice Issues, Testimony Before the Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard, Committee on Commerce, Science and Transportation, U.S. Senate, GAO-07-460T, February 14, 2007.

<sup>13</sup> Defense Acquisition University, *Quick Look Study, United States Coast Guard Deepwater Program*, February 2007.

## **Coast Guard Reform Actions in 2007**

In 2007, as the Coast Guard's management and execution of the then-integrated Deepwater program was being strongly criticized by various observers, the Coast Guard announced a number of reform actions that significantly altered the service's approach to Deepwater acquisition (and to Coast Guard acquisition in general). Among these was the change from a single, integrated Deepwater acquisition program to a collection of separate Deepwater acquisition programs. For a more detailed discussion, see **Appendix B**.

## **Justice Department Investigation**

On April 18, 2007, it was reported that the Justice Department was conducting an investigation of the Deepwater program. Press reports at the time stated that investigation centered on communications systems, the conversion of the Coast Guard's 110-foot patrol boats, and the National Security Cutter (NSC). The Justice Department reportedly notified Lockheed, Northrop, and certain other firms involved in the Deepwater program of the investigation on December 13, 2006, and directed the firms to preserve all documents relating to the program.<sup>14</sup>

## **Oversight Issues for Congress**

The Coast Guard's management of its Deepwater and other acquisition programs, including implementation of recommendations made by the Government Accountability Office (GAO), is a topic of continuing congressional oversight. Additional oversight issues include cost growth in Deepwater acquisition programs and the execution of individual Deepwater acquisition efforts, particularly those for surface ships.

## **Management of Deepwater and Other Acquisition Programs in General**

### **Coast Guard Perspective**

The Coast Guard testified in April 2011 that:

In recent years, the Coast Guard has made significant changes to its acquisition enterprise to increase the efficiency and efficacy of our programs. We have consolidated our acquisition, contracting, foreign military sales, and research and development functions under the Acquisition Directorate to support timely delivery of complex and interoperable cutters, boats and aircraft to our frontline forces. The Coast Guard Acquisition Directorate has reclaimed a leadership role in systems integration at all levels, and is now the Systems Integrator for all major and non-major acquisition projects across the Service....

### **ACQUISITION TODAY**

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<sup>14</sup> Ana Radelat, "Justice Investigating Deepwater Contractors," *NavyTimes.com*, April 18, 2007; Chris Strohm, "Deepwater Contractors Face Justice Probe" *GovExec.com*, April 19, 2007; Patricia Kime, "Justice Investigating Deepwater Contract," *NavyTimes.com*, April 20, 2007.

The Acquisition Directorate was established nearly four years ago through the integration of programs previously governed under Integrated Deepwater Systems and the Service's legacy acquisition programs. Since then, we have progressed as an organization, and we are implementing effective processes and improving our project management capability and capacity.

The Acquisition Directorate established itself as a learning organization, building on our experiences and incorporating relevant lessons learned and best practices from within and outside of the Coast Guard. We are committed to sound management and comprehensive oversight of all aspects of the acquisition process by leveraging the expertise of our acquisition workforce, technical authorities and governmental partners. The acquisition reform measures recently enacted in the Coast Guard Authorization Act of 2010 provide the Coast Guard with the needed tools and authorities to build upon the efforts that were already underway to enhance our acquisition programs. The Coast Guard has ensured that compliance with the Act's requirements is a priority, and we continue to make progress in implementing these required programmatic changes.

The Coast Guard has always adapted to meet the needs of the nation, whether those needs are well-known and long-standing—saving lives, enforcing federal law, protecting the marine environment, and contributing to national security—or responding to emergent threats. We have been, and will always be, America's maritime guardians, safeguarding the nation's maritime interests. However, as we face new threats, we must be prepared to adapt our tactics and processes to meet mission requirements. Recapitalization of our aging, costly-to-maintain assets and infrastructure is critical to meeting current missions as well as ensuring that we are ready for the future. Due in large part to this Subcommittee's efforts, we are creating a more unified and agile organization focused on the sustained delivery of mission support to enhance mission execution.

The Acquisition Directorate is actively working with our mission support partners—who also act as technical authorities for our ongoing acquisition programs—to provide efficient and effective logistics and maintenance support to our assets in the field.

These organizational changes have come in concert with the significant changes in our acquisition processes and project management, in which the Department of Homeland Security (DHS) and this Subcommittee have played integral roles. Consolidation of the Acquisition Directorate, assumption of the Systems Integrator responsibilities and implementation of the recently released Blueprint for Continuous Improvement, Version 5.0, have better equipped us to manage cost, schedules, and contractor performance. We have achieved several accomplishments in key areas:

#### **Coast Guard as the Systems Integrator**

The Coast Guard Acquisition Directorate is now the Systems Integrator for all Coast Guard acquisition projects. Our contract with Integrated Coast Guard Systems (ICGS), a joint venture of Northrop Grumman and Lockheed Martin, expired in January 2011 and will not be renewed. As Systems Integrator, the Coast Guard is responsible for all phases in the lifecycle of its assets, from concept development to decommissioning.

We are carrying out these responsibilities through active collaboration with our technical authorities, who set technical standards for the projects, and project sponsors who set the requirements.

The Asset Project Office (APO) was added to the Acquisition Directorate last year to ensure new surface assets smoothly transition from acquisition to sustainment by

integrating life cycle support early in the acquisition process, and establishing a strong link between the acquisition and maintenance communities.

### **Documentation**

Major systems acquisitions are complex and require disciplined processes and procedures. In 2010, the Acquisition Directorate completed a comprehensive revision of the Coast Guard's Major Systems Acquisition Manual (MSAM), which defines policies and procedures for project managers to plan, coordinate and execute major systems acquisition projects. The MSAM is closely aligned with DHS acquisition management policy Directive 102-01. The revised MSAM ensures that uniform procedures for acquisition planning and project management are applied to every major systems acquisition, aligning the Coast Guard with the requirements of the Coast Guard Authorization Act of 2010, our Department's acquisition management policy and processes, and federal acquisition rules and procedures. We have made significant progress in ensuring that acquisition projects already underway comply with MSAM policies.

In 2010 we also released an updated strategic plan, the Blueprint for Continuous Improvement, Version 5.0—the top-level planning document for the Coast Guard's acquisition enterprise for the next two years. It builds on the action plans included in previous versions by shifting toward a performance measurement and management structure. Furthermore, this plan fits within a broader Mission Support plan, recently signed, that addresses all aspects of support for our people, systems, and assets.

### **Role of Governance and Oversight**

The Coast Guard's revitalized and improved acquisition organization has been informed and aided by the support of this Subcommittee, DHS and the Government Accountability Office. Effective oversight requires well-defined and repeatable processes, and we have worked hard during the last few years to improve our transparency to Congress and the public. In addition, this Subcommittee was closely involved in developing reforms to our acquisition program that were enacted as part of the Coast Guard Authorization Act of 2010. We are working diligently to institute these reforms, which build on programmatic improvements that the Coast Guard had begun implementing prior to the Act's passage.

We have also benefited from the guidance provided by DHS as the Coast Guard's acquisition decision authority. The Department's Acquisition Lifecycle Framework provides the Coast Guard with a disciplined, phased acquisition approach and governance by department-level Acquisition Review Boards, which evaluate the direction of each program according to consistent criteria. This oversight function not only ensures Coast Guard acquisition programs are soundly conceptualized, developed and managed, but also fosters a strong collaborative component-department relationship. The acquisition process support and clear guidance provided by the Department's Office of the Chief Procurement Officer and Acquisition Program Management Division have played a considerable role in the maturation of the Coast Guard's Acquisition Directorate as a cost-conscious and milestone-driven acquisition organization.

### **Organizational Realignment and Partnerships**

A key component of the reorganized and revitalized acquisition organization is the strong relationships forged with our technical authorities in the Coast Guard's mission support community, including Human Resources; Engineering and Logistics; and Command, Control, Communications, Computers and Information Technology (C4IT).

We have institutionalized collaborative partnerships with these authorities in their roles as our technical authorities for the platforms and mission systems the acquisition enterprise produces and delivers.

We continue to benefit from a robust partnership with the U.S. Navy, leveraging its expertise in acquisition processes, common systems planning, engineering, and testing.

While the Coast Guard maintains its position as the final authority for asset and system certification, we are committed to seeking out independent validation by third-party experts. These experts provide valuable input to the Coast Guard's own certification process, allowing our technical staff and other professionals to make better-informed decisions regarding designs and operational capabilities of assets and systems....

### **ACQUISITION WORKFORCE**

The Coast Guard has been able to make accomplishments in the acquisition field over the past year due in large part to the quality of our people and the great work that they do. The Acquisition Directorate has placed a tremendous emphasis on ensuring workforce quality through professional development and retention, as well as enhancing training and certification opportunities for our acquisition personnel. Project managers for all major acquisition projects within the Acquisition Directorate have attained DHS Level III program manager certification. Both military and civilian Level III program managers have risen through the ranks of our acquisition organization, learning from their leaders, tapping into previous experience in other programs, and increasing leadership continuity in the acquisition enterprise.

In addition to maintaining a trained and certified workforce, the expedited hiring authority provided in the Coast Guard Authorization Act of 2010 proved vital to filling many critical civilian positions with individuals who have the appropriate acquisition experience and capabilities. The Service is also establishing military and civilian career paths within the acquisition enterprise to give members of our workforce the opportunity to establish themselves in the acquisition field.<sup>15</sup>

### **GAO Perspective**

GAO for several years has been assessing, providing reports and testimony on, and making recommendations for Coast Guard management of Deepwater acquisition. The Coast Guard has implemented many of GAO's recommendations. The extent to which the Coast Guard has implemented GAO recommendations has been a topic of continuing congressional oversight for Deepwater acquisition.

An April 2011 GAO report states:

Since 2001, we have reviewed Coast Guard acquisition programs and have reported to Congress, DHS, and the Coast Guard on the risks and uncertainties inherent in its acquisitions. In our June 2010 report on selected DHS major acquisitions, we found that

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<sup>15</sup> [Statement of] Vice Admiral John P. Currier, Deputy Commandant for Mission Support, Before the [House] Committee [on] Transportation & Infrastructure, Subcommittee on Coast Guard and Maritime Transportation, April 13, 2011, pp. 1-3 and 6.

acquisition cost estimates increased by more than 20 percent in five of the Coast Guard's six major programs we reviewed. For example, the National Security Cutter's acquisition cost estimate grew from an initial figure of \$3.45 billion to \$4.75 billion from 2006 to 2009—a 38 percent increase. Moreover, five of six programs faced challenges due to unapproved or unstable baseline requirements, and all six programs experienced schedule delays. The Rescue 21 search-and-rescue program, for example, had both unapproved or unstable baseline requirements and schedule delays.

Several of our reports have focused on the Coast Guard's Deepwater acquisition program. Most recently, in our July 2010 report on the program, we found that the Coast Guard had generally revised its acquisition management policies to align with DHS directives, was taking steps to address acquisition workforce needs, and was decreasing its dependence on the Integrated Deepwater Systems contractor by planning for alternate vendors for some assets, and to award and manage work outside of the Integrated Coast Guard Systems contract for other assets. We also have ongoing work on the status of the Deepwater program that is related but complementary to this report and will result in a separate published report later this year.

The Coast Guard updated its overarching acquisition policy since we last reported in July 2010 to better reflect best practices and respond to our prior recommendations, and to more closely align its policy with the DHS Acquisition Management Directive Number 102-01. For example, in November 2010, the Coast Guard revised its Major Systems Acquisition Manual, which establishes policy and procedures, and provides guidance for major acquisition programs. Revisions included

- a list of the Executive Oversight Council's roles and responsibilities;
- aligning roles and responsibilities of independent test authorities to DHS standards, which satisfied one of our prior recommendations;
- a formal acquisition decision event before a program receives approval for low-rate initial production, which addresses one of our prior recommendations; and
- a requirement to present an acquisition strategy at a program's first formal acquisition decision event.

The Coast Guard's Blueprint for Continuous Improvement (Blueprint) was created after the Coast Guard began realigning its acquisition function in 2007 and is designed to provide strategic direction for acquisition improvements. The Blueprint uses GAO's Framework for Assessing the Acquisition Function at Federal Agencies and the Office of Federal Procurement Policy's Guidelines for Assessing the Acquisition Function as guidance, but also includes quantitative and qualitative measures important to the acquisitions process. Through these measures, the Coast Guard plans to gain a clearer picture of its acquisition organization's health. The Blueprint was revised in October 2010 to formalize the acquisition directorate's integration with the Coast Guard's mission support structure and includes plans to annually evaluate the Blueprint's measures.

The Coast Guard developed the Blueprint as a top-level planning document to provide acquisition process objectives and strategic direction as well as to establish action items, but DHS's Inspector General expressed concern that the agency did not prioritize action items and consider the effects of delayed completion of action items on subsequent program outcomes. For example, the 2010 Inspector General report found that by the end of fiscal year 2009, 23 percent of assigned action item completion dates slipped without determining the effect on acquisition improvements. In response to the Inspector General's report, the

Coast Guard has taken steps to prioritize its action items; however, it is too soon to tell the outcome of these actions.

These policies were updated to align with DHS guidance and reflect best practices. Coast Guard officials also attribute acquisition reforms to the Coast Guard's efforts to assume responsibilities for all major acquisition programs. We previously reported in 2009 that the Coast Guard acknowledged its need to define systems integrator functions and assign them to Coast Guard stakeholders as it assumed the systems integrator role. As a result, the Coast Guard established new relationships among its directorates to assume control of key systems integrator roles and responsibilities formerly carried out by the contractor. For example, according to Coast Guard officials, the Coast Guard formally designated certain directorates as technical authorities responsible for establishing, monitoring, and approving technical standards for all assets related to design, construction, maintenance, logistics, C4ISR, life-cycle staffing, and training. In addition, the Coast Guard is developing a Commandant's Instruction to further institutionalize the roles and responsibilities for Coast Guard's acquisition management.

Beyond updating its major acquisition policies and guidance, the Coast Guard Acquisition Directorate also increased the involvement of its Executive Oversight Council to facilitate its acquisition process. Coast Guard officials stated that the council, initially established in 2009 with an updated charter in November 2010, provides a structured way for flag-level and senior executive officials in the requirements, acquisition, and resources directorates, among others, to discuss programs and provide oversight on a regular basis. As the Coast Guard began assuming the system integrator function from the Deepwater contractor in 2007, it believed it needed a forum to make trade-offs and other program decisions especially in a constrained budget environment; according to officials, the council was established in response to that need. Coast Guard officials noted that major programs are now required to brief the formalized council annually, prior to milestones, and on an ad hoc basis when major risks are identified. According to Coast Guard documentation, from fiscal year 2010 through the first quarter of fiscal year 2011, the council met over 40 times to discuss major programs. For example, the council held more than five meetings to discuss the Offshore Patrol Cutter's life-cycle costs and system requirements, among other issues. The discussions are captured at a general level in meeting minutes and sent to the Coast Guard Acquisition Directorate for approval.

The Coast Guard has made progress in reducing its acquisition workforce vacancies since April 2010. As of November 2010, the percentage of vacancies dropped from about 20 percent to 13 percent or from 190 to 119 unfilled billets out of 951 total billets. Acquisition workforce vacancies have decreased, but program managers have ongoing concerns about staffing program offices. For example, the HH-65 program office has funded and filled 10 positions out of an identified need for 33 positions. Although the program has requested funding for an additional 8 billets for fiscal year 2012, due to the timing of the request, the funding outcome is unknown as of April 2011. Similarly, the Interagency Operations Center program is another office affected by acquisition workforce shortages. According to the Coast Guard, as of March 2011, the program office has funded and filled 11 positions out of the 27 needed. For some of these positions, the Interagency Operations Center program uses staff from the Coast Guard's Command, Control, and Communications Engineering Center for systems engineering support; however, workforce shortages remain. Program officials may face additional challenges in hiring staff depending on the location of the vacancies within the program's management levels. For example, a program official stated that vacant supervisory positions must be filled first before filling remaining positions because lower-level positions would not have guidance for their activities....

We reported in January 2010 that the Coast Guard faces difficulty in identifying critical skills, defining staffing levels, and allocating staff to accomplish its diverse missions. An

official Coast Guard statement from 2009 partially attributed the challenge of attracting staff for certain positions to hiring competition with other federal agencies. In February 2010, we reported on the Coast Guard's long-standing workforce challenges and evaluated the agency's efforts to address these challenges. For example, we reported that while the Coast Guard developed specific plans to address its human capital challenges, they fell short of identifying gaps between mission areas and personnel.

The Coast Guard has taken steps to outline specific areas of workforce needs, including developing a human-capital strategic plan and commissioning a human-capital staffing study published in August 2010, but program managers continue to state concerns with the Coast Guard's ability to satisfy certain skill areas. For example, the August 2010 human-capital staffing study stated that program managers reported concerns with staffing adequacy in program management and technical areas. To make up for shortfalls in hiring systems engineers and other acquisition workforce positions for its major programs, the Coast Guard uses support contractors. As of November 2010, support contractors constituted 25 percent of the Coast Guard's acquisition workforce. While we have stated the risks in using support contractors, we reported in July 2010 that the Coast Guard acknowledged the risks of using support contractors and had taken steps to address these risks by training its staff to identify potential conflicts of interest and by releasing guidance regarding the role of the government and appropriate oversight of contractors and the work that they perform.

The Coast Guard has also made progress ensuring that program management staff received training and DHS certifications to manage major programs. For example, according to Coast Guard officials, in December 2010, the Coast Guard was 100 percent compliant with DHS personnel certification requirements for program-management positions. We have previously reported that having the right people with the right skills is critical in ensuring that the government achieves the best value for its spending.<sup>16</sup>

## Cost Growth and Budget Planning

### Coast Guard Perspective

An August 30, 2010, press report quoted Admiral Robert Papp, the Commandant of the Coast Guard, as acknowledging that the Coast Guard's ability to acquire Deepwater assets within budgeted costs will depend in part on factors that the Coast Guard does not control:

“We can't control the ups and downs of the economy, the price of steel and other things, so there could be [added] costs that occur,” he said. “A lot of acquisition pricing depends upon a steady stream of funding. If you delay a ship or you delay the award of a contract for a year or if you don't get the funding through Congress, it adds costs in the out years ... Maybe the

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<sup>16</sup> Government Accountability Office, *Coast Guard[:] Opportunities Exist to Further Improve Acquisition Management Capabilities*, GAO-11-480, April 2011, pp. 5-11. See also Government Accountability Office, *Coast Guard[:] Observations on Acquisition Management and Efforts to Reassess the Deepwater Program*, GAO-11-535T, Statement of John P. Hutton, Director, Acquisition and Sourcing Management, Testimony Before the Subcommittee on Coast Guard and Maritime Transportation and Infrastructure, House of Representatives, April 13, 2011, 14 pp. Pages 1-2 of this testimony states that it is “largely based” on GAO-11-480, and that it additionally draws on information in a July 2010 report (Government Accountability Office, *Coast Guard[:] Deepwater Requirements, Quantities, and Cost Require Revalidation to Reflect Knowledge Gained*, GAO-10-790, July 2010, 38 pp.) and “related ongoing work that we are conducting under the Comptroller General's authority. Our ongoing work will be issued later this year.”

whole project doesn't fit within that original advertised cost. We'll be working very hard to bring it in within cost."<sup>17</sup>

A July 2009 news report stated: "The total cost of the Coast Guard's beleaguered Deepwater acquisition program is a 'moving target' that could rise beyond the latest \$26.3 billion price tag, but the completion date for the purchases could come sooner than projected, the service's top officer testified last week."<sup>18</sup>

The Coast Guard testified in April 2009 that:

[a] persistent challenge is controlling costs in complex, multiple-year projects – especially those costs driven by economic factors outside the Coast Guard's control, more specifically, those types of cost increases recently impacting the National Security Cutter and Maritime Patrol Aircraft projects. Current economic conditions have seen a steady six-month decline in the cost of commodities such as nickel, steel and copper. However, when we award production contracts, our contract price reflects commodity prices at the time of award.

In the case of the National Security Cutter we are executing production contracts for NSCs two and three and the long lead time materials contract for NSC four that were priced based on historically high commodity and fuel prices in effect during the summer of 2008. Likewise, when current NSC and MPA contracts were awarded, the value of the U.S. dollar was at a record low when compared to other foreign currencies, meaning all foreign components necessary for production were more expensive.

While the government will never be able to eliminate these types of cost changes completely, we have taken steps to minimize their impact within Coast Guard acquisitions. Once again, by building on the cornerstones for acquisition success, we have established a firm commitment to independent cost estimates within each project to validate projected program costs. We have initiated more rigorous government oversight of contractor performance and cost accounting, including renewed emphasis on Earned Value Management data. And we continue to work with industry to balance risk and ensure affordable acquisition programs at best value for the government.<sup>19</sup>

## **GAO Perspective**

GAO testified in April 2011 that

the average annual budget plan [for Coast Guard Acquisition, Construction and Improvements (AC&I) funding] from fiscal year 2011 through fiscal year 2016 is about \$520 million, or approximately 37 percent, higher than the average Coast Guard acquisition budgets previously appropriated or requested during the past 6 years.

To illustrate further, the Coast Guard plans to request \$2.35 billion for acquisitions in fiscal year 2015, but the Coast Guard has not received more than \$1.54 billion for its yearly

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<sup>17</sup> Cid Standifer, "Papp: Deepwater Cost Increases May Be Out Of Coast Guard's Control," *Inside the Navy*, August 30, 2010. Ellipses and bracketed material as in original.

<sup>18</sup> Rebekah Gordon, "Coast Guard Commandant: Deepwater Price Tag A 'Moving Target,'" *Inside the Navy*, July 13, 2009.

<sup>19</sup> Statement of Admiral Thad W. Allen, Commandant [of the Coast Guard], on the Coast Guard and Acquisitions before the Committee on Appropriations Subcommittee on Homeland Security, U.S. House of Representatives, 22 April 2009, pp. 17-18.

acquisition budget in recent years. In fiscal year 2015, the Coast Guard is planning to request funding for construction of three major Deepwater surface programs: National Security Cutter, Offshore Patrol Cutter, and Fast Response Cutter. But the Coast Guard has never requested funding for construction of three major Deepwater surface assets in the same year before, and therefore this plan appears to be unrealistic. This is particularly true given the rapidly building fiscal pressures facing our national government.<sup>20</sup>

A July 2010 GAO report states:

Currently, the Deepwater Program exceeds the 2007 cost and schedule baselines, and given revisions to performance parameters for certain assets, it is unlikely to meet system-level performance baselines. The asset-specific baselines that have been approved to date, while providing greater insight into asset-level capabilities, place the total cost of Deepwater at roughly \$28 billion, or \$3.8 billion over the \$24.2 billion 2007 baseline. The revised baselines also present life-cycle costs, which encompass the acquisition cost as well as costs for operations and maintenance. While the revised baselines show a significant decrease in life-cycle costs, due to changes to assumptions like shorter service lives for assets, the Coast Guard's understanding of them continues to evolve as the agency revisits its assumptions and produces new cost estimates. Costs could continue to grow as four assets currently lack revised cost baselines; among them is the largest cost driver in the Deepwater Program, the Offshore Patrol Cutter. The asset-level baselines also indicate that schedules for some assets are expected to be delayed by several years. Regarding system-level performance, the 2007 baseline may not be achievable, as the Coast Guard has redefined or eliminated key performance indicators for many individual assets, while significant uncertainties surround other assets. Further, a planned analysis to reassess the overall fleet mix for Deepwater was not completed as planned, and a new analysis will include surface assets only. In the meantime, the Coast Guard and DHS are proceeding with acquisition decisions on individual assets.<sup>21</sup>

GAO testified in February 2010 that:

The Coast Guard has also made other improvements to its oversight and management of the Deepwater program. Due in part to the Coast Guard's increased insight into its purchases, the anticipated cost, schedules, and capabilities of many Deepwater assets have changed since the \$24.2 billion baseline was established in 2007. Coast Guard officials have stated that this baseline reflected not a traditional cost estimate, but rather the anticipated contract costs as determined by ICGS. As the Coast Guard developed its own cost baselines for some assets, as of July 2009, it has become apparent that some of the assets it is procuring will likely cost up to \$2.7 billion more than anticipated. This represents about a 39 percent cost growth for the assets under the revised cost estimates. According to Coast Guard, as more cost baselines are developed and approved, further cost growth is likely. Updated baselines also indicate that schedules have slipped for delivery of several of the assets.<sup>22</sup>

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<sup>20</sup> Government Accountability Office, *Coast Guard[:] Observations on Acquisition Management and Efforts to Reassess the Deepwater Program*, GAO-11-535T, Statement of John P. Hutton, Director, Acquisition and Sourcing Management, Testimony Before the Subcommittee on Coast Guard and Maritime Transportation and Infrastructure, House of Representatives, April 13, 2011, pp. 7-8.

<sup>21</sup> Government Accountability Office, *Coast Guard[:] Deepwater Requirements, Quantities, and Cost Require Revalidation to Reflect Knowledge Gained*, GAO-10-790, July 2010, summary page.

<sup>22</sup> Government Accountability Office, *Coast Guard[:] Observations on the Requested Fiscal Year 2011 Budget, Past Performance, and Current Challenges*, GAO-10-411T, February 25, 2010 (Testimony before the Subcommittee on Coast Guard and Maritime Transportation, Committee on Transportation and Infrastructure, U.S. House of Representatives), pp. 13-14.

## Fleet Mix Analysis

Regarding the Coast Guard's fleet mix analysis, GAO testified in April 2011 that

To support its role as systems integrator, the Coast Guard planned to complete a fleet mix analysis in July 2009 to eliminate uncertainty surrounding future mission performance and to produce a baseline for the Deepwater acquisition. We previously reported that the Coast Guard expected this analysis to serve as one tool, among many, in making future capability requirements determinations, including future fleet mix decisions. The analysis, which began in October 2008 and is now termed fleet mix analysis phase 1, was led by the Coast Guard directorate responsible for identifying and providing capabilities. In July 2010, we reported that while the Coast Guard had not yet released the results, officials told us that the analysis considered the 2007 Deepwater baseline to be the "floor" for asset capabilities and quantities and did not impose financial constraints on the outcome. The Coast Guard initiated a second phase of the analysis to impose cost constraints. We recommended in our July 2010 report that since the 2007 DHS-approved baseline of \$24.2 billion was no longer feasible because of cost growth, the Coast Guard should conduct a comprehensive review of Deepwater cost, schedule, quantities, and mix of assets needed to meet mission needs, identify trade-offs given fiscal constraints, and report the results to Congress. The Coast Guard's efforts to date have not addressed this recommendation.

We recently obtained and analyzed the phase 1 fleet mix analysis. We found that to conduct this analysis, the Coast Guard assessed asset capabilities and mission demands to identify a fleet mix—referred to as the objective fleet mix—that would meet long-term strategic goals. Given the significant increase in the number of assets needed for this objective fleet mix from the approved Deepwater program of record—the \$24.2 billion baseline—the Coast Guard developed, based on risk metrics, incremental fleet mixes to bridge the two. Table 1 shows the quantities of assets for each incremental mix, according to the Coast Guard's analysis.

**Table 1: Alternative Fleet Mix Asset Quantities According to Coast Guard's Phase 1 Fleet Mix Analysis**

Surface/aviation platforms	Program of record	Fleet mix 1	Fleet mix 2	Fleet mix 3	Fleet mix 4 (objective)
NSC	8	9	9	9	9
OPC	25	32	43	50	57
FRC	58	63	75	80	91
HC-130	22	32	35	44	44
MPA HC-144A	36	37	38	40	65
HH-60	42	80	86	99	106
HH-65	102	140	158	188	223
UAS, Land-Based	12	19	21	21	22
UAS, Cutter-Based	18	15	19	19	19

Source: December 2009 Coast Guard data.

Phase 1 also analyzed the performance of these fleet mixes to gain insight into mission performance gaps. However, the analysis was not cost constrained, as noted above. For instance, the Coast Guard estimated that the costs associated with the objective fleet mix could be as much as \$65 billion. This is approximately \$40 billion higher than the DHS-approved \$24.2 billion baseline. As a result, as we reported last year, Coast Guard officials

stated that they do not consider the results to be feasible because of cost and do not plan to use them to provide recommendations on a baseline for fleet mix decisions.

In May 2010, the Coast Guard undertook phase 2, a cost-constrained fleet mix analysis. Officials responsible for the analysis explained that it will primarily assess the rate at which the Coast Guard could acquire the Deepwater program of record within a high and low bound of annual acquisition cost constraints. They told us that the lower- and upper- bound constraints are, respectively, \$1.2 billion and \$1.7 billion annually; however, the basis for selecting these cost constraints is not documented. Based on our review of recent budget data, this upper bound for Deepwater is more than Congress has appropriated for the Coast Guard's entire acquisition portfolio in recent years. Moreover, the Coast Guard officials stated that this analysis will not reassess whether the current program of record is the appropriate mix of assets to pursue and will not assess any mixes smaller than the current program of record. Alternative fleet mixes will be assessed, but these mixes are based on purchasing additional assets after the program of record is acquired, if funding remains within the yearly cost constraints. Coast Guard officials stated that they are only analyzing the program of record or a larger fleet mix because they found that the first phase of the analysis validated pursuing, at the minimum, the program of record. The Coast Guard expects to complete its phase 2 analysis in the summer of 2011. Because fleet mix analysis phase 2 will not assess options lower than the program of record, it will not prepare the Coast Guard to make the trade-offs that will likely be needed in the current fiscal climate.

Furthermore, it is our understanding that DHS is conducting a study examining the mix of surface assets, which is expected to be completed later this year. As part of our ongoing work, we will continue to monitor these efforts as they relate to the fleet mix analysis.<sup>23</sup>

## **Reporting of Costs and Planned Procurement Quantities**

Regarding Coast Guard reporting of costs and planned procurement quantities for Deepwater acquisition programs, a July 2009 GAO report stated:

The Coast Guard's budget submission, as currently structured, limits Congress's understanding of details at the asset level in so far as it does not include key information such as assets' total acquisition costs or, for the majority of assets, the total quantities planned. For example, while the justification of the NSC request includes a detailed description of expected capabilities and how these capabilities link to the Coast Guard's missions and activities funded by past appropriations, it does not include estimates of total program cost, future award or delivery dates of remaining assets, or even the total number of assets to be procured.

Our past work has emphasized that one key to a successful capital acquisition, such as the multibillion-dollar ships and aircraft the Coast Guard is procuring, is budget submissions that clearly communicate needs.<sup>11</sup> An important part of this communication is to provide decision makers with information about cost estimates, risks, and the scope of a planned project before substantial resources are committed. Good budgeting also requires that the full costs of a project be considered upfront when decisions are made. Other federal agencies that acquire systems similar to those of the Coast Guard, such as the Department of Defense, capture these elements in justifications of their budget requests....

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<sup>23</sup> Government Accountability Office, *Coast Guard[:] Observations on Acquisition Management and Efforts to Reassess the Deepwater Program*, GAO-11-535T, Statement of John P. Hutton, Director, Acquisition and Sourcing Management, Testimony Before the Subcommittee on Coast Guard and Maritime Transportation and Infrastructure, House of Representatives, April 13, 2011, pp. 9-11.

While the Coast Guard's asset-level Quarterly Acquisition Reports to Congress and the annual Deepwater Program Expenditure Report include some information on total costs and quantities, these documents are provided only to the appropriations committees, and they contain selected information that is restricted due to acquisition sensitive material. The budget justification prepared by the Coast Guard is a tool that Congress uses in its budget and appropriations deliberations. Presentation of information on the full costs and quantities of Deepwater assets in the Coast Guard's budget submission can provide Congress greater insights in fulfilling its roles of providing funding and conducting oversight.<sup>24</sup>

## **National Security Cutter (NSC)**

Oversight issues concerning the NSC program have included whether the original design for the NSC was rugged enough to ensure that the ships could be operated for their full 30-year intended service lives; whether the electronic systems on the ship met technical standards (including some referred to as TEMPEST) for information assurance (or IA—the ability of the ship's various electronic systems to protect classified data); and cost growth in building the ships.

## **Coast Guard Perspective**

The Coast Guard testified in April 2009 that:

We have been actively running *Bertholf* through her paces during the operational test and evaluation process now underway and have received very positive feedback from her crew and the Coast Guard's operational community. Of particular note, *Bertholf* has conducted her first operational patrols and completed flight deck dynamic interface testing and attained interim flight deck certification. Additionally, *Bertholf* recently conducted towing exercises with CGC [Coast Guard cutter] *Morgenthau*, a fueling at sea evolution with USNS [U.S. naval ship] *Kaiser*, and testing of the 57mm deck gun and close-in weapon system against high-speed maneuvering surface targets and unmanned aerial vehicles....

We continue to see real progress in the areas of Information Assurance, which includes TEMPEST, on the NSC. Our technical authority, with support from the Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) and NSC project managers, conducted TEMPEST certification inspections prior to preliminary acceptance of *Bertholf* in May 2008. Those pre-delivery inspections have contributed to building a TEMPEST baseline, which will serve as a reference point for all future TEMPEST-related activities. Using the test-fix-test methodology, we now have resolved all 122 visual TEMPEST discrepancies identified during that pre-acceptance process. We are conducting additional instrumented TEMPEST surveys using a National Security Agency (NSA) approved contractor to prepare for final TEMPEST testing, which is scheduled to be conducted by SPAWAR [the Navy's Space and Naval Warfare Systems Command] and in April 2009.

We continue to build on lessons learned and are making some significant improvements to the *Stratton*, including construction process efficiencies, enhanced functionality and better hull design. One of the most notable process improvements is a significant reduction in the number of grand blocks—multiple units stacked together in large assembly halls away from the waterfront—used to assemble the ships hull. We used 29 grand blocks to assemble

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<sup>24</sup> Government Accountability Office, *Coast Guard[:]As Deepwater Systems Integrator, Coast Guard Is Reassessing Costs and Capabilities but Lags in Applying Its Disciplined Acquisition Approach*, GAO-09-682, July 2009, pp. 21-22.

Bertholf, but expect to use as few as 14 to assemble Stratton. This will enable more sub-assembly work in each grand block in a controlled environment and potentially lead to fewer construction hours compared to the process for Bertholf.

Other improvements include an enhanced replenishment at sea station, which incorporates a redesigned refueling area that will be more efficient and ergonomic for cutter personnel. We are also improving the gas turbine removal route, which will make it easier to remove and repair the gas turbine modules that power the cutter. And we have enhanced the hull fatigue design on Stratton, ensuring she will achieve a 30-year fatigue life.

We are currently working toward production award for the fourth NSC, Hamilton. In line with accomplished acquisition reforms and our efforts to become the lead systems integrator, the production award for Hamilton will occur outside the Integrated Coast Guard Systems (ICGS) LSI construct and include a fixed price contract structure.<sup>25</sup>

The Coast Guard also testified in April 2009 that:

our reform efforts are facilitating the successful resolution of past and current project challenges.

One such challenge is the fatigue lifespan of the National Security Cutter—which the Coast Guard insists be at least 30 years—meaning at least 30 years before the onset of major repairs due to normal mission use. In 2007, in accordance with the acquisition success cornerstones and working through our technical authority for engineering and logistics, the Coast Guard arranged to work with the Navy’s Naval Surface Warfare Center, Carderock Division to provide independent third party analysis of fatigue design solutions developed by Coast Guard naval engineers. Using the newest available computer fatigue modeling software, Carderock reached two main conclusions in its final report, presented to the Coast Guard earlier this year.

First, Carderock determined Coast Guard-developed design fatigue enhancements for the hulls of NSCs three through eight will achieve the desired 30-year fatigue life, while also recommending monitoring of localized stress in several structural details. Second, the report identifies major improvements with fatigue life after completing identified modifications to hulls one and two, but the Carderock transmittal letter recommends more data be gathered for several areas which are still modeling a less-than 30-year fatigue life.

We agree with Carderock’s assessments. In fact, we have already outfitted CGC Bertholf with strain gauge sensors to measure actual encountered stresses and collect data to enable more precise design modeling. Our technical authority is also reviewing each area identified by Carderock, based on Coast Guard missions and the planned operational profile of the NSC, and will develop a plan to address those concerns prior to implementing any related design fix. Plans are to gather data and modify design enhancements over a span of multiple years, even after NSCs one and two transition to full operations, as the upgrades are completed over potentially several future yard availabilities. We plan to continue to collaborate with Carderock to conduct further analysis, including possible re-validation of changes to the proposed design as a result of the recommendations in their report.

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<sup>25</sup> Statement of Admiral Thad W. Allen, Commandant [of the Coast Guard], on the Coast Guard and Acquisitions before the Committee on Appropriations Subcommittee on Homeland Security, U.S. House of Representatives, 22 April 2009, pp. 13-14.

Another persistent challenge is controlling costs in complex, multiple-year projects – especially those costs driven by economic factors outside the Coast Guard’s control, more specifically, those types of cost increases recently impacting the National Security Cutter and Maritime Patrol Aircraft projects. Current economic conditions have seen a steady six-month decline in the cost of commodities such as nickel, steel and copper. However, when we award production contracts, our contract price reflects commodity prices at the time of award.

In the case of the National Security Cutter we are executing production contracts for NSCs two and three and the long lead time materials contract for NSC four that were priced based on historically high commodity and fuel prices in effect during the summer of 2008. Likewise, when current NSC and MPA contracts were awarded, the value of the U.S. dollar was at a record low when compared to other foreign currencies, meaning all foreign components necessary for production were more expensive.<sup>26</sup>

## GAO Perspective

A July 2009 GAO report states that the cost of the NSC program was estimated in June 2009 at \$4,749 million in then-year dollars—an increase of \$1,299 million, or about 38%, from the 2007 baseline estimate of \$3,450 million.<sup>27</sup> The report states that the Coast Guard has

made a significant investment in the NSC program before completing operational testing to demonstrate that the capabilities it is buying meet Coast Guard needs. While some testing of the NSC has already taken place, the tests conducted to date do not substitute for the complete scope of operational testing that should be the basis for further investment. For example, COMOPTEVFOR completed an operational assessment of the NSC in 2007 to identify risks to the program’s successful completion of operational testing. Before the first NSC was delivered, it also underwent acceptance trials, conducted by the U.S. Navy Board of Inspection and Survey, to determine compliance with contract requirements and to test system capabilities. Since delivery of the first NSC, the Coast Guard has also conducted flight deck and combat system certifications with the assistance of the Navy. While these demonstrations and certifications provide evidence that the first NSC functions as intended, they do not fully demonstrate the suitability and effectiveness of the ship for Coast Guard operations. According to officials, a test plan to demonstrate these capabilities is expected to be approved in July 2009, and COMOPTEVFOR may begin operational testing in March 2010. However, by the time full operational testing is scheduled to be completed in 2011, the Coast Guard plans to have six of eight NSCs either built or under contract.<sup>28</sup>

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<sup>26</sup> Statement of Admiral Thad W. Allen, Commandant [of the Coast Guard], on the Coast Guard and Acquisitions before the Committee on Appropriations Subcommittee on Homeland Security, U.S. House of Representatives, 22 April 2009, pp. 17-18. See also Calvin Biesecker, “Coast Guard’s NSC Fleet Cost Estimates Rise Due To Labor, Commodity Issues,” *Defense Daily*, February 6, 2009: 2-3; Bettina H. Chavanne, “National Security Cutter Hulls Below Fatigue Life Requirements,” *Aerospace Daily & Defense Report*, February 10, 2009: 1-2; Rebekah Gordon, “First Two National Security Cutters Still Face Fatigue-Life Issues,” *Inside the Navy*, February 9, 2009.

<sup>27</sup> Government Accountability Office, *Coast Guard[’s] As Deepwater Systems Integrator, Coast Guard Is Reassessing Costs and Capabilities but Lags in Applying Its Disciplined Acquisition Approach*, GAO-09-682, July 2009, p. 18.

<sup>28</sup> Government Accountability Office, *Coast Guard[’s] As Deepwater Systems Integrator, Coast Guard Is Reassessing Costs and Capabilities but Lags in Applying Its Disciplined Acquisition Approach*, GAO-09-682, July 2009, pp. 14-15.

## Sentinel Class Fast Response Cutter (FRC)

On March 14, 2007, the Coast Guard announced that it intended to procure the 12 FRC-B cutters, also known as the Sentinel class, directly from the manufacturer, rather than through ICGS.<sup>29</sup> On June 22, 2007, the Coast Guard issued a Request for Proposals (RFP) for the FRC-B, with submissions from industry due November 19, 2007. In February 2008, it was reported that the contract to be awarded by the Coast Guard could be valued at up to \$1.7 billion for 34 FRC-Bs, if all options are executed.<sup>30</sup> On September 26, 2008, the Coast Guard announced that it had awarded an \$88-million contract to Bollinger Shipyards for the design and construction of the FRC-B, which the Coast Guard now refers to as the Sentinel class. On October 7, 2008, the shipbuilding firm Marinette Marine filed a protest with GAO of the Coast Guard's contract award to Bollinger.<sup>31</sup> On January 12, 2009, GAO denied the protest.<sup>32</sup> On February 9, 2009, Marinette Marine notified the Justice Department of its intent to file a second protest, but on February 17, 2009, it was reported that Marinette had withdrawn the second protest.<sup>33</sup>

## Coast Guard Perspective

The Coast Guard testified in April 2009 that:

business improvements have led to a number of high profile project successes. Consider the recent award of the Fast Response Cutter (FRC) Sentinel-class patrol boat. Initially planned as part of the Deepwater program, to be delivered through Integrated Coast Guard Systems (ICGS), we took this project back within the Coast Guard to ensure full and open competition and responsible program management. We have followed our reformed acquisition processes, conducting a deliberative proposal review and award determination with integrated participation from technical authorities and the operational community. The FRC's proven parentcraft design will minimize cost and schedule risk and mitigate the patrol boat hour gap in the shortest time possible. Neither ICGS nor the Coast Guard's pre-modernized acquisition program could have accomplished this feat as efficiently or effectively, and I am confident we will build on this record of advances for future acquisitions programs as well....

The most pointed example of the success of our reformed acquisition processes is Fast Response Cutter Sentinel-class patrol boat. With a total potential contract value of more than \$1 billion, it was a highly competitive process, and our selection survived two post-award protests, demonstrating that our robust acquisition process was beyond reproach.

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<sup>29</sup> Coast Guard press release, "Coast Guard Reassigns Deepwater Replacement Patrol Boat Acquisition Project," March 14, 2007; Calvin Biesecker, "Coast Guard Strips FRC-B Patrol Boat Acquisition From ICGS," *Defense Daily*, March 15, 2007; Renae Merle, "Coast Guard Cancels Contract," *Washington Post*, March 15, 2007; and David Stout, "Coast Guard Cancels Contract For Vessel," *New York Times*, March 15, 2007.

<sup>30</sup> Andrea Shalal-Esa, "US Coast Guard Sees Patrol Boat Award in May or June," *Reuters*, February 11, 2008. See also Stew Magnuson, "Not So Fast on Fast Response Cutters, Coast Guard Says," *National Defense Magazine*, February 2008.

<sup>31</sup> Rebekah Gordon, "Marinette Marine Files Protest Over Coast Guard's FRC Award," *Inside the Navy*, October 13, 2009.

<sup>32</sup> Rebekah Gordon, "GAO Denies Protest of Coast Guard Award to Bollinger for FRC," *Inside the Navy*, January 19, 2009.

<sup>33</sup> Amy McCullough, "Marinette Withdraws Patrol Boat Protest," *NavyTimes.com*, February 17, 2009.

As the yard stick by which to measure the success of our reformed acquisition enterprise, the Sentinel project provides a number of assurances - all built on the cornerstones for successful acquisition - for its own and future acquisition management successes, including:

- Establishment and maintenance of a direct Coast Guard relationship with the contractor, rather than through a separate lead systems integrator;
- Development of detailed technical requirements, and firm adherence to those requirements throughout the proposal design evaluation process and construction;
- Classification of cutters to established and recognized standards (i.e., American Bureau of Shipping and High Speed Naval Vessel Rules);
- Use of parent craft designs where applicable, with parent craft designer and builder co-located on engineering team;
- On-site government staff at production facilities;
- Fixed price contract structure;
- Extensive involvement of technical authority throughout acquisition and delivery process;
- Independent validation (i.e., independent cost estimates and design assessments);
- Leveraging Navy and other government partnerships; and,
- Ability to re-compete thru options for data and licensing.

The Sentinel project has become the model for all current and future Coast Guard acquisition programs.<sup>34</sup>

The Coast Guard also testified in April 2009 that:

our reform efforts are directly measured in the recent contract award for the critically needed Fast Response Cutter Sentinel-class patrol boat. Initially planned as part of the Deepwater program, to be delivered through Integrated Coast Guard Systems, we took this project back within the Coast Guard to ensure full and open competition and responsible program management. We have abided strictly to our reformed acquisition processes, conducting a deliberative proposal review and award determination with integrated participation from technical authorities and the operational community. Based on the cornerstones for successful acquisition, this project also adheres to MSAM guidelines, full reporting, independent assessment and validation, leveraging internal and external partnerships, and robust departmental oversight.<sup>35</sup>

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<sup>34</sup> Statement of Admiral Thad W. Allen, Commandant [of the Coast Guard], on the Coast Guard and Acquisitions before the Committee on Appropriations Subcommittee on Homeland Security, U.S. House of Representatives, 22 April 2009, pp. 2-3, 8-9.

<sup>35</sup> Statement of Admiral Thad W. Allen, Commandant [of the Coast Guard], on the Coast Guard and Acquisitions before the Committee on Appropriations Subcommittee on Homeland Security, U.S. House of Representatives, 22 April 2009, pp. 15-16.

## GAO Perspective

A July 2009 GAO report stated:

Based on its determination that the need for the capabilities to be provided by the Fast Response Cutter and C4ISR is pressing, the Coast Guard has contracted for these capabilities without having in place all acquisition documentation required by the MSAM. This situation puts the Coast Guard at risk for cost overruns and schedule slips if it turns out that what it is buying does not meet its requirements. For example, in September 2008, after conducting a full and open competition, the Coast Guard awarded an \$88.2 million contract to Bollinger Shipyards, Inc. for the design and construction of a lead Fast Response Cutter. Prior to the award, however, the Coast Guard did not have an approved operational requirements document or test plan for this asset as required by the MSAM process. Recognizing the risks inherent in this approach, the Coast Guard developed a basic requirements document and an acquisition strategy based on procuring a proven design. These documents were reviewed and approved by the Coast Guard's capabilities directorate, the engineering and logistics directorate, and chief of staff before the procurement began. The Coast Guard's next acquisition decision event is scheduled for the first quarter of fiscal year 2010 to obtain DHS approval for low-rate initial production. According to officials, the Coast Guard intends to submit an operational requirements document and test plan to DHS for this acquisition decision event. With plans to exercise contract options for hulls 2 through 8 in fiscal year 2010, the Coast Guard's aggressive schedule leaves little room for unforeseen problems. Program risks are compounded by the fact that the Coast Guard plans to have at least 12 cutters either delivered or under contract prior to the scheduled completion of operational testing in fiscal year 2012, before it has certainty that what it is buying meets Coast Guard needs.<sup>36</sup>

## 110/123-Foot Patrol Boat Modernization

As an earlier part of the Deepwater program, the Coast Guard initiated an effort to modernize its existing 110-foot Island class patrol boats, so that they could remain in service pending the delivery of replacement Deepwater craft. Among other things, the modernization increased the length of the boats to 123 feet. The effort is thus referred to variously as the 110-foot modernization program, the 123-foot modernization program, or the 110/123-foot modernization program.

The initial eight boats in the program began to develop significant structural problems soon after completing their modernizations. The Coast Guard removed the boats from service and canceled the program, having spent close to \$100 million on it. On May 17, 2007, the Coast Guard issued a letter to ICGS revoking its previous acceptance of the eight modernized boats—an action intended to facilitate Coast Guard attempts to recover from ICGS funds that were spent on the eight converted boats.<sup>37</sup> On January 7 and 8, 2008, it was reported that the Coast Guard was seeking a repayment of \$96.1 million from ICGS for the patrol boats and had sent a letter to ICGS on December 28, 2007, inviting ICGS to a negotiation for a settlement of the issue.<sup>38</sup> Some

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<sup>36</sup> Government Accountability Office, *Coast Guard[:]As Deepwater Systems Integrator, Coast Guard Is Reassessing Costs and Capabilities but Lags in Applying Its Disciplined Acquisition Approach*, GAO-09-682, July 2009, p. 15.

<sup>37</sup> Dan Caterinicchia, "Coast Guard Wants Refund For Ships," *Associated Press*, May 17, 2007; Renae Merle, "Coast Guard Seeks Deepwater Refund," *Washington Post*, May 18, 2007: D3.

<sup>38</sup> See Andrea Shalal-Esa, "Lockheed, Northrop Asked To Pay \$96 Mln For Bad Boats," *Reuters*, January 7, 2008; Geoff Fein, "Coast Guard Invites ICGS To Negotiate A Settlement Over 123-Foot Boat Issue," *Defense Daily*, January (continued...)

observers questioned the strength of the government's legal case, and thus its prospects for recovering the \$96.1 million or some figure close to that.<sup>39</sup>

The Coast Guard testified in April 2009 that:

With regard to the 123-foot patrol boats, the Department of Justice and the DHS-OIG [the DHS Office of the Inspector General] continue their investigation into the project. The qui tam [legal] action involving the patrol boats is still on-going. The Department of Justice has not yet made a determination whether it will intervene in that action. The Coast Guard continues its support of the DOJ and DHS-OIG investigation.

Simultaneous to our support of the DOJ investigation, we have also undertaken an independent engineering analysis through the Navy's Naval Sea Systems Command, which we expect to be completed sometime this summer. Additionally, we are working with the Department of Justice to release five of the eight patrol boats to salvage systems, equipment and parts still of value to the Coast Guard. The remaining three cutters would remain untouched for evidence purposes in support of the ongoing investigations.<sup>40</sup>

## **Revolving Door and Potential for Conflicts of Interest**

The so-called revolving door, which refers to the movement of officials between positions in government and industry, can create benefits for government and industry in terms of allowing each side to understand the other's needs and concerns, and in terms of spreading best practices from one sector to the other. At the same time, some observers have long been concerned that the revolving door might create conflicts of interest for officials carrying out their duties while in government positions. A March 25, 2007, news article stated in part:

Four of the seven top U.S. Coast Guard officers who retired since 1998 took positions with private firms involved in the Coast Guard's troubled \$24 billion fleet replacement program, an effort that government investigators have criticized for putting contractors' interests ahead of taxpayers'.

They weren't the only officials to oversee one of the federal government's most complex experiments at privatization, known as Deepwater, who had past or subsequent business ties to the contract consortium led by industry giants Northrop Grumman and Lockheed Martin.

The secretary of transportation, Norman Y. Mineta, whose department included the Coast Guard when the contract was awarded in 2002, was a former Lockheed executive. Two deputy secretaries of the Department of Homeland Security, which the Coast Guard became part of in 2003, were former Lockheed executives, and a third later served on its board.

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(...continued)

8, 2008; Dan Caterinicchia, "Gov't Wants \$96M Refund For Faulty Ships," *Business Week*, January 8, 2008. See also Emelie Rutherford, "Coast Guard Wants \$96 Million From Deepwater Team For Bad Ships," *Inside the Navy*, January 14, 2008.

<sup>39</sup> See, for example, Geoff Fein, "Coast Guard Invites ICGS To Negotiate A Settlement Over 123-Foot Boat Issue," *Defense Daily*, January 8, 2008. See also Geoff Fein, "Rep. Taylor Chides Coast Guard Over Effort To Recoup Cutter Conversion Funds," *Defense Daily*, February 27, 2008.

<sup>40</sup> Statement of Admiral Thad W. Allen, Commandant [of the Coast Guard], on the Coast Guard and Acquisitions before the Committee on Appropriations Subcommittee on Homeland Security, U.S. House of Representatives, 22 April 2009, p. 18. See also Bettina H. Chavanne, "Lawmakers Still Pressing USCG On Patrol Boat Conversion," *Aerospace Daily & Defense Report*, March 25, 2009: 3.

Washington's revolving-door laws have long allowed officials from industry giants such as Lockheed, the nation's largest defense contractor, to spend parts of their careers working for U.S. security agencies that make huge purchases from those companies, though there are limits.

But Deepwater dramatizes a new concern, current and former U.S. officials said: how dwindling competition in the private sector, mushrooming federal defense spending and the government's diminished contract management skills raise the stakes for potential conflicts of interest.

Deepwater also illustrates how federal ethics rules carve out loopholes for senior policymakers to oversee decisions that may benefit former or prospective employers. These include outsourcing strategies under which taxpayers bear most of the risks for failure, analysts said.

There is no sign that any of the retired admirals or former Lockheed officials did anything illegal.

But the connections between the agencies and the contractors have drawn the attention of the DHS inspector general, Richard L. Skinner. "That is on our radar screen," he said. "It's something we are very sensitive to."<sup>41</sup>

## Potential Options for Congress

In addition to approving or modifying the Coast Guard's requests for acquisition funding Deepwater programs, potential options for Congress regarding the Deepwater program include but are not limited to the following:

- continue to track the Coast Guard's management and execution of Deepwater acquisition programs, including implementation of reform actions announced by the Coast Guard itself or recommended by GAO;
- modify reporting requirements for Deepwater acquisition programs;
- prohibit the obligation or expenditure of funding for Deepwater acquisition programs until the Coast Guard or DHS takes certain actions or makes certain certifications regarding the Deepwater program; and
- pass legislation to codify acquisition reforms for Deepwater programs that the Coast Guard has already announced, or to change acquisition policies and practices for Deepwater acquisition programs in other ways.

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<sup>41</sup> Spencer S. Hsu and Renae Merle, "Coast Guard's Purchasing Raises Conflict-Of-Interest Flags," *Washington Post*, March 25, 2007.

## Legislative Activity in 112<sup>th</sup> Congress

### Summary of Appropriations Action on FY2012 Funding Requests

**Table 4** summarizes appropriations action on the FY2012 acquisition funding requests for Deepwater programs.

**Table 4. Appropriations Action on FY2012 Acquisition Funding Requests**  
(in millions of dollars, rounded to nearest tenth)

Program	Request <sup>a</sup>	House Appropriations Committee	Senate Appropriations Committee	Conference
Maritime Patrol Aircraft (MPA)	129.5	129.5		
HH-60 Conversion Projects	74.4 <sup>b</sup>	74.4		
HH-65 Conversion/Sustainment Projects	24.0	61.0		
HC-130H Conversion/Sustainment Projects	62.0	62.0		
Cutter unmanned aircraft systems (UAS)	0	2.0		
<b>Subtotal aircraft</b>	<b>289.9</b>	<b>328.9</b>		
National Security Cutter (NSC)	77.0	0		
Offshore Patrol Cutter (OPC)	25.0	25.0		
Fast Response Cutter (FRC)	358.0	240.0		
Deepwater small boats	5.0	5.0		
Medium-endurance cutter sustainment	47.0	47.0		
<b>Subtotal surface ships</b>	<b>512.0</b>	<b>317.0</b>		
Government program management	35.0	30.0		
Systems engineering and integration	17.1	17.1		
C4ISR	34.5	44.5		
Deepwater logistics	87.0 <sup>c</sup>	Not clear <sup>d</sup>		
<b>Subtotal other</b>	<b>173.6</b>	<b>Not clear</b>		
<b>TOTAL</b>	<b>975.5</b>	<b>Not clear</b>		

**Source:** Table prepared by CRS based on Coast Guard FY2011 and FY2012 budget submissions and H.Rept. 112-91 on H.R. 2017. C4ISR means Command and control, communications, computers, intelligence, surveillance and reconnaissance.

- a. The Coast Guard's FY2012 budget submission states: "The Coast Guard FY 2012 budget proposes the elimination of the Integrated Deepwater System (IDS) sub-appropriation and disaggregation of the IDS construct from the Coast Guard's Acquisition, Construction and Improvement (AC&I) appropriation. Enacting this proposal will further enhance acquisition management and accountability by aligning the appropriations structure with how the projects are managed. This initiative also enhances accountability by establishing a stronger linkage between appropriations and specific asset acquisition projects, promotes better alignment with the authorized appropriation structure, and is a natural outcome of the Coast Guard's ongoing efforts to reform acquisition management and oversight.... Consistent with the dissolution of Integrated CG Systems and the disaggregation of the Deepwater Acquisition into asset-based Acquisition Program Baselines, the proposed changes align projects that were formerly grouped under Integrated

- Deepwater Systems (IDS) with the existing authorized structure for Vessels, Aviation, Shore, Other Equipment, and Personnel and Management.” (*Department of Homeland Security, United States Coast Guard, Fiscal Year 2012 Congressional Justification*, pp. CG-AC&I-3 and CG-AC&I-13.)
- b. Includes \$56.1 million for HH-60 conversion projects and \$18.3 million for a project called CGNR 6017 to convert a retired Navy SH-60F helicopter into a Coast Guard MH-60T helicopter, so as to replace a Coast Guard MH-60T lost in a crash in 2010.
  - c. The Coast Guard’s FY2012 budget submission states: “This is the first submission for CG-LIMS under the post-Integrated Deepwater Systems construct. Previous work managed under this program was conducted under the Deepwater Logistics Acquisition Project. Deepwater Logistics was disaggregated into CG-LIMS within the “Other” sub-appropriation and Major Acquisition Systems Infrastructure (MASI) within the ‘Shore and Aids to Navigation’ subappropriation.” The requested FY2012 figure shown in this table for Deepwater Logistics is the sum of the FY2012 funding requests for CG-LIMS (\$6.5 million) and for MASI projects relating to the NSC (\$18 million), the FRC (\$57 million), and the MPA (\$5.5 million).
  - d. H.Rept. 112-91 does not present a funding figure for this line item; see footnote c above.

## FY2012 DHS Appropriations Bill (H.R. 2017)

### House

#### *Bill Language*

The text of H.R. 2017 as reported by the House Appropriations Committee states in part that funds are provided for the Coast Guard’s Operating Expenses (OE) account,

... *Provided further*, That of the funds provided under this heading, \$75,000,000 shall be withheld from obligation for Coast Guard Headquarters Directorates until (1) a revised future-years capital investment plan for fiscal years 2012 through 2016, as specified under the heading ‘Coast Guard, Acquisition, Construction, and Improvements’ of this Act, that is reviewed by the Comptroller General of the United States; (2) the fiscal year 2012 second quarter acquisition report; and (3) the polar operations high latitude study are submitted to the Committees on Appropriations of the Senate and the House of Representatives:...

The bill also states in part that funds are provided for the Coast Guard’s Acquisition, Construction, and Improvements (AC&I) account,

...*Provided*, That the Secretary of Homeland Security shall submit to the Committees on Appropriations of the Senate and the House of Representatives, at the time that the President’s budget is submitted each year under section 1105(a) of title 31, United States Code, a future-years capital investment plan for the Coast Guard that identifies for each requested capital asset—

- (1) the proposed appropriations included in that budget;
- (2) the total estimated cost of completion, including and clearly delineating the costs of associated major acquisition systems infrastructure and transition to operations;
- (3) projected funding levels for each fiscal year for the next five fiscal years or until acquisition program baseline or project completion, whichever is earlier;
- (4) an estimated completion date at the projected funding levels; and
- (5) a current acquisition program baseline for each capital asset, as applicable, that—

(A) includes the total acquisition cost of each asset, subdivided by fiscal year and including a detailed description of the purpose of the proposed funding levels for each fiscal year, including for each fiscal year funds requested for design, pre-acquisition activities, production, structural modifications, missionization, post-delivery, and transition to operations costs;

(B) includes a detailed project schedule through completion, subdivided by fiscal year, that details—

(i) quantities planned for each fiscal year; and

(ii) major acquisition and project events, including development of operational requirements, contracting actions, design reviews, production, delivery, test and evaluation, and transition to operations, including necessary training, shore infrastructure, and logistics;

(C) notes and explains any deviations in cost, performance parameters, schedule, or estimated date of completion from the original acquisition program baseline and the most recent baseline approved by the Department of Homeland Security's Acquisition Review Board, if applicable;

(D) aligns the acquisition of each asset to mission requirements by defining existing capabilities of comparable legacy assets, identifying known capability gaps between such existing capabilities and stated mission requirements, and explaining how the acquisition of each asset will address such known capability gaps;

(E) defines life-cycle costs for each asset and the date of the estimate on which such costs are based, including all associated costs of major acquisitions systems infrastructure and transition to operations, delineated by purpose and fiscal year for the projected service life of the asset;

(F) includes the earned value management system summary schedule performance index and cost performance index for each asset, if applicable; and

(G) includes a phase-out and decommissioning schedule delineated by fiscal year for each existing legacy asset that each asset is intended to replace or recapitalize:

Provided further, That the Secretary shall ensure that amounts specified in the future-years capital investment plan are consistent, to the maximum extent practicable, with proposed appropriations necessary to support the programs, projects, and activities of the Coast Guard in the President's budget as submitted under section 1105(a) of title 31, United States Code, for that fiscal year: Provided further, That any inconsistencies between the capital investment plan and proposed appropriations shall be identified and justified:...

Section 517 of the bill states:

Sec. 517. Any funds appropriated to 'Coast Guard, Acquisition, Construction, and Improvements' for fiscal years 2002, 2003, 2004, 2005, and 2006 for the 110-123 foot patrol boat conversion that are recovered, collected, or otherwise received as the result of negotiation, mediation, or litigation, shall be available until expended for the Fast Response Cutter program.

## *Report Language*

The House Appropriations Committee, in its report (H.Rept. 112-91 of May 26, 2011) on H.R. 2017, states:

Of the [operating expenses] funds recommended for the Coast Guard’s Headquarters Directorates, \$75,000,000 is withheld from obligation until the Commandant of the Coast Guard submits the following to the Committees on Appropriations of the Senate and House of Representatives: (1) a revised future-years Capital Investment Plan for fiscal years 2012 through 2016 that has been reviewed by GAO, as specified under the “Coast Guard Acquisition, Construction, and Improvements” heading in this Act; (2) the fiscal year 2012 second quarter quarterly acquisition report; and (3) the polar operations high latitude study....

### MISSION REQUIREMENTS

The Coast Guard has not formally updated its mission requirements to the Committee since the 2004 Mission Needs Study. The Coast Guard informed the Committee that it uses an annual Standard Operational Planning Process (SOPP) to update current requirements; however, a SOPP finding has never been submitted to the Committee nor has a change in an acquisition program baseline or an operational requirement been justified before the Committee as a result of a SOPP finding. Furthermore, the Coast Guard has stated that it has been conducting a Fleet Mix Analysis since 2004 and the results of this analysis will inform the fiscal year 2013 budget submission and fiscal years 2013 through 2017 Capital Investment Plan. The Committee finds this protracted delay in updating mission requirements for the Coast Guard’s post-Deepwater era to be a major impediment to effective budget planning. The Coast Guard is directed to submit the most current Fleet Mix Analysis to the Committees on Appropriations of the Senate and House of Representatives and to brief the Committees on its process for formulating updated mission requirements no later than 30 days after the date of enactment of this Act. (Pages 72-73)

The report also states:

The Committee removes the annual requirement for a Revised Deepwater Implementation Plan due to the dissolution of the Deepwater initiative and directorate. The Committee modifies and strengthens the requirements for the annual capital investment plan (CIP) and requires the submittal of the CIP, as specified in the bill, in conjunction with the annual budget submission....

### QUARTERLY REPORTS ON ACQUISITION PROJECTS AND MISSION EMPHASIS

The Commandant is directed to continue to submit to the Committee quarterly acquisition and mission emphasis reports consistent with deadlines articulated under section 360 of division I of Public Law 108–7. The Coast Guard shall continue submitting these reports in the same format as required in fiscal year 2010. In addition, for each asset covered, the reports should present the objective for operational hours the Coast Guard expects to achieve, the gap between that objective, current capabilities, and stated mission requirements, and how the acquisition of the specific asset closes the gap. The information shall also include a discussion of how the Coast Guard calculated the operational hours, an explanation on risks to mission performance associated with the current shortfall, and the operational strategy to mitigate such risks.

### CAPITAL INVESTMENT PLAN

The Committee directs the Commandant of the Coast Guard to revise and resubmit the fiscal years 2012–2016 Capital Investment Plan as specified in the bill. The CIP submitted with the fiscal year 2012 budget request fails to align capital investments to mission requirements; does not include current acquisition program baselines for each capital asset; does not include the associated infrastructure costs essential to the operation of each capital asset; and contains no background information or justification regarding the future-years funding assumptions. The Coast Guard is further directed to submit a CIP in accordance with the specified requirements listed in the bill in conjunction with the budget submission for fiscal year 2013 and thereafter. The Committee believes the CIP serves as the primary means of oversight for tracking the Coast Guard’s recapitalization efforts and therefore must be substantially improved.

### REVISED BUDGET STRUCTURE

The Committee has revised the Coast Guard’s budget structure for the Acquisition, Construction, and Improvements account due to the dissolution of the Deepwater initiative and directorate. The Committee appreciates the Coast Guard’s cooperation in aligning previously appropriated funds with this new PPA structure and directs the Coast Guard to submit both its fiscal year 2013 budget submission and revised and future CIPs in accordance with this new budgetary display. The Committee’s standing reprogramming and transfer guidelines contained in section 503 of this Act shall be applied to these new PPAs.

### NATIONAL SECURITY CUTTER

The Committee denies the request for \$77,000,000 for the closeout costs of the fifth National Security Cutter (NSC) because these funds were provided in fiscal year 2011 along with funding for the full production costs of the fifth NSC. The Coast Guard has not submitted a budget amendment proposing to re-purpose these requested funds towards the pre-acquisition and long-long material costs of the sixth NSC; has currently budgeted for the full cost of the sixth NSC in fiscal year 2013, as per the capital investment plan submitted with the fiscal year 2012 budget submission; and has not informed the Committee on whether the Office of Management and Budget (OMB) would grant an exception from the full funding policy contained in OMB Circular A–11 and allow for the application of incremental funding (as has been done for the previous five NSCs).

Due to OMB’s application of this Circular A–11 full funding policy upon the acquisition of NSCs five through eight, the entire NSC acquisition program baseline will be extended by several years and the unit cost for NSCs six through eight will increase by an estimated \$45,000,000 to \$60,000,000 per cutter (an estimated increase of six to eight percent to total acquisition cost per cutter). The Committee believes the application of a policy that results in higher costs and in the undue delay of critical operational capabilities to be illogical and counterproductive to our Nation’s security needs as well as current budgetary realities. Furthermore, delays in the acquisition of the NSC will exacerbate the already escalating operating and maintenance costs of the Coast Guard’s aging High Endurance Cutter fleet. Due to these undisputed adverse impacts, the Committee believes the Administration’s management of the NSC acquisition program baseline to be failing in its responsibility to deliver a cost-effective capability for maritime safety and security. The Committee directs the Department’s Office of the Chief Financial Officer and the Coast Guard to brief the Committee within 30 days of the date of enactment of this Act on a revised NSC acquisition strategy that addresses all known adverse impacts resulting from the application of OMB’s full funding requirements for the NSC pursuant to OMB Circular A–11.

#### FAST RESPONSE CUTTER

The Committee recommends \$240,000,000 for the acquisition of four Fast Response Cutters (FRCs), \$118,000,000 below the amount requested and the same as the amount provided in fiscal year 2011. Funding for two, additional FRCs is denied due to concerns regarding structural deficiencies found during the production of the first FRC and the resulting delay in delivery of the first FRC due to the required structural modifications. The Committee is also very concerned that the Coast Guard is applying funds reserved for FRC antecedent liabilities to address the costs of these structural modifications and that this decision will likely result in future, unfunded liabilities. Because the Coast Guard has yet to conduct its operational test and evaluation (OT&E) of the first FRC, the Committee believes it is prudent to examine the empirical OT&E results before accelerating the acquisition of FRCs from four to six per year. The Committee also denies the request for the re-procurement package and data rights (RDLP) at this time because, according to the Coast Guard's fiscal year 2012 budget submission, the RDLP option of the contract is not scheduled to be executed until fiscal year 2013 and the current contract for FRC production does not expire until the end of fiscal year 2014. The Committee remains committed to the FRC acquisition, and believes replacement of the Coast Guard's aging, 110-foot Island Class patrol boat fleet to be among the Department's highest acquisition priorities. The Committee will re-consider the request for funding to support an increase in the annual production rate of FRCs and the purchase of the RDLP once outstanding issues have been fully resolved....

#### MAJOR ACQUISITION SYSTEMS INFRASTRUCTURE

The Committee recommends \$66,000,000 for major acquisition systems infrastructure, \$28,500,000 below the amount requested and \$10,000,000 above the amount provided in fiscal year 2011. The Committee denies the request for two of the FRC port upgrades due to an insufficient budget justification; projected delays in FRC deliveries; the protracted delay in the Coast Guard's delivery of a revised FRC master schedule to the Committee; and due to serious concerns regarding the significant cost per port upgrade that amount to nearly a 24 percent increase in the cost of each FRC. As previously stated and directed, the Coast Guard shall include the associated costs of major acquisition systems infrastructure with each capital asset, as applicable, in the CIP. Furthermore, the Coast Guard is directed to brief the Committee no later than 45 days after the date of enactment of this Act on the cost control and estimation tools it is employing to contain the costs of infrastructure modifications needed to accommodate re-capitalized and new assets.

#### GOVERNMENT PROGRAM MANAGEMENT

The Committee recommends \$30,000,000 for government program management, \$5,000,000 below the amount requested and \$15,000,000 below the amount provided in fiscal year 2011. The Committee recommends this reduction due to the complete lack of detail provided by the Coast Guard in their fiscal year 2012 Congressional budget justification for this function. While Committee strongly supports the activities carried out within this function, the lack of detail provided in the budget request is inadequate to warrant a recommendation for funding the amount requested. The Coast Guard is directed to provide a detailed subdivision of funding requested for government program management in its justification materials accompanying the fiscal year 2013 budget submission.

#### COMMUNICATION UPGRADES OF LEGACY CUTTERS

The Committee recommends an additional \$10,000,000 above the amount requested to support the costs of installation of communications systems on legacy cutters. These enhancements will improve surveillance, secure networking, and operational coordination among Coast Guard and other blue force assets. Furthermore, this increase in funding is

consistent with recent DHS OIG recommendations to upgrade current maritime satellite communication equipment to provide high-speed transmission capabilities to enable cutters that interdict migrants to collect and screen certain biometric data.

#### HH-65 HELICOPTER RESET

The Committee recommends an additional \$37,000,000 above the amount requested for the acquisition of two, replacement HH-65 helicopters that were lost in the line of duty over the past two years. The Coast Guard is directed to brief the Committee within 60 days of the date of enactment of this Act on its reset plans for irrecoverable assets lost in the line of duty.

#### CUTTER-BASED UNMANNED AIRCRAFT SYSTEMS

The Committee recommends an additional \$2,000,000 above the amount requested for the pre-acquisition activities for cutter-based unmanned aircraft systems (UAS). The Committee supports the use of cutter-based UAS to maximize the surveillance and interdiction capabilities of the Coast Guard's cutters, but is concerned that the fiscal years 2012 through 2016 CIP submitted with the fiscal year 2012 budget request contains no funding for UAS. In the justification materials accompanying the fiscal year 2013 budget submission, the Coast Guard shall clearly outline its plans for further investment in the acquisition and deployment of a cutter-based UAS, to include estimated acquisition costs and delivery schedule. The Committee advises that any such plan should align with the Coast Guard's CIP and should clearly identify the costs of acquisition, cutter integration, and missionization per asset, as well as a delivery and activation schedule of UAS capability per cutter. The Coast Guard shall also include with its fiscal year 2013 budget submission a report to the Committee on the impact of the absence of deployed UAS upon NSC capability and mission performance.

#### LAND-BASED MARITIME UNMANNED AIRCRAFT SYSTEMS

The Committee commends CBP and the Coast Guard for its collaboration on the development and deployment of a land-based, maritime unmanned aircraft system. However, the Committee notes with concern the lack of progress on this interagency coordination or subsequent acquisition of additional land-based, maritime UAS. In fact, the Coast Guard's fiscal years 2012 through 2016 Capital Investment Plan submitted with the fiscal year 2012 budget request includes no funding for land-based UAS. The Committee believes there is considerable potential in the use of persistent surveillance tools in the maritime approaches to the continental United States, namely in the Eastern Pacific and Caribbean basin. In the justification materials accompanying the fiscal year 2013 budget submission, the Coast Guard shall clearly outline its plans for further investment in the acquisition and deployment of a land-based UAS in collaboration with CBP, to include estimated acquisition costs and delivery schedule. The Committee advises that any such plan should align with the Coast Guard's CIP and should clearly identify the costs of acquisition, integration, and missionization per asset, as well as a delivery and activation schedule of UAS capability.

#### LONG-RANGE SURVEILLANCE AIRCRAFT

The Committee has renamed and combined the PPAs for HC-130J introduction and HC-130H refurbishment in order to allow the Coast Guard to leverage its limited funding for these activities for the most cost-effective budgeting for Long Range Surveillance (LRS) Aircraft. The Coast Guard is directed to brief the Committee no later than 45 days after the date of enactment of this Act on its evaluation of options presented in the recently completed Naval Air Systems Command business case analysis of the optimal mix of refurbished HC-130Hs and new HC-130Js. (Pages 79-84)

## Appendix A. Criticism of Deepwater Management in 2007

### Overall Management of Program

Many observers in 2007 believed the problems experienced in the three Deepwater cutter acquisition efforts were the product of broader problems in the Coast Guard's overall management of the Deepwater program. Reports and testimony in 2007 and prior years from the DHS IG and GAO, as well as a February 2007 DAU "quick look study" requested by the Coast Guard<sup>42</sup> expressed serious concerns about the Coast Guard's overall management of the Deepwater program.

Some observers expressed the view that using a private-sector LSI to implement the Deepwater program made a complex program more complex, and set the stage for waste, fraud, and abuse by effectively outsourcing oversight of the program to the private sector and by creating a conflict of interest for the private sector in executing the program. Other observers, including GAO and the DAU, expressed the view that using a private-sector LSI is a basically valid approach, but that the contract the Coast Guard used to implement the approach for the Deepwater program was flawed in various ways, undermining the Coast Guard's ability to assess contractor performance, control costs, ensure accountability, and conduct general oversight of the program.

Observers raised various issues about the Deepwater contract. Among other things, they expressed concern that the contract was an indefinite delivery, indefinite quantity (ID/IQ) contract, which, they said, can be an inappropriate kind of contract for a program like the Deepwater program. Observers also expressed concern that the contract

- transferred too much authority to the private-sector LSI for defining performance specifications, for subsequently modifying them, and for making technical judgements;
- permitted the private-sector LSI to certify that certain performance goals had been met—so-called self-certification, which, critics argue, can equate to no meaningful certification;
- provided the Coast Guard with insufficient authority over the private-sector LSI for resolving technical disputes between the Coast Guard and the private-sector LSI;
- was vaguely worded with regard to certain operational requirements and technical specifications, reducing the Coast Guard's ability to assess performance and ensure that the program would achieve Coast Guard goals;
- permitted the firms making up the private-sector LSI to make little use of competition between suppliers in selecting products to be used in the Deepwater program, to tailor requirements to fit their own products, and consequently to rely too much on their own products, as opposed to products available from other manufacturers;

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<sup>42</sup> Defense Acquisition University, *Quick Look Study, United States Coast Guard Deepwater Program*, February 2007.

- permitted the private-sector LSI's performance during the first five-year period to be scored in a way that did not sufficiently take into account recent problems in the cutter acquisition efforts;
- permitted award fees and incentive fees (i.e., bonuses) to be paid to the private-sector LSI on the basis of "attitude and effort" rather than successful outcomes; and
- lacked sufficient penalties and exit clauses.

Observers also expressed concern that the Coast Guard did not have enough in-house staff and in-house expertise in areas such as program management, financial management, and system integration to properly oversee and manage an acquisition effort as large and complex as the Deepwater program, and that the Coast Guard did not make sufficient use of the Navy or other third-party, independent sources of technical expertise, advice, and assessments. They also expressed concern that the Coast Guard, in implementing the Deepwater program, placed a higher priority on meeting a schedule as opposed to ensuring performance.

In response to criticisms of the management and execution of the Deepwater program, Coast Guard and industry officials acknowledged certain problems in the program's management and execution and defended the program's management execution in other respects.<sup>43</sup>

## **National Security Cutter (NSC)**

A DHS IG report released in January 2007 strongly criticized the NSC program, citing design flaws in the ship and the Coast Guard's decision to start construction of NSCs in spite of early internal notifications about these flaws. The design flaws involved, among other things, areas in the hull with insufficient fatigue life—that is, with insufficient strength to withstand the stresses of at-sea operations for a full 30-year service life. The DHS IG report also noted considerable growth in the cost to build the first two NSCs, and other issues.<sup>44</sup>

Observers in 2007 stated that the Coast Guard failed to report problems about the NSC effort to Congress on a timely basis, resisted efforts by the DHS IG to investigate the NSC effort, and appeared to have altered briefing slides on the NSC effort so as to downplay the design flaws to certain audiences. On May 17, 2007, the DHS IG testified that the Coast Guard's cooperation with the DHS IG had substantially improved (though some issues remained), but that Deepwater

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<sup>43</sup> For examples of Coast Guard testimony, see Department of Homeland Security, U.S. Coast Guard, Statement of Admiral Thad W. Allen, Commandant, on Deepwater: 120-Days Later, Before the Subcommittee on Coast Guard & Maritime Transportation, Committee on Transportation & Infrastructure, U.S. House of Representatives, June 12, 2007; and Department of Homeland Security, U.S. Coast Guard, Statement of Rear Admiral Gary T. Blore and Captain Steven Baynes on Deepwater: Charting a Course For Safer Waters, Before the Committee on Homeland Security, U.S. House of Representatives, Subcommittees on Management, Investigations, and Oversight and Border, Maritime and Global Counterterrorism, May 17, 2007.

For examples of industry testimony, see Statement for the Record, Mr. James E. Anton, Vice President Deepwater Program, Northrop Grumman Ship Systems (NGSS), Testimony Before: The House Maritime and Global Counterterrorism Subcommittee And The House Management, Investigations and Oversight Subcommittee, May 17, 2007; and Testimony of Fred P. Moosally, President, Lockheed Martin Maritime Systems and Sensors, to The House Committee on Homeland Security Subcommittee on Border, Maritime and Global Counterterrorism, May 17, 2007.

<sup>44</sup> Department of Homeland Security, Office of Inspector General, *Acquisition of the National Security Cutter*, OIG - 07-23, January 2007. The report is available online at [http://www.dhs.gov/xoig/assets/mgmttrpts/OIG\\_07-23\\_Jan07.pdf](http://www.dhs.gov/xoig/assets/mgmttrpts/OIG_07-23_Jan07.pdf).

contractors had establishing unacceptable conditions for DHS IG to interview contractor personnel about the program.

## **110-Foot Patrol Boat Modernization**

The Coast Guard originally planned to modernize and lengthen its 49 existing Island-class 110-foot patrol boats so as to improve their capabilities and extend their lives until their planned eventual replacement with FRCs starting in 2018. The work lengthened the boats to 123 feet. The program consequently is referred to as the 110-foot or 123-foot or 110/123 modernization program.

Eight of the boats were modernized at a total cost of about \$96 million. The first of the eight modernized boats was delivered in March 2004. Structural problems were soon discovered in them. In June 2005, the Coast Guard stopped the modernization effort at eight boats after determining that they lacked capabilities needed for meeting post-9/11 Coast Guard operational requirements.

In August 2006, a former Lockheed engineer posted on the Internet a video alleging four other problems with the 110-foot patrol boat modernization effort.<sup>45</sup> The engineer had previously presented these problems to the DHS IG, and a February 2007 report from the DHS IG confirmed two of the four problems.<sup>46</sup>

On November 30, 2006, the Coast Guard announced that it was suspending operations of the eight modernized boats (which were assigned to Coast Guard Sector Key West, FL) because of the discovery of additional structural damage to their hulls. The suspension prompted expressions of concern that the action could reduce the Coast Guard's border-enforcement capabilities in the Caribbean. The Coast Guard said it was exploring options for addressing operational gaps resulting from the decision.<sup>47</sup>

On April 17, 2007, the Coast Guard announced that it would permanently decommission the eight converted boats and strip them of equipment and components that might be reused on other Coast Guard platforms.<sup>48</sup> The Coast Guard acknowledged in 2007 that the program was a failure.

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<sup>45</sup> Patricia Kime, "Video Alleges Security Problems With Converted U.S. Coast Guard Cutters," *DefenseNews.com*, August 7, 2006. See also Griff Witte, "On YouTube, Charges Of Security Flaws," *Washington Post*, August 29, 2006. The video is posted on the Internet at <http://www.youtube.com/watch?v=qd3VV8Za04g>.

<sup>46</sup> Department of Homeland Security, Office of Inspector General, *110'/123' Maritime Patrol Boat Modernization Project*, OIG -07-27, January 2007. The report is available online at [http://www.dhs.gov/xoig/assets/mgmttrpts/OIG\\_07-27\\_Feb07.pdf](http://www.dhs.gov/xoig/assets/mgmttrpts/OIG_07-27_Feb07.pdf).

<sup>47</sup> "Coast Guard Statement on Suspension of Converted Patrol Boat Operations," *InsideDefense.com*, November 30, 2006; Patricia Kime, "U.S. Coast Guard Pulls 123s Out of Service," *DefenseNews.com*, November 30, 2006; Calvin Biesecker, "Coast Guard Suspends 123-Foot Patrol Boat Operations," *DefenseDaily*, December 1, 2006; Robert Block, "Coast Guard Fleet Cuts Could Hurt Border Patrols," *Wall Street Journal*, December 1, 2006; Renae Merle, "Coast Guard Finds Flaws In Converted Patrol Boats," *Washington Post*, December 2, 2006; Renae Merle and Spencer S. Hsu, "Costly Fleet Update Falts," *Washington Post*, December 8, 2006.

<sup>48</sup> Coast Guard Press Release dated April 17, 2007, entitled "Statement by Adm. Thad Allen on the Converted 123-Foot Patrol Boats and Changes to the Deepwater Acquisition Program." See also Geoff Fein, "Coast Guard Nixes 123-Foot Patrol Boat, Assumes Lead of Deepwater Effort," *Defense Daily*, April 18, 2007; Patricia Kime, "Coast Guard To Decommission Troubled 123s," *NavyTimes.com*, April 18, 2007.

## **Fast Response Cutter (FRC)**

As a result of the problems in the 110-foot patrol boat modernization project, the Coast Guard accelerated the FRC design and construction effort by 10 years. Problems, however, were discovered in the FRC design. The Coast Guard suspended work on the design in February 2006, and then divided the FRC effort into two classes—the FRC-Bs, which are to be procured in the near term, using an existing patrol boat design (which the Coast Guard calls a “parent craft” design), and the subsequent FRC-As, which are to be based on a fixed version of the new FRC design.

As mentioned earlier, although the November 2006 Deepwater APB calls for 12 FRCs and 46 FRC-Bs, the Coast Guard’s Request for Proposals (RFP) for the FRC-B program includes options for building up to 34 FRC-Bs (which, if exercised, would reduce the number of FRC-As to as few as 24). The Coast Guard has also stated that if the FRC-Bs fully meet the requirements for the FRC, all 58 of the FRCs might be built to the FRC-B design.

## **Appendix B. Coast Guard Reform Actions in 2007**

### **Actions Announced in April 2007**

On April 17, 2007, the Coast Guard announced six changes intended to reform management of the Deepwater program. In announcing the actions, Admiral Thad Allen, the Commandant of the Coast Guard, stated in part:

Working together with industry, the Coast Guard will make the following six [6] fundamental changes in the management of our Deepwater program:

[1] The Coast Guard will assume the lead role as systems integrator for all Coast Guard Deepwater assets, as well as other major acquisitions as appropriate....

[2] The Coast Guard will take full responsibility for leading the management of all life cycle logistics functions within the Deepwater program under an improved logistics architecture established with the new mission support organization.

[3] The Coast Guard will expand the role of the American Bureau of Shipping, or other third-parties as appropriate, for Deepwater vessels to increase assurances that Deepwater assets are properly designed and constructed in accordance with established standards.

[4] The Coast Guard will work collaboratively with Integrated Coast Guard Systems to identify and implement an expeditious resolution to all outstanding issues regarding the national security cutters.

[5] The Coast Guard will consider placing contract responsibilities for continued production of an asset class on a case-by-case basis directly with the prime vendor consistent with competition requirements if: (1) deemed to be in the best interest of the government and (2) only after we verify lead asset performance with established mission requirements.

[6] Finally, I will meet no less than quarterly with my counterparts from industry until any and all Deepwater program issues are fully adjudicated and resolved. Our next meeting is to be scheduled within a month.

These improvements in program management and oversight going forward will change the course of Deepwater.

By redefining our roles and responsibilities, redefining our relationships with our industry partners, and redefining how we assess the success of government and industry management and performance, the Deepwater program of tomorrow will be fundamentally better than the Deepwater program of today....

As many of you know, I have directed a number of significant organizational changes [to the Coast Guard], embedded within direction and orders, to better prepare the Coast Guard to meet and sustain mission performance long into the future as we confront a broad range of converging threats and challenges to the safety, security and stewardship of America's vital maritime interests.

What's important to understand here is that these proposed changes in organizational structure, alignment and business processes, intended to make the Coast Guard more

adaptive, responsive and accountable, are not separate and distinct from what we have been doing over the past year to improve Deepwater.

In fact, many of these initiatives can be traced directly to challenges we've faced, in part, in our Deepwater program. Consequently, we will be better organized, better trained, and better equipped to manage large, complex acquisitions like Deepwater in the coming days, weeks, months and years as we complete these service-wide enhancements to our mission support systems, specifically our acquisition, financial and logistics functions. That is the future of the Coast Guard, and that is the future of Deepwater.

To be frank, I am tired of looking in the rearview mirror - conducting what has been the equivalent of an archaeological dig into Deepwater. We already understand all too well what has been ailing us within Deepwater in the past five years:

We've relied too much on contractors to do the work of government as a result of tightening AC&I budgets, a dearth of contracting personnel in the federal government, and a loss of focus on critical governmental roles and responsibilities in the management and oversight of the program.

We struggle with balancing the benefits of innovation and technology offered through the private sector against the government's fundamental reliance on robust competition.

Both industry and government have failed to fully understand each other's needs and requirements, all too often resulting in both organizations operating at counter-odds to one another that have benefited neither industry nor government.

And both industry and government have failed to accurately predict and control costs.

While we can—and are—certainly learning from the past, we ought to be about the business of looking forward—with binoculars even—as we seek to see what is out over the horizon so we can better prepare to anticipate challenges and develop solutions with full transparency and accountability. That is the business of government. And it's the same principle that needs to govern business as well.

And it's precisely what I intend to do: with the changes in management and oversight I outlined for you here today, with the changes we are making in the terms and conditions of the Deepwater contract, and with the changes we will make in our acquisition and logistics support systems throughout the Coast Guard. If we do, I have no doubt in my mind that we will exceed all expectations for Deepwater...

The Deepwater program of tomorrow will be fundamentally better than the Deepwater program of today.

The Coast Guard has a long history of demonstrating exceptional stewardship and care of the ships, aircraft and resources provided it by the public, routinely extending the life of our assets far beyond original design specifications to meet the vital maritime safety, security and stewardship needs of the nation....

Knowing that to be the case, I am personally committed to ensuring that our newest ships, aircraft and systems acquired through the Coast Guard's Integrated Deepwater System are capable of meeting our mission requirements from the moment they enter service until they are taken out of service many, many years into the future....

As I've said many times in the past, the safety and security of all Americans depends on a ready and capable Coast Guard, and the Coast Guard depends on our Deepwater program to keep us ready long into the future.

The changes to Deepwater management and oversight I outlined here for you today reflect a significant change in the course of Deepwater. I will vigorously implement these and other changes that may be necessary to ensure that our Coast Guard men and women have the most capable fleet of ships, aircraft and systems they need to do the job I ask them to do each and every day on behalf of the American people.<sup>49</sup>

## **Other Actions Announced in 2007**

The Coast Guard in 2007 also did the following:

- announced a reorganization of certain Coast Guard commands—including the creation of a unified Coast Guard acquisition office—that is intended in part to strengthen the Coast Guard's ability to manage acquisition projects, including the Deepwater program;
- stated that would alter the terms of the Deepwater contract for the 43-month award term that commenced in June 2007 so as to address concerns raised about the current Deepwater contract;
- announced that it intended to procure the 12 FRC-B cutters directly from the manufacturer, rather than through ICGS;
- stated that it was hiring additional people with acquisition experience, so as to strengthen its in-house capability for managing the Deepwater program and other Coast Guard acquisition efforts;
- stated that it concurred with many of the recommendations made in the DHS IG reports, and was moving to implement them;
- stated that it was weighing the recommendations of the DAU quick look study; and
- stated that it had also implemented many recommendations regarding Deepwater program management that have been made by GAO.

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<sup>49</sup> Coast Guard Press Release dated April 17, 2007, entitled "Statement by Adm. Thad Allen on the Converted 123-Foot Patrol Boats and Changes to the Deepwater Acquisition Program."

## **Author Contact Information**

Ronald O'Rourke  
Specialist in Naval Affairs  
rorourke@crs.loc.gov, 7-7610