

# Background

No. 1950  
July 7, 2006



Published by The Heritage Foundation

## Learning Katrina's Lessons: Coast Guard Modernization Is a Must

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The Coast Guard saved tens of thousands of lives during and in the aftermath of Hurricane Katrina. Most of the response was carried out with “legacy” assets: planes and ships that are increasingly outdated, worn out, and inadequate.

If Deepwater, the Coast Guard’s modernization program, had been implemented more aggressively, the service would have had a much greater capacity to conduct search and rescue missions and to coordinate the operations of other federal, state, and city responders working in the disaster area. As a result, the federal disaster response would have seemed less of a disaster. Yet Deepwater is still not fully supported in Washington. Congress and the Administration need to accelerate implementation and fully fund the program at about \$1.5 billion per year.

### **In the Eye of the Storm**

According to the White House report on the federal response to Hurricane Katrina, “Coast Guard teams alone ultimately rescued and evacuated over 33,000 people.” After the second landfall of Katrina, “Coast Guard assets began conducting rescue operations immediately,” four hours before the next available outside responders—Army National Guard units—arrived on the scene.<sup>1</sup>

In addition to saving 24,000 lives during search and rescue operations, the Coast Guard assisted in the medical evacuation of 9,000 more. The Coast Guard also provided food, water, shelter, and medical sup-

### **Talking Points**

- Using mostly “legacy” assets that need to be replaced, the Coast Guard saved over 33,000 lives in response to Hurricane Katrina. It could have done even more with a modernized fleet of ships and planes.
- Deepwater, the service’s modernization initiative, is underfunded despite the fact that management of the program has been improved and the imperative of replacing the Coast Guard’s aging fleet is more critical than ever.
- Congress should accelerate Deepwater funding to the optimal level of about \$1.5 billion per year. This will provide the most assets the most quickly and at the least cost.
- An accelerated Deepwater program would have provided better assets not just for catastrophic disaster response, but also for the full range of Coast Guard missions from drug interdiction to search and rescue.

This paper, in its entirety, can be found at:  
[www.heritage.org/research/homelanddefense/bg1950.cfm](http://www.heritage.org/research/homelanddefense/bg1950.cfm)

Produced by the Douglas and Sarah Allison  
Center for Foreign Policy Studies  
of the  
Kathryn and Shelby Cullom Davis  
Institute for International Studies

Published by The Heritage Foundation  
214 Massachusetts Avenue, NE  
Washington, DC 20002-4999  
(202) 546-4400 • [heritage.org](http://heritage.org)

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plies to survivors and managed the response to environmental threats, such as cleaning up oil spills.<sup>2</sup>

The Coast Guard was also able to provide leadership at the federal level, “close to the disaster scene,” coordinating the activities of responders.<sup>3</sup> Admiral Thad Allen, principal federal officer during Katrina operations and current Commandant of the Coast Guard, noted in a later interview:

[D]isaster-relief supplies were flowing in, but there was nobody to take control of them and deploy them to where they were needed most. Someone needed to take tactical operational control to organize the relief mission.<sup>4</sup>

By September 9, Secretary of Homeland Security Michael Chertoff had appointed Allen to replace Federal Emergency Management Agency Director Michael Brown. On September 7, Allen had already moved the headquarters of the forward-operating joint force operation (JFO, which included NORTHCOM and state and local officials) to the USS *Iwo Jima* in New Orleans. This move “rapidly increased the effectiveness of the Federal response by providing a Federal unified command close to the disaster scene.... Allen’s appointments ultimately proved critical for energizing the JFO and the entire Federal response to Hurricane Katrina.”<sup>5</sup>

## The Bad News

Equipment limitations plagued the Coast Guard throughout the response and recovery effort. Communications proved particularly challenging, as the

service had limited assets. The Integrated Support Command New Orleans and Station Gulf Port were completely destroyed. The Coast Guard offset this shortfall somewhat by prepositioning cutters with Deepwater communications upgrades outside of New Orleans before the storm. This strengthened and helped to maintain command and control, enabling the Coast Guard both to perform its missions and to work in conjunction with other federal, state, and local agencies.<sup>6</sup>

During the storm, the Coast Guard used 62 of its aircraft, including three HH-65C helicopters that had undergone Deepwater modernization.<sup>7</sup> The helicopters played a large role in the highly publicized rescue of thousands of people, with the three HH-65Cs able to carry twice as many people as similar aircraft that had not been modernized. The small number of modernized helicopters, however, limited the Coast Guard’s ability to respond.

The Coast Guard’s response to Katrina was also limited by its fleet, which is inadequate for performing the range of security, safety, and law enforcement missions tasked to the Coast Guard.<sup>8</sup> This should not be surprising since the service has never had a coherent modernization program.

Today, the U.S. Coast Guard fleet is the 37th oldest of the world’s 39 existing fleets.<sup>9</sup> On average, because of maintenance issues, only 34 percent of the cutters and 75 percent of the aircraft are operational at one time. Currently, 88 of the cutters and 64 aircraft need to be replaced or modernized. This includes the entire deepwater cutter fleet and 34

1. The White House, *The Federal Response to Hurricane Katrina: Lessons Learned*, February 23, 2006, p. 38, at [www.whitehouse.gov/reports/katrina-lessons-learned.pdf](http://www.whitehouse.gov/reports/katrina-lessons-learned.pdf) (June 19, 2006).
2. *Ibid.*, p. 61.
3. *Ibid.*, pp. 47 and 57.
4. James Kitfield, “The Coast Guard’s New Captain,” *National Journal*, June 3, 2006, p. 55, at [www.uscg.mil/comdt/about\\_commandant/nationaljournalinterview.pdf](http://www.uscg.mil/comdt/about_commandant/nationaljournalinterview.pdf) (June 29, 2006).
5. The White House, *The Federal Response to Hurricane Katrina*, p. 47.
6. Maryann Lawlor, “Coast Guard Communications Weather the Storm,” *Signal*, December 2005, at [www.afcea.org/signal/articles/templates/SIGNAL\\_Article\\_Template.asp?articleid=1063&zoneid=169](http://www.afcea.org/signal/articles/templates/SIGNAL_Article_Template.asp?articleid=1063&zoneid=169) (July 5, 2006), and U.S. Coast Guard, “Deepwater Assets Respond to Hurricane Katrina,” *Deepwater News*, December 2005, p. 5, at [www.uscg.mil/deepwater/pdf/December05Newsletter.pdf](http://www.uscg.mil/deepwater/pdf/December05Newsletter.pdf) (June 30, 2006).
7. U.S. Coast Guard, “Hurricane Response to Katrina and Rita,” June 7, 2006, at [www.d8publicaffairs.com/go/doc/425/119926/](http://www.d8publicaffairs.com/go/doc/425/119926/) (June 30, 2006).

percent of Coast Guard aircraft. Under the current schedule, decommissioning them or modernizing many of them will not even begin until 2008.<sup>10</sup>

### Thinking the Unthinkable

Despite the limitations of its equipment, in a few days, the Coast Guard managed to surge to six times its annual workload of search and rescue operations.<sup>11</sup> That is exactly the kind of surge capacity that the federal government needs to provide large-scale emergency response.

In a catastrophic disaster like Katrina, tens or hundreds of thousands of lives are immediately at risk. State and local resources are exhausted from the onset, and government leaders are unable to determine or communicate their priority needs. National resources need to show up in hours, not days, in unprecedented amounts regardless of the difficulties. This is much different from mounting a national response to a “normal” disaster. Katrina demonstrated convincingly that the United States does not have adequate means to assist state and local responders in the critical first few days after large-scale disasters.<sup>12</sup>

As the Coast Guard fleet continues to age, it will have greater difficulty providing the surge capacity needed for large-scale disasters. Likewise, the service needs new capabilities so that it can provide the command, control, communications, and surveillance required to organize and integrate other

responders to meet all the maritime needs of catastrophic disaster response.

### The Deepwater Difference

Even before September 11, 2001, the Coast Guard fleet was widely regarded as too old and too expensive to operate and maintain and poorly suited to 21st century homeland security threats. In addition, since the service never had a systematic program for buying and replacing its ships and planes, virtually the entire fleet (most of it fielded in the 1960s) was in danger of becoming obsolete and unusable.

Since replacing everything at the same time would be impractical and prohibitively expensive, the Coast Guard undertook a sweeping review of its requirements in 1995. The result was the Deepwater Program. Deepwater is designed to replace ships and planes incrementally and to add new capabilities like unmanned aerial vehicles, other sensors, and communications equipment that would enable Coast Guard assets to “network” with each other, military assets, and civilian law enforcement agencies and emergency responders.

By 2002, a plan to replace and upgrade the fleet was in place. Implementation, however, has been slow. After 9/11, it soon became apparent that the Coast Guard’s increasing operational tempo and expanding homeland security missions were wearing out the fleet even faster than anticipated.<sup>13</sup>

