

U. S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: G-ICA
Phone: (202) 366-4280
FAX: (202) 366-7124

DEPARTMENT OF HOMELAND SECURITY

U. S. COAST GUARD

STATEMENT OF

CAPTAIN MYLES BOOTHE

ON

OIL POLLUTION PREVENTION

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

U. S. SENATE

SEATTLE, WASHINGTON

AUGUST 1, 2005

Introduction

Good morning Senator Cantwell and distinguished Members of the Committee. It is a pleasure to be here today to discuss the Coast Guard's role in protecting our marine resources within the Pacific Northwest against the threat of pollution while preserving the safe and efficient flow of commerce within our diverse waterway systems.

The Coast Guard has continued to meet our statutory responsibilities, even with the increased emphasis on maritime homeland security since September 11th, 2001. This is particularly true regarding protection of the marine environment, from both a prevention and response perspective. The Coast Guard has primary responsibility for preparedness and response to oil and hazardous material spills within the coastal zone. Our Captains of the Port, as the pre-designated Federal On-Scene Coordinators for the coastal zones under the National Contingency Plan, have continued to lead their respective Area Committees' planning and response actions prescribed under the Oil Pollution Act of 1990 (OPA-90). In particular, the Coast Guard continues to oversee and manage numerous intervention strategies to prevent maritime accidents that may cause harm to our environment, and oversee or direct most clean-up efforts within the coastal zone with the same vigor as prior to the attacks on America.

The Pacific Northwest Environment and Economy

Environmental Sensitivity

Washington State waters within the coastal zone represent some of the most pristine coastal areas within the Nation. Encompassing over 4,000 square miles and over 2,700 miles of rugged coastline, including over 300 hundred miles of the Columbia River, this diverse ecosystem includes many "environmentally sensitive" areas, some of which include the Olympic Coast National Marine Sanctuary, Padilla Bay National Estuarine Research Reserve, the South Slough National Estuarine Research Reserve, the Washington Maritime National Wildlife Refuge Complex, the Willapa National Wildlife Refuge Complex, the Grays Harbor National Wildlife Refuge, and numerous tribal aquaculture sites. Both resident and migrating orca (killer whale) pods feed extensively throughout the waters of the Strait of Juan de Fuca, Puget Sound and Haro Strait. Many species of nesting, wintering, and migrating seabirds, shorebirds, waterfowl, and raptors utilize the outer coast as well as the Strait of Juan de Fuca and Puget Sound for foraging, nesting, and resting. Environmental responses can be particularly challenging along Washington State's Pacific coast, due to the steep slopes on shore, exposed location, shoals and offshore rocks, and lack of roads. Within the Puget Sound region, the challenges include significant tidal ranges and sensitive wetland mud flat areas.

Puget Sound is a complex environmental system made up of diverse shoreline features. There are heavily industrialized areas immediately adjacent to sensitive refuge areas. There are several historical and tribal archaeological sites along much of the coastal zone. Vegetated banks and marshes line most of the waters that flow into the Sound, and Columbia River and its tributaries.

The biological resources in the region cross the spectrum of marine life including birds, fish, shellfish and marine mammals. There are high concentrations of waterfowl present over most seasons, as well as several birds of prey which nest in the region. Coastal estuaries are sensitive habitats for many types of birds and forage fish. Coastal islands are used as nesting and rearing sites for many seabird species, some of which are nationally rare. The Grays Harbor estuary provides an internationally significant resting and feeding area for tens of thousands of migrating shorebirds that concentrate there in the spring. The Puget Sound region is home or feeding grounds for several orca families, and the region

has several seal rookeries. Dungeness crab, oysters, clams and mussels are the predominant significant shellfish in Puget Sound and coastal zone region. Numerous salmon species also thrive in these waters, as well as the Columbia River and its tributaries, which serve as both fish highways and critical spawning grounds.

Economics

The Puget Sound region, Gray's Harbor, Columbia River and other waters of the Pacific Northwest provide several fine harbors for commercial and public vessels. The area has historically supported valuable fisheries (both recreational and commercial) and a large, ever increasing, recreational boating community. We share a 125-mile international maritime border with Canada along the Strait of Juan de Fuca, Haro Strait, Boundary Pass and the Strait of Georgia, which provide access to the ports of Victoria and Vancouver, British Columbia, and several U.S. ports. The Marine Transportation System (MTS) in Puget Sound and the Columbia River port complexes provide an important economic link to Asian markets and to the West Coast of the United States, including Alaska.

The Puget Sound region receives approximately 5,000 deep draft vessel arrivals through the Strait of Juan de Fuca each year. Approximately three-fifths of those vessels transiting the 125-mile international maritime border are bound for U.S. ports, while the remainder proceed to Canadian ports. The Seattle-Tacoma port complex is the third largest containerized cargo complex in the Nation and Puget Sound is homeport to a large Seattle-based fishing fleet, the largest passenger ