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Environmental Activities of the U.S. Coast Guard

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Summary

The U.S. Coast Guard's (USCG's) environmental activities focus on prevention programs, accompanied by enforcement and educational activities. An important component is maritime oil spill prevention, which includes inspection of U.S. and foreign-flagged ships to ensure compliance with U.S. laws and international agreements. As required by the Oil Pollution Act and the Superfund law, the USCG's pollution preparedness and response activities aim to reduce the impact of oil and hazardous substances spills. USCG's National Pollution Funds Center manages the Oil Spill Liability Trust Fund, paying certain spill-related costs and certifying that vessels show evidence of financial responsibility. Another prevention effort, minimizing marine debris, addresses commercial items (e.g., lost nets and fishing lines), as well as trash from recreational fishing and boating (e.g., beverage cans and bottles and pieces of foam plastic). The FY2007 budget estimate for marine environmental protection was $332 million, a decrease of $55 million from the amount spent in FY2006. This report will be updated as warranted.

Environmental activities of the U.S. Coast Guard (USCG) fall within the service's program for protection of natural resources, and consist of maritime oil spill prevention, marine debris, and pollution response preparedness. Protection of living marine resources and fisheries also falls in this category, but is not discussed here.[1] Marine environmental protection is one of six "non-homeland security missions" specified in the Homeland Security Act of 2002.[2]

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[1] CRS reports that discuss these issues include CRS Report RL33459, *Fishery, Aquaculture, and Marine Mammal Legislation in the 109th Congress*, by Eugene H. Buck; CRS Report RL32154, *Marine Protected Areas: An Overview*, by Jeffrey A. Zinn and Eugene H. Buck; and CRS Report RL32344, *Ballast Water Management to Combat Invasive Species*, by Eugene H. Buck.

[2] P.L. 107-296, Section 888 (6 U.S.C. 468). The other five are marine safety, search and rescue, aids to navigation, living marine resources (fisheries law enforcement), and ice operations.

Marine Environmental Protection Budget. Congressional appropriations for the Coast Guard are not broken down by specific mission (e.g., marine environmental protection), but are allocated to broader categories, such as "operating expenses." The Coast Guard accounts for mission-specific funding by using a "sophisticated activity-based costing model."[3] **Table 1** identifies the level of spending for the marine environmental protection mission in recent years. The FY2007 budget estimate for marine environmental protection is $332 million, or 3.9% of the Coast Guard's total request of $8.42 billion. This is a decrease of $55 million from the amount spent in FY2006 ($387 million).

Table 1. U.S. Coast Guard Marine Environmental Protection Budget

	FY2005 (% of budget authority)	FY2006 (% of budget authority)	FY2007 Estimate (% of budget authority)
Marine Environmental Protection	$261,162,000 (3.5%)	$386,846,000 (4.8%)	$331,710,000 (3.9%)
Total Coast Guard Adjusted Budget Authority	$7,524,560,000	$8,093,797,000	$8,422,075,000

Source: U.S. Department of Homeland Security. *Budget-in-Brief, Fiscal Year 2007*, p. 51, available at [http://www.dhs.gov/interweb/assetlibrary/Budget_BIB-FY2007.pdf].

Maritime Oil Spill Prevention.[4] Protecting the marine environment from accidental oil spills is an important mission of the Coast Guard. In 2005, the Coast Guard performed more than 3,000 inspections aboard mobile offshore drilling units, outer continental shelf facilities, and offshore supply vessels, and responded to 23,904 reports of water pollution or hazardous material releases, which resulted in 4,015 response cases.[5]

The USCG's foremost effort is in prevention programs and enforcement based on international agreements, and on federal standards and regulations. The Coast Guard represents the United States at the International Maritime Organization (IMO), which, through treaties, sets international environmental and safety standards for vessels. Important treaties cover the following topics:

- accidental and operational oil and chemical pollution;[6]

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[3] Although they are be labeled as "enacted" amounts in the *Budget-in-Brief* document , the figures are estimates based on Coast Guard performance assumptions. See U.S. Department of Homeland Security, 2006, *Budget-in-Brief, Fiscal Year 2007*, p. 51 (footnote 1).

[4] For more information, see CRS Report RL33705, Oil Spills in U.S. Coastal Waters: Background, Governance, and Issues for Congress, by Jonathan L. Ramseur.

[5] U.S. Department of Homeland Security, 2006, *Budget-in-Brief, Fiscal Year 2007*, p. 49.

[6] The IMO International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), implemented in the United

(continued...)

- the right of a coastal state to take measures on the high seas to prevent, mitigate, or eliminate danger to its coastline from pollution by oil;[7]
- a global, cooperative framework for combating major incidents or threats of marine pollution from oil, and hazardous and noxious substances;[8] and
- pollution from the dumping of wastes and other materials.[9]

The Oil Pollution Act of 1990 (OPA-90) and the international treaty MARPOL 73/78 require the owners and operators of vessels that carry oil and designated hazardous substances to submit to the Coast Guard "Vessel Response Plans" and/or "Shipboard Oil Pollution Emergency Plans." These vessel-specific plans address such matters as spill mitigation procedures, training requirements for the crew, and spill mitigation equipment required to be carried on board. The USCG must approve the plans for a ship to operate legally in U.S. waters. Under these authorities vessel operators also must submit to regular inspections, and the USCG's inspection program is a key component of their oil spill prevention effort.

Inspection of Foreign Ships (Port State Control Program). The Coast Guard conducts "certificate of compliance" examinations — both on a random and targeted basis — on foreign vessels that make port calls in the United States.[10] In 2005, the USCG conducted 10,430 safety and environmental compliance inspections and 9,117 security exams on all types of passenger, freight, and tank ships.[11] The inspection program emphasizes compliance with environmental and safety standards and, particularly since September 2001, is concerned with port security as well. The inspecting officers verify that the vessels and their crews are in substantial compliance with international conventions and applicable U.S. laws. The pollution prevention examination covers the various waste streams onboard and related record keeping, which vary for different types of ships, and may include the following:

- *Oil pollution prevention systems* include the oily water separator and the sludge containment system. The oily water separator is a high-

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[6] (...continued)
States by the Act to Prevent Pollution from Ships, P.L. 96-478.

[7] The International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969, implemented in the United States by the Intervention on the High Seas Act, P.L. 93-248. A 1973 protocol extended the convention to cover substances other than oil, and was implemented in the United States by P.L. 95-302. Amendments in 1991, 1996, and 2002 added additional substances.

[8] The International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990, implemented in the United States by P.L. 102-241. A protocol to this convention (HNS Protocol, 2000) covers marine pollution by hazardous and noxious substances.

[9] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, generally known as the London Convention; seven amendments from 1978 to 1996 addressed such things as incineration, low-level radioactive wastes, and industrial wastes.

[10] In 2005, 7,850 individual vessels, from 76 different flag States, made 62,818 port calls in the United States. U.S. Coast Guard, 2006, *Port State Control in the United States: Annual Report 2005*, p. 2.

[11] Ibid.

maintenance device, and ships sometimes alter their piping to bypass the system. Further, pumping oily sludge ashore is expensive and ships have been known to take illegal steps to avoid it.
- The *black water system* includes marine sanitation devices and other systems to treat, store, and discharge sewage.
- *Hazardous waste* includes paints, thinners, and cleaning solutions that contain hazardous substances. The types and volumes of hazardous waste vary depending on the technology and processes used aboard.[12]
- *Non-hazardous waste* is shipboard garbage, including food waste, plastics, and other synthetic materials, as well as recyclables like glass, and aluminum and steel cans.
- The *gray water system* includes discharges from the galley, sinks, showers, and baths.

In recent years, cruise ships, most of which are registered in foreign countries, have gained attention. These very large vessels carry up to 5,000 passengers who generate a large amount of sewage and gray water. (For additional information, see CRS Report RL32450, *Cruise Ship Pollution: Background, Laws and Regulations, and Key Issues*, by Claudia Copeland.)

Inspection of Domestic Ships. The domestic inspection system is similar to the port state control program in assuring compliance with applicable laws and treaties. Rules vary according to size and type of vessel (e.g., tanker, passenger, cargo, and mobile offshore drilling units), and the number of passengers carried. In 1996, the Coast Guard initiated its Alternate Compliance Program (ACP), under which "classification societies"[13] can perform inspections that satisfy certain periodic USCG test and inspection requirements. The ACP allows the service to shift its emphasis from providing a quality control service (inspections) to evaluating the human factors in maritime operations (which account for more than 80% of marine accidents), and to port state enforcement.

Marine Debris. Marine debris (e.g., discarded fishing lines or nets) can endanger birds and marine animals, and cause damage to coral reefs. Even less lethal trash from recreational fishing and boating (such as beverage cans and bottles, food wrappers, and foam plastic pieces) degrades beaches, coral reefs, and the oceans. The Coast Guard's approach to debris is preventive, promoting compliance by boarding and inspecting vessels, and working with local port agencies to ensure there are facilities to receive garbage from vessels. The Coast Guard also coordinates with the Environmental Protection Agency (EPA), the National Marine Fisheries Service, the National Park Service, and the Ocean Conservancy[14] in monitoring and measuring amounts of marine debris. This activity is authorized in the Act to Prevent Pollution from Ships, 33 U.S.C. 1905 and 1915, as well as MARPOL Annex V.

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[12] Cruise ships, for example, will have dry cleaning and photo processing wastes.

[13] A classification society is "[a]n Organisation, whose main function is to carry out surveys of vessels, its purpose being to set and maintain standards of construction and upkeep for vessels, their engines and their safety equipment." From *A-Z of Shipping Terms*, on website of P&O Nedlloyd, at [http://www.ponl.com/topic/home_page/language_en/about_us/useful_information/a-z_of_shipping_terms/C]. Examples are the American Bureau of Shipping and Lloyd's Register.

[14] Formerly the Center for Marine Conservation.

Pollution Preparedness and Response. The pollution preparedness and response activity is aimed at minimizing the impact of spills of oil and hazardous substances on the marine environment. The USCG and EPA share responsibility, with the Coast Guard being the lead agency for pollution prevention and response in the coastal maritime zone, and EPA being the lead for inland waters. Along with representatives of 15 other federal departments and agencies, they comprise the National Response Team[15] and 13 Regional Response Teams. EPA serves as the chair, and the Coast Guard is the vice-chair of these teams. The National Contingency Plan[16] (NCP) provides the organizational structure and procedures for preparing for and responding to discharges of oil and hazardous substances on both water and land.

Marine and Environmental Science. The Coast Guard has a history of scientific study of the oceans dating back to 1881, when it began Arctic cruises along the Alaska coast. Today the USCG role is that of a facilitator, supporting the scientific efforts of other groups. Satellites and computers have taken over many of the weather-data gathering activities formerly performed by USCG. Moreover, many of the oceanographic and other scientific activities conducted by federal agencies, including the Coast Guard, were consolidated in 1970 with the creation of the National Oceanic and Atmospheric Administration (NOAA).

The Coast Guard operates three icebreakers in the Arctic and Antarctic, and provides supplies to remote stations. These icebreakers typically carry about 40 scientists from universities as well as from such federal agencies as NOAA's National Marine Fisheries Service and the U.S. Fish and Wildlife Service. The USCG also participates in the International Ice Patrol, which monitors iceberg danger in the northwest Atlantic, particularly in the area of the Grand Banks of Newfoundland. The iceberg season is usually from February to July, but the Ice Patrol is logistically flexible and can commence operations when iceberg conditions dictate.

The Coast Guard is responsible for enforcing federal regulations governing commercial fisheries. The USCG carries out some 4,000-6,500 boardings per year to ensure compliance with gear and harvest regulations (see CRS reports referenced above).

National Pollution Funds Center. The Coast Guard created the National Pollution Funds Center (NPFC) in 1991 to carry out many of the requirements of Title I of the Oil Pollution Act of 1990 (OPA).[17] The NPFC manages the Oil Spill Liability Trust Fund (OSLTF), as well as the Coast Guard's use of the Superfund Trust Fund. The OSLTF is used for several purposes:

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[15] The National Response Team "coordinates a program of preparedness, planning, and response to oil and hazardous materials incidents at the local, regional, and national levels; facilitates research to improve response activities; and provides assistance for responses to specific incidents as needed." U.S. Dept. of Homeland Security, *National Response Plan*, Oil and Hazardous Materials Annex, p. 3.

[16] 40 CFR Part 300. The full title of the NCP is the National Oil and Hazardous Substances Pollution Contingency Plan.

[17] For more discussion on issues regarding management of the trust fund, see CRS Report RL33705, *Oil Spills in U.S. Coastal Waters: Background, Governance, and Issues for Congress*, by Jonathan L. Ramseur.

- prompt payment of costs for responding to and removing oil spills, in accordance with the National Contingency Plan (including payments to federal entities, such as USCG and EPA);
- payment of the costs incurred by the federal and state trustees of natural resources for assessing the injuries to natural resources caused by an oil spill, and developing and implementing the plans to restore or replace the injured natural resources;
- payment of parties' claims for uncompensated removal costs, and for uncompensated damages (e.g., financial losses of fishermen, hotels, and beachfront businesses);
- payment for the net loss of government revenue, and for increased public services by a state or its political subdivisions; and
- payment of federal administrative and operational costs, including research and development, and $25 million per year for the Coast Guard's operating expenses.

Initially, the primary source of revenue for the fund was a 5-cents-per-barrel fee on imported and domestic oil.[18] Collection of this fee ceased on December 31, 1994, due to a "sunset" provision in the law. However, in April 2006, the tax resumed as required by the Energy Policy Act of 2005 (P.L. 109-58). As of August 2006, the fund had approximately $637 million and was projected to have slightly more than $1 billion by 2014.[19]

To ensure that responsible parties can be held accountable for cleanup costs and damages in the event of an oil spill (thereby preserving the oil spill fund), OPA requires that vessels show evidence of financial responsibility, such as insurance. The NPFC carries out this mandate by issuing Certificates of Financial Responsibility (COFRs) to shipping vessel owners when owners demonstrate the ability to pay for oil spill cleanup and damages. In general, vessels over 300 gross tons are required to have a valid COFR to operate in U.S. waters.

The NPFC also takes action to recover cleanup costs from responsible parties. It documents ongoing costs and damages from the spill area, and bills the responsible party. About 40% of spills in U.S. waters are "mystery" spills, and the costs go unrecovered.

Environmental Compliance and Restoration. This activity is concerned with USCG compliance with environmental laws. Ongoing initiatives include meeting the more stringent emission requirements of the Clean Air Act Amendments of 1990, and developing strategies to minimize the generation of hazardous waste. There also are continuing efforts to design pollution prevention into shore facility improvement projects, and to conduct environmental audits at facilities to find and correct potential environmental violations.

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[18] Other revenue sources for the fund include interest on the fund, cost recovery from the parties responsible for the spills, and any fines or civil penalties collected.

[19] Per fund forecast prepared by the NPFC (as of August 17, 2006).