8. For example, in addition to responding to two major hurricanes in FY 2005, the Coast Guard was also required to attend to its other missions, including worldwide assistance missions such as those that were initiated after the Southeast Asian tsunami. In FY 2005, it seized a record 299,579 pounds of cocaine, made 364 arrests, and seized 66 smuggling vessels involved in trafficking narcotics. It took the initiative in cooperating on an international level with other organizations and governments, including implementing and fostering the International Port Security program. Gordon Peterson, “United States Coast Guard Year in Review: ‘A Shining Light’ During Katrina’s Darkest Hours,” in *The Year in Defense* (Tampa, Fla.: Faircount, 2006).
9. U.S. Coast Guard, “Deepwater Briefing 101: Introduction to United States Coast Guard Integrated Deepwater System Program,” April 2006, at [www.uscg.mil/deepwater/pdf/Deepwater101.pdf](http://www.uscg.mil/deepwater/pdf/Deepwater101.pdf) (April 4, 2006).
10. U.S. Coast Guard, “Deepwater Implementation Plan Review,” February 2006, pp. A1–B7 and D1–D13.
11. John Birkler, Brien Alkire, Robert Button, Gordon Lee, Raj Raman, John Schank, and Carl Stephens, *The U.S. Coast Guard’s Deepwater Force Modernization Plan: Can It Be Accelerated? Will It Meet Changing Security Needs?* Rand Corporation, National Security Research Division, 2004, at [www.rand.org/pubs/monographs/2004/RAND\\_MG114.pdf](http://www.rand.org/pubs/monographs/2004/RAND_MG114.pdf) (June 29, 2006).
12. James Jay Carafano, Ph.D., “Improving the National Response to Catastrophic Disaster,” testimony before the Committee on Government Reform, U.S. House of Representatives, September 15, 2005, at [www.heritage.org/Research/HomelandDefense/tst091505a.cfm](http://www.heritage.org/Research/HomelandDefense/tst091505a.cfm) (June 29, 2006).

Although the terrorist attacks on New York and Washington focused increased attention on homeland security, the service's modernization budget received scant notice. The Coast Guard intended replacement systems to be funded at an annual rate of \$530 million (in 1998 dollars) in the following budgets. This level of funding would have meant a fiscal year (FY) 2004 budget of \$579 million in current dollars, but the budget request for Deepwater was \$500 million—substantially less than initial projections and a decline in real spending of about \$9 million from the \$500 million in FY 2003.<sup>14</sup>

The service's modernization budget has been increased in recent years, and the FY 2007 budget request was about \$950 million.<sup>15</sup> However, increased funding has not sufficiently accelerated the program to meet the post-9/11 demands. In 2005, the Deepwater program included approximately \$700 million in unfunded priorities.<sup>16</sup> Congress is reluctant to fund the program more aggressively, as reflected in current Senate Appropriations Committee proposals, and both the House Appropriations Committee and the White House Office of Management and Budget lack confidence in the program's management.

A series of Government Accountability Office (GAO) reports have examined Coast Guard over-

sight and the service's implementation of GAO recommendations. A 2004 GAO report detailed concerns over management practices for contractors that ranged from human capital shortfalls to a lack of performance measures for contract evaluation, but a 2005 report noted progress in improving program management.<sup>17</sup>

The Coast Guard has continued to strengthen oversight of the program. In February 2006, it announced revised plans for the Deepwater Program that reflected a better mix of assets for its homeland security missions, established models to control contracting costs, and included a timeline for rollout of various program components.<sup>18</sup>

Despite concerns over funding and management, Deepwater has already begun to demonstrate its merit. During the Katrina response, Deepwater assets made a noteworthy difference in how the service responded. Admiral Allen concluded that Deepwater's "operational benefits were apparent during the Coast Guard's response to Hurricane Katrina."<sup>19</sup> For example, the three upgraded HH-65C helicopters can hoist 280 more pounds and stay on scene longer than their predecessors. This enhanced capability allowed them to fly 85 sorties and save 305 lives.<sup>20</sup> In addition, the Coast Guard cutters with upgraded communication equipment

13. James Jay Carafano, Ph.D., "Congress Must Act to Link Navy and Coast Guard to Future Needs," Heritage Foundation *WebMemo* No. 294, June 13, 2003, at [www.heritage.org/research/nationalsecurity/wm294.cfm](http://www.heritage.org/research/nationalsecurity/wm294.cfm) (February 6, 2006).
14. James Jay Carafano, Ph.D., "Budgets and Threats: An Analysis of Strategic Priorities for Maritime Security," Heritage Foundation *Lecture* No. 791, June 16, 2003, at [www.heritage.org/Research/index\\_hl2003.cfm](http://www.heritage.org/Research/index_hl2003.cfm) (June 29, 2006).
15. U.S. Department of Homeland Security, "U.S. Coast Guard 2007 Budget in Brief," February 2006, p. A3.
16. Hearing, *Deepwater Implementation*, Subcommittee on Coast Guard and Maritime Security, Committee on Transportation, U.S. House of Representatives, 109th Cong., 1st Sess., April 20, 2005, at [www.house.gov/transportation/cgmt/04-20-05/04-20-05memo.html](http://www.house.gov/transportation/cgmt/04-20-05/04-20-05memo.html) (June 30, 2006).
17. For a description, see Admiral Thad Allen, "Statement of Admiral Thad Allen, Commandant, on the Integrated Deepwater System," testimony before the Subcommittee on Coast Guard and Maritime Transportation, Committee on Transportation and Infrastructure, U.S. House of Representatives, June 14, 2006, at [www.uscg.mil/comdt/About\\_Commandant/14June\\_Statement\\_DeepWater.pdf](http://www.uscg.mil/comdt/About_Commandant/14June_Statement_DeepWater.pdf) (June 22, 2006).
18. For a summary of the earlier GAO reports, see U.S. Government Accountability Office, *Coast Guard: Changes to Deepwater Plan Appear Sound, and Program Management Has Improved, But Continued Monitoring Is Warranted*, GAO-06-546, April 2006, at [www.gao.gov/new.items/d06546.pdf](http://www.gao.gov/new.items/d06546.pdf) (July 5, 2006).
19. Admiral Thad Allen, "Statement on the Fiscal Year 2007 President's Budget: Coast Guard," testimony before the Subcommittee on Fisheries and Coast Guard, Committee on Commerce, Science, and Transportation, U.S. Senate, June 15, 2006, at [commerce.senate.gov/public/\\_files/Allen061505.pdf](http://commerce.senate.gov/public/_files/Allen061505.pdf) (June 22, 2006).
20. *Ibid.*

were able to provide effective on-scene coordination of rescue operations with other military units, federal agencies, and local first responders.<sup>21</sup>

If a greater number of modernized HH-65C helicopters had been available and deployed, the Coast Guard's ability to respond to calls after the storm would have been greater. However, the cutters deployed for Katrina also limited the deployment of additional modernized aircraft. The cutters had upgraded communications systems, but each cutter could support only one helicopter. The planned Maritime Security Cutter (medium), also known as Offshore Patrol Cutter, could have supported one helicopter and two unmanned air vehicles (UAVs).<sup>22</sup> UAVs could have helped in a myriad of ways, from monitoring the New Orleans levees for breaks and traffic during the evacuation to helping law enforcement control crime to assessing damage after the storm had passed.

### Worth the Cost

Deepwater assets deployed during Hurricane Katrina demonstrated the merit of replacing and upgrading the Coast Guard's older assets. The new capabilities that would have been available from an accelerated program suggest the potential to improve significantly the service's capacity to respond to natural disasters and perform its other missions.

A 2003 Coast Guard study comparing the costs of implementing the program over 20 years versus the costs over 10 years shows that the accelerated 10-year program would save \$4 billion. The longer the program implementation is extended, the more

money it will cost. After the 10-year plan is complete, costs drop off dramatically.<sup>23</sup> A 10-year plan is not the silver bullet for every asset, but a close look at which parts of the program could be implemented more quickly and efficiently is warranted.

A 2004 RAND study concluded that accelerating Deepwater is not only feasible, but would achieve cost savings by retiring equipment that is more expensive to operate.<sup>24</sup> The study further found that the implementation costs are manageable and recommended fully implementing Deepwater.<sup>25</sup> Optimal funding for the Deepwater program (i.e., the level that would provide the most assets the most quickly and at the least cost) will require sustained annual investments of about \$1.5 billion.<sup>26</sup>

Congress should reconsider the plan for Deepwater implementation and accelerate the program and its funding to about \$1.5 billion per year. An accelerated Deepwater program would provide better assets not just for catastrophic disaster response, but also for the full range of Coast Guard missions from drug interdiction to search and rescue. Fully funding Deepwater this year and for the next nine years should be a budget priority to ensure that the transformation continues and that America does not leave the Coast Guard with an inadequate fleet.

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21. Jeff Murphy and Gordon Peterson, "Deepwater Assets Respond to Hurricane Katrina," in *USCG: Hurricane Katrina: The U.S. Coast Guard at Its Best* (Tampa, Fla.: Faircount, November 2005), p. 18.

22. For example, see Dan Gouré, "Hurricanes and the Coast Guard," Lexington Institute *Issue in Brief*, June 6, 2006, at [www.lexingtoninstitute.org/defense.asp?aid=779](http://www.lexingtoninstitute.org/defense.asp?aid=779) (June 30, 2006).

23. U.S. Coast Guard, "Report to Congress on the Feasibility of Accelerating the Integrated Deepwater System," March 2003, pp. 5–6, at [www.uscg.mil/deepwater/pdf/IDSReport.pdf](http://www.uscg.mil/deepwater/pdf/IDSReport.pdf) (June 30, 2006).

24. Birkler et al., *The U.S. Coast Guard's Deepwater Force Modernization Plan*.

25. *Ibid.*

26. For cost layout, see U.S. Government Accountability Office, *Coast Guard*.