



Small Vessel Security Implementation Plan Report to the Public

Department of Homeland Security

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INTRODUCTION

America's waterways and ports are physically, economically, and culturally significant to our way of life. Americans enjoy them for recreation and the commerce transported through them touches virtually every facet of our lives. Ports and waterways are also the United States' most open border. Millions of small vessels use our waters for all manner of purposes, and they provide extraordinary economic and social benefits.¹ Given the real threats and hazards we face, including terrorism, criminal activities, natural disasters, and everyday safety concerns, this vast maritime domain also contains large risks. The Department of Homeland Security (DHS) Small Vessel Security Implementation Plan (*Plan*) outlines ongoing and contemplated federal efforts to improve our management of these risks.

The *Plan* is the product of a multi-year process that involved public and private stakeholders, DHS, and other federal, state, local, and tribal authorities. The activities identified in it were developed with the input of stakeholders in an ongoing dialogue that began with a national Small Vessel Security Summit in 2007 and continued with a series of regional summit meetings in 2008 and 2009. The *Plan* builds upon a strong, successful partnership and dialogue among federal and local authorities, small vessel stakeholders, the private sector, and the general public.

The *Plan* is a roadmap for realizing the goals and objectives of the DHS National Small Vessel Security Strategy (*Strategy*). The intent of the *Strategy* is to reduce potential security and safety risks from small vessels through the adoption and implementation of a coherent system of regimes, awareness and security operations that strike the proper balance between fundamental freedoms, adequate security and continued economic stability. The *Plan* identifies possible and proven means of managing and controlling risks posed by the potential threat and possibly dire consequences of small vessel exploitation by terrorists. Due to its sensitive nature, the *Plan* itself has been designated Sensitive Security Information, with distribution only to pre-cleared stakeholders (e.g., members of Area Maritime Security Committees). Consistent with the Administration's commitment to transparency and to emphasize the collaborative nature of the effort, this report provides a publically releasable synopsis of the *Plan*.

BACKGROUND

The DHS *Strategy* was created to address the potential for commercial or recreational small vessels to be used to smuggle terrorists or weapons (including weapons of mass destruction) into the United States, as a stand-off weapon platform, or as a direct attack method to deliver a water-borne improvised explosive device (WBIED). Following the *Strategy*, the *Plan* seeks to improve Maritime Domain Awareness (MDA), maritime security and safety alike. It improves existing operations and systems by leveraging the actions and resources of stakeholder groups in the commercial private sector and the recreational boating community.

¹ U.S. Coast Guard 2006 statistics compiled from state boater registration reports, combined with estimates of unregistered watercraft, indicate that there are approximately 17 million small vessels operating in U.S. waterways. For the purposes of this report, "small vessels" are characterized as any watercraft, regardless of method of propulsion, less than 300 gross tons. Small vessels can include commercial fishing vessels, recreational boats and yachts, towing vessels, uninspected passenger vessels, or any other commercial vessels involved in foreign or U.S. voyages.

The *Strategy's* four major goals are:

1. Develop a strong partnership with the small vessel community to enhance maritime domain awareness, that is the effective understanding of anything associated with the maritime domain that could impact our security, safety, economy, or environment;
2. Strengthen maritime security and safety based on a coherent plan with a layered, innovative approach;
3. Exploit technology to enhance our ability to detect, determine the intent of, and, where necessary, interdict small vessels; and,
4. Improve coordination, cooperation, and communications between the public and private sectors, as well as with our international partners.

The *Plan* takes these goals and their associated objectives and identifies activities to meet them. Many programs included in the *Plan* are not new or uniquely dedicated to terrorist threats or small vessels. They are ongoing in the agencies that facilitate maritime safety, security, recreation, and commerce. The *Plan* outlines improvements to this very substantial base of existing programs to achieve higher levels of operational capability and awareness. By design, it will be continuously revised to accommodate new information about threats, technologies, requirements, and lessons learned as programs are implemented.

The *Plan* is not intended to serve as a resourcing document. Rather, it is a guidance document intended to provide greater specificity about how programs may be developed and coordinated to achieve the goals and objectives outlined in the *Strategy*. All activities outlined, whether short- or long-term, are expected to undergo standard U.S. government appropriation processes, budgetary processes, and regulatory review procedures. All activities will be subject to the availability of resources.

Plan implementation encompasses two timeframes for accomplishing its strategic goals. Short-term actions are those intended to be evaluated or implemented within five years of plan approval. Long-term actions are those most likely to require more than five years to achieve due to resource, technological, and statutory challenges.

The *Plan* maps coordinated efforts, leverages current operations, and sets the framework for potential new initiatives among DHS components and other partners. Components include the U.S. Coast Guard (USCG), Customs and Border Protection (CBP), Immigration and Customs Enforcement (ICE), the Federal Emergency Management Agency (FEMA), the U.S. Secret Service (USSS), the Domestic Nuclear Defense Office (DNDO), the DHS Science and Technology Directorate (S&T). Other partners include the Federal Bureau of Investigation (FBI), Bureau of Alcohol, Tobacco, Firearms & Explosives (BATF), and Department of Defense (DOD).

DEFENSE IN DEPTH

The *Plan* employs a layered approach (described below) to achieve a defense in depth strategy against potential threats. Using this approach, the federal government can systematically deploy an array of capabilities or implement methods to increase MDA and to respond to any detected threats. This approach is designed to thwart adversaries by raising the likelihood of detection through an array of operational techniques. No single capability or method is certain to succeed against a particular threat but, in combination, an array of capabilities and methods are likely to disrupt and stop a broad range of known and unknown threats. Moreover, the methods in this layered approach are flexible by design and can be

implemented at federal, state and local levels to manage specific risks related to maritime terrorism, crime, security, and safety in general.

To illustrate, these methods are arrayed in Figure 1 against the typical actions that a terrorist adversary must take, over time, to plan and conduct an attack. Each layer of the defense in depth illustration below takes advantage of governmental authorities and capabilities, in conjunction with the presence and expertise of each stakeholder group, to disrupt adversary actions. A disruption of any adversary action will break the chain of events necessary for a terrorist small vessel attack. For example, by reporting suspicious activity—e.g., via America’s Waterway Watch (AWW)—the maritime public can bolster law enforcement capabilities. An alert public is found in more places than law enforcement personnel, and through prompt reporting can disrupt adversary actions leading to an attack. The maritime industry implements vessel and facility security plans to similarly disrupt such adversary actions. Thus public and industry stakeholders represent both a strong foundation and substantial leverage for state, local, and tribal law enforcement entities as they conduct security activities and respond to reports of suspicious activity or attacks. DHS components provide intelligence, grants to state/local/tribal/industry partners, conduct research, perform security patrols, and respond to attacks. Together with other domestic and foreign agencies, this array of anti-terrorist activities provides the defense in depth.

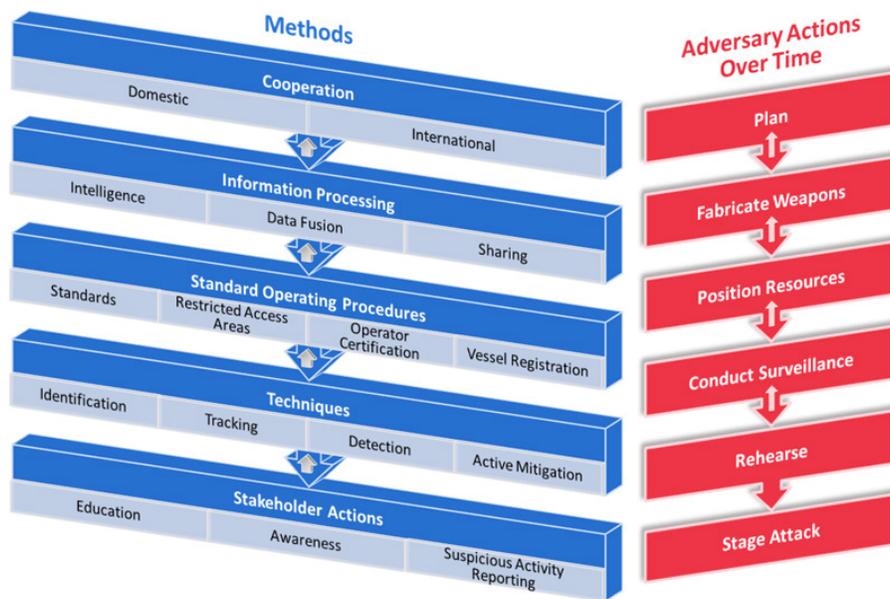


Figure 1: Defense in Depth: Layered Methods and Potential Adversary Actions

Along with building capabilities to act on information, these methods increase the potential of disrupting potential adversarial attacks and identify dangerous conditions and situations to allow for more effective responses to the broad array of situations that may be encountered in the maritime environment. The resulting improvements in readiness can be expected to improve responses to events and recovery from disasters.

Some of the capabilities needed to create defense in depth require research and development. Applied research and development supported by programs managed by the DHS Science and Technology Directorate seeks new technology solutions that provide needed capabilities for command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR) systems, information

processing, risk-informed operations, anomaly detection, determination of vessel operator intent, vessel interception, and public preparedness and participation.

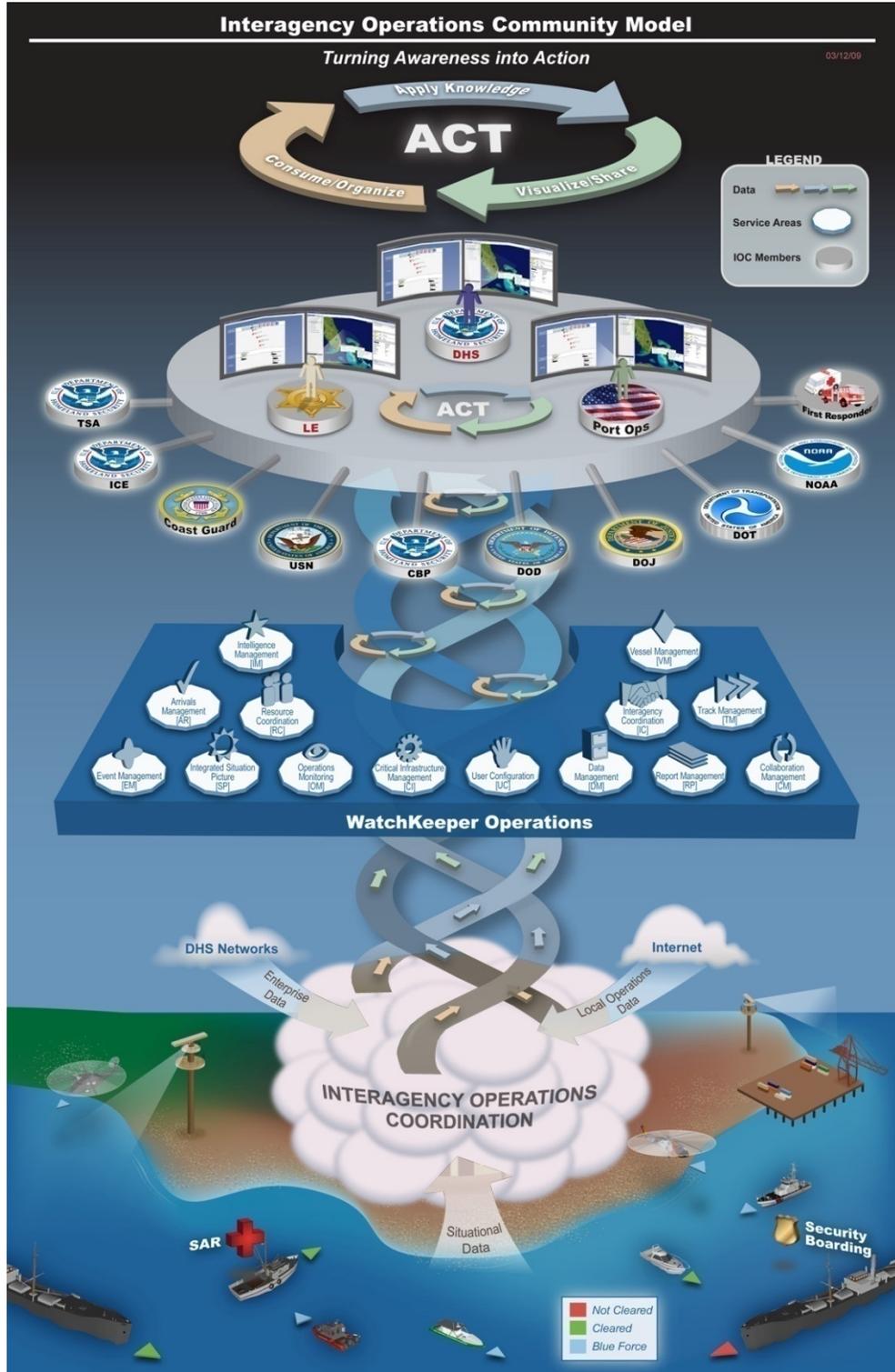


Figure 2. DHS is fostering interagency operations that will integrate information from all sources and facilitate operations that support maritime homeland security.

GOALS, OBJECTIVES, ACTIONS AND PROGRAM HIGHLIGHTS

Goal 1

The first goal in the Strategy is to develop and leverage a strong partnership with the small vessel community and public and private sectors to enhance maritime domain awareness. The methods contributing to achieving this goal address community education and awareness, encourage suspicious activity reporting, and improve mitigation elements for defense in depth.

Goal 1 Objectives

- Provide opportunities and adequate venues for an ongoing dialogue with small vessel stakeholders to encourage the free flow of information and ideas among the public, private sector, federal government, and state, local, tribal, and territorial authorities.
- Expand relationships with local maritime organizations, such as recreational boating organizations, sport fishing associations, commercial vessel partnerships, and port authorities.
- Improve knowledge and preparedness in the small vessel community through measures such as participation in exercises, attention to lessons-learned, and formal, but simple and inexpensive, instruction.
- Leverage existing education and outreach programs, such as those provided to the small vessel community by the USCG Boating Safety Division, USCG Auxiliary, and partnerships with the U.S. Power Squadrons and National Association of Boating Safety Administrators, to expand both security and safety training.
- Increase public awareness of how to report suspected terrorist activity.

Goal 1 Example Activities

- Improve awareness, expand private sector participation in reporting suspicious activity, distribute reports to responsible local authorities, provide feedback to those who submit reports, and seek to grant immunity from lawsuits to citizens making good-faith reports.
- Increase systematic visits to maritime facilities to build relationships, improve knowledge of threat conditions at marinas, and deter criminals.
- Engage citizen volunteers as appropriate in various preparedness and operational activities that assist authorities' response to events.
- Enhance local maritime security workgroups and Area Maritime Security Committees (AMSCs), to include small vessel community constituents in ad-hoc working groups for port assessment, planning, and training.
- Sustain educational partnerships with local constituent groups to address small vessel security and build a knowledgeable small vessel community through instructional programs and providing accessible, easy-to-use information about lessons-learned system from exercises and real-life events.

DHS and its components will continue close collaboration with the broad maritime community in the tradition of the Summit meetings, at local venues and via available media, to sustain an ongoing DHS-stakeholder dialogue. As recommended by Summit participants, DHS will seek innovative ways to

improve awareness about threats and take advantage of citizen reporting capabilities to increase MDA. Specifically, three existing outreach, education, and operational engagement activities that improve maritime security and safety could be coordinated, enhanced and extended nationally. This coordination leverages the AWW, Citizen Action Network (CAN), and Focused Lens (FL).

AWW, originally created in response to the events of September 11, 2001, is a national hot line (1-877-24-WATCH) for reporting suspicious maritime activity and obtaining educational materials about keeping waterways safe and secure. CAN, one of a number of local initiatives developed to engage stakeholders to aid the Coast Guard in search and rescue in Puget Sound, represents a proven approach to aiding the Coast Guard in its all hazard response mission. FL is currently being conducted in California ports. While building trust with the public, this anti-terrorism operation directs field units to perform focused and coordinated air, land, and sea surveillance patrols, small boat law enforcement boardings, and intelligence collection activities in areas where small boat attacks or boat bombs may originate, be staged, or executed. FL activities are designed to deter and prevent terrorists from exploiting marinas and other such areas. Activities are conducted in partnership with other components, local law enforcement, Coast Guard Auxiliary, and the boating public at large, and expand awareness of AWW.

A coordinated approach would exploit appropriate communications and networking technologies to enhance MDA. Improving communication between authorities at all levels and the aware, informed, participating local maritime community helps to achieve MDA in general and supports the defense in depth model.

Goal 2

The second goal in the Strategy is to enhance maritime security and safety based on a coherent plan with a layered, state-of-the-art approach. Actions to achieve this goal address a number of the elements of defense in depth, including technical detection, active mitigation, tracking, and information sharing.

Goal 2 Objectives

- Improve detection and tracking capabilities to better identify small vessel threats in or near U.S. waters.
- Support a robust layered defense by fostering the maritime radiological and nuclear detection capabilities of international, federal, state, local, tribal, and private stakeholders.
- Improve efforts to gather and share appropriate security data on small vessels and their operators.
- Improve data analysis to target high-risk small vessels.
- Assess, develop, and improve layered security for critical infrastructure and key resources.

Goal 2 Example Activities

- Evaluate options for new notice-of-arrival procedures for small vessels transiting to/from foreign ports.
- Publish new regulations mandating automatic identification system (AIS) carriage on commercial vessels 65 feet and longer; tugs of 26 feet and longer with over 600 horsepower; and certain passenger carrying vessels.

- Evaluate the costs and benefits of potential systems for robust surface radar coverage in areas not covered to enhance MDA.
- Assess the costs and benefits of creating larger Naval Vessel Protection Zones around naval vessels and submarines.
- Evaluate the impact of the ongoing three-year West Coast Maritime Preventive Radiological/Nuclear Detection (PRND) pilot program in the Puget Sound and San Diego regions, working closely with the Area Maritime Security Committees.
- Develop a maritime module for the Preventive Radiological/Nuclear Detection Program Management Handbook and Technical Appendix to assist state and local stakeholders with establishing an effective small maritime vessel Preventive Radiological/Nuclear Detection programs.
- Partner with the Departments of Energy, State, and Defense to develop a Regional Containment Strategy with willing foreign countries that are proximate to areas where there is a significant threat of illicit radiological or nuclear weapon or material smuggling.
- Partner with bordering nations using the Security and Prosperity Partnership and other agreements to share information based on the PRND program.
- Partner and coordinate with foreign countries, particularly in the Caribbean region, on radiological and nuclear detection and interdiction.
- Promote recreational boat owners' participation in "trusted traveler" programs.
- Promote state participation in the Vessel Identification System.
- Develop and implement a public information campaign to ensure that small vessel operators understand CBP reporting requirements.
- Evaluate automated small vessel screening approaches.
- Increase activities to detect and thwart preoperational surveillance.
- Explore having recreational vessel operators complete an educational course conforming to a national standard.
- Develop small vessel automated targeting capabilities that minimize delays and inconvenience for trusted owners and operators.
- Ensure that critical infrastructure/key resource owners and operators adequately address small vessel security in plans and security procedures.
- Improve education and public knowledge of regulated navigation areas, safety zones, and security zones, working with small vessel industry partners to develop and present information that includes definitions, current areas and designations, reasons for restrictions, and consequences for violations.

- Enhance integration of data from maritime suspicious activity reporting programs with similar programs dedicated to highways, ferries, neighborhoods, and transit systems.
- Expand use of biometrics for positive identifications, in support of security missions.
- Employ risk management and modeling and simulation tools to guide operational policy on the effectiveness of security countermeasures.
- Maximize coordination of waterborne, shore side, and aerial patrols; security boardings; vessel escorts; fixed security zone enforcement; and surveillance.
- Coordinate port access, activity, and movement using integrated federal, state, local, and tribal law enforcement procedures.
- Improve explosive trace detection capabilities for the maritime domain.



Figure 3. Captain of the Port of Jacksonville, Fla. and Commander, Sector Jacksonville, briefs the Commandant of the U.S. Coast Guard on Coast Guard and CBP operations.

Goal 3

The third goal of the Strategy is to leverage technology to enhance the ability to detect, determine intent, and, when necessary, interdict suspicious small vessels. Research will be conducted into potential solutions for small vessel identification systems to readily identify a vessel and correlate ownership, registration, and reporting data.

Goal 3 Objectives

- Foster research into low-cost, nonintrusive, small vessel identification systems, such as radio frequency identification (RFID) tags, adaptable miniature transponders, portable Global Positioning System (GPS) devices, or cell phone-based recognition systems.
- Foster research into and investment in anomaly detection instruments and other decision aids such as automated scene-understanding tools.
- Foster research into methods of protecting critical infrastructure and key resources, especially at shorelines, through means such as small boat barriers, unambiguous warning devices, and nonlethal deterrents such as sonic cannons.
- Foster development of improved warning systems to adequately distinguish between and respond to intentional and innocent intrusions into security zones and safety zones.

- Foster research into advanced maritime radiation and nuclear detection technology for human-portable radiation detection equipment, mobile standoff radiation detectors, and fixed detectors that could be deployed on or near the waters in the vicinity of small vessels.

Goal 3 Example Activities

- Explore research and development of a permanent sensor system to detect and track non-cooperative vessels (those not emitting AIS, radar, and radio signals).
- Develop a research plan for detection methods and instruments and other decision aids, such as automated scene-understanding tools and automated systems that integrate sensors that track and learn normal vessel behaviors, in order to detect suspicious vessel activities.
- Research and develop next-generation of lethal and non-lethal weapons for securing ports, waterways, and coastal environments.
- Identify and evaluate countermeasures against waterborne improvised explosive device (WBIED) threats.
- Develop a range of solutions to interdict small vessels, such as small boat barriers, unambiguous warning devices, and non-lethal deterrents.
- Standardize warning signage for limited-access areas, such as Defense Department bases, U.S. Army Corps of Engineers restricted areas, or USCG security zones and for special events and high-threat situations to demarcate security zones and safety zones.
- Evaluate systems that could provide immediate deterrence for those who unintentionally enter a security zone.
- Evaluate the effectiveness of various escort systems in protecting high-value assets.
- Conduct a maritime test campaign to determine the effectiveness of commercial off-the-shelf mobile standoff radiation detectors in the maritime domain.



Figure 4. Coast Guard, CBP and other federal, state and local agency crewmen inspect a Coast Guard Auxiliary boat during a full scale exercise to test non-intrusive small vessel radiological screenings at three Puget Sound security zones on Sept. 23, 2009. The exercise was part of a pilot demonstration funded by the Domestic Nuclear Detection Office to evaluate radiation detection sensors and operational protocols for the small vessel maritime environment. Pacific Northwest National Laboratory photo/ Bruce Williams-Burden.

Goal 4

The fourth goal of the Strategy is to enhance coordination, cooperation, and communications among federal, state, local, tribal, and territorial agencies, as well as international partners. The activities included in the *Plan* are intended to foster joint operations and ensure the most responsive, coordinated interdiction of threats possible.

Goal 4 Objectives

- Improve coordinated small vessel interdiction capabilities and operations.
- Leverage the capabilities of domestic partners and foreign governments through sharing of information.
- Where appropriate, establish programs in which law enforcement authorities from different nations combine efforts in cooperative patrol and enforcement.
- Integrate intelligence analysts from the USCG, CBP, and ICE into participating state, local, tribal, and regional fusion centers located in jurisdictions along maritime borders of the United States.
- Update area maritime security processes to address small vessel threats when conducting area maritime security assessments and developing Area Maritime Security Plans.

Goal 4 Example Activities

- Expand joint field operations to improve the overall coordination of maritime responder organizations, and coordinate joint targeting of vessels to share local targeting information and practices.
- Identify and share opportunities for short-term professional exchange and local training of law enforcement and security officers.
- Continue regular interaction and exchange of information through interagency briefings, tabletop and field exercises, AMSC meeting, etc., to increase situational awareness and operational coordination.
- Enhance coordinated enforcement response methods for interagency concepts of operations and training with regard to small vessel threats.
- Develop and maintain partnerships and bilateral agreements with foreign governments and port authorities to report suspicious activities.
- Improve federal, state, tribal, and local interagency information sharing, joint targeting, collaboration on boardings, and related operations.
- Improve coordination and collaboration with officer exchange programs, joint training and exercises, interagency briefings, and day-to-day operational collaboration.
- Obtain and share lessons learned in countries facing a terrorist small vessel threat.
- Apply existing ship rider and ship boarding programs to other geographic areas and other international partners.

- Improve local and regional law enforcement intelligence collection on all maritime threats; establish and maintain reliable information exchanges between government and private entities; and improve local and regional analysis capabilities, to provide tactical and operational intelligence directly to law enforcement unit leaders.
- Encourage port committees, AMSCs, and state, local, and tribal law enforcement agencies to utilize their Port Security Grant funding to expand and improve analysis and education about small vessel threats.
- Revise Area Maritime Security Plan development guidance to emphasize Maritime Security Risk Analysis Model analysis in developing maritime security measures and transportation security incident planning scenarios, mitigation measures, and security response procedures.



Figure 5. A 25-foot Coast Guard boat patrols the New York Harbor with a New York Police Department Harbor Unit boat demonstrating interagency cooperation.

CONCLUSION

The DHS Small Vessel Security Implementation Plan is a roadmap for all the stakeholders to work together and focus on achieving the goals and objectives set forth in the DHS Small Vessel Security Strategy. It lays out ongoing and contemplated activities to meet the objectives of the *Strategy* and promotes active linkages of DHS components, state, tribal, local, and other national authorities.

The goals in the *Plan* were developed in collaboration with small vessel stakeholders from across the small vessel community in a dialog that began with the national Small Vessel Security Summit in 2007, and continued with regional summit meetings in 2008 and 2009.

Local small vessel stakeholders are uniquely knowledgeable observers in harbors and waterways and have an exceptional understanding of their community's terrain, population, and boating community. Their cooperation with local authorities in devising activities and programs will assist in increasing safety and security. Local stakeholder input provides the foundation for a wide range of efforts, such as improving planning and information sharing among responsible local partners, undertaking interagency and international collaborative activities, and expanding international agreements on vessel monitoring and data sharing.

Taken together, the procedures, systems, and people that implement the actions in the *Plan* create a comprehensive, but flexible and readily adaptable, layered security system. This will provide a sustainable defense in depth against threats based on plausible exploitation of small vessels. The goals will be achieved by building on strong and historically successful relationships and programs that share resources dedicated to facilitating commerce, recreation, and the freedom of the U.S. maritime environment.

The *Plan* is a "living" document, intended to be continuously updated. Detailed versions with content appropriate to federal program planning and management purposes are maintained within DHS. This public synopsis will be similarly revised periodically as part of the continual public engagement that is critical to successfully reducing potential risks in the maritime domain.

The actions of this plan will be updated periodically and when done will be available to the public through the DHS small vessel security website at:

http://www.dhs.gov/files/programs/gc_1199394950818.shtm



Figure 6. The Boston Area Maritime Security Committee hosted an exercise, led by the Coast Guard, to coordinate a simulated response to large-scale scenarios involving marine traffic in Boston Harbor.

