



**TESTIMONY OF
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ROLE OF UNMANNED AERIAL SYSTEMS IN BORDER SECURITY

**HOUSE HOMELAND SECURITY SUBCOMMITTEE ON
BORDER, MARITIME, AND GLOBAL COUNTERTERRORISM**

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Good morning Mr. Chairman and distinguished members of the subcommittee. I am honored to appear before you today to speak about the employment of unmanned aircraft systems (UAS) in support of the Coast Guard's mission to secure our borders.

The Coast Guard is a military service and branch of the armed forces of the United States. We are also the only service in the Armed Forces with statutory law enforcement authority. Since our beginnings as the Revenue Cutter Service in 1790, the Coast Guard has seen tremendous expansion in our roles and responsibilities, continuing with the Homeland Security Act of 2002. The Coast Guard functions as the nation's principal maritime law enforcement authority and lead federal agency for maritime homeland security. The Coast Guard is also designated as lead agency for maritime drug interdiction under the National Drug Control Strategy, the lead agency for maritime and aeronautical search-and-rescue in coastal and international waters and airspace, and the co-lead agency with Customs and Border Protection's Office of Air and Marine (OAM) for air interdiction operations. Of these roles, many overlap with other agencies, while others fall solely within the purview of the Coast Guard.

America's borders encompass over 95,000 miles of coastline. To secure America's borders, the Department of Homeland Security (DHS) and other government agencies employ a comprehensive "layered security" strategy, which aims to provide security at and between U.S. ports of entry while simultaneously extending the zone of security beyond the physical border to include the Exclusive Economic Zone. These waters contain living and non-living marine resources that are of substantial economic value to our nation.

The layered security strategy depends on effective and efficient Maritime Domain Awareness (MDA), which refers to the persistent intelligence, surveillance, and reconnaissance of all vessels, cargo, aircraft, and people approaching and seeking entry into the U.S., legally or illegally. Along with the Coast Guard's fleet of manned aircraft, UAS will provide required capability to monitor open seas and littoral waters providing additional data and imagery to maritime operational commanders and other users throughout the U.S. government. The resulting improvement in MDA will support other Coast Guard's efforts to detect, monitor, track, and if necessary, interdict targets of interest. This capability will, in turn, increase the effectiveness of the Coast Guard and its partners in performing our core homeland security, defense, and law enforcement missions.

As envisioned in the Deepwater mission Needs Statement (MNS), UAS is critical to support many of the Coast Guard's missions (e.g., Search and Rescue; Drug Interdiction; Alien Migrant Interdiction; Living Marine Resources; Other Law Enforcement; Defense Readiness; and Ports, Waterways, and Coastal Security) in direct support of the 2010 Quadrennial Homeland Security Review Report.

For example, these capabilities would augment surveillance efforts currently provided by manned Maritime Patrol Aircraft. Sensor data would be made available to Coast Guard and other government agency command and control units, tactical units and exploitation sites.

To achieve a well-balanced capability, the Coast Guard's UAS strategy is threefold:

- Evaluate existing cutter-based and mid-altitude, land-based UAS options and leverage existing Department of Defense and CBP acquisition products;
- Exploit information available from U.S. Navy High Altitude Long Endurance (HALE) platforms; and
- Develop knowledge and experience through partnerships within DHS and the Department of Defense.

This strategy will be used to safely and pragmatically guide the implementation of a UAS solution.

In February 2009, the Department of Homeland Security approved the Coast Guard's strategy to acquire mid-altitude long-range and low-altitude cutter-based tactical UAS's to meet mission requirements. The strategy also emphasizes commonality with existing DHS and Department of Defense (DoD) programs that are already technologically and production mature. This approach will streamline the Advanced Concept Technology Demonstrations and the development of UAS Mission Needs Statements and Capability Development Plans already underway.

The Coast Guard is proactively leveraging partnerships with CBP, the Department of Defense, and the Federal Aviation Administration (FAA) to explore the abilities of UAS to contribute to Coast Guard mission sets. To this end, the Coast Guard significantly enhanced collaboration with CBP by establishing a Joint Program Office with four officer billets in 2009. At the same time, the Coast Guard created senior officer liaison billets with the Navy and the FAA.

In cooperation with CBP, the Joint Program Office has provided significant expertise in maritime surveillance, sensors and data management capabilities, resulting in the development and fielding of the Guardian UAS, an offshore version of the land-based Predator UAS. In addition, the Joint Program Office assisted in securing facilities to support Guardian test activities and routine flight operations.

The Joint Program Office's efforts also enabled three Coast Guard aviators and one sensor operator to receive Predator training at CBP facilities. Upon completion of the training, Coast Guard personnel operate the Guardian UAS and assist CBP in developing tactics, techniques, and procedures for UAS operations in the maritime environment. This mutually beneficial relationship provides a valuable resource for both agencies, as it enables the Coast Guard to develop critical UAS skill sets within the service, and provides manpower and maritime expertise to CBP, permitting expanded and flexible flight operations in domestic and international waters.

A recent example of the benefits of this cooperative effort was the Coast Guard's request to employ the Guardian UAS in response to the Deepwater Horizon oil spill. Pilots from both agencies have employed UAS to map the spill, locate and track responding surface assets, and transmit imagery to supporting command centers, efforts which enabled the Coast Guard to evaluate the UAS's ability to support large-area surge operations.

In addition, the Coast Guard is observing other new technologies in existing systems that can support a wide variety of missions in the maritime. Over the last year, the Coast Guard has been monitoring the Heron I UAS in routine exercises sponsored by U.S. Southern Command, including the joint development of test and mission plans, as well as observation of flight operations in Central America and command and control activities in the United States. Data gathered in these efforts will be invaluable in acquiring and operating a UAS capable of meeting the Coast Guard's mission needs.

The Coast Guard's mission also requires a cutter-based, rotary-wing UAS program which will provide a tactical enforcement tool to extend the range and capability of our new cutter fleets. Our partnership with the Department of Defense has ensured that we maintain the expertise to develop a robust cutter-based program, enabling one Coast Guard aviator to qualify on the Navy's Fire Scout UAS, and two other aviation personnel to observe Fire Scout operations and maintenance aboard the USS McInerney. The Coast Guard's close relationship with the U.S. Navy in this effort led to the option of installing a sea search radar aboard Fire Scout. Although this was not originally included in the Navy's payload requirements, it is critical for Coast Guard missions and provides a more robust and capable surveillance capability. Having completed a "dry fit" of the Fire Scout aboard the NSC Bertholf in 2008, engineering and design plans have been completed to support a Fire Scout technical demonstration aboard the NSC in FY 2011.

Conclusion

Since its inception, Coast Guard aviation has been at the leading edge of applying new technologies to efficiently accomplish our many responsibilities. It is our unique authorities, capabilities, competencies, and partnerships, both foreign and domestic that enable the Coast Guard, in partnership with our fellow DHS components and the other branches of the armed forces, to consistently and effectively provide maritime security. In the context of the U.S. layered security strategy for the maritime domain, the introduction of UAS would extend the reach of Coast Guard's ability to protect America's maritime borders.

Thank you for the opportunity to testify before you today. I will be happy to answer your questions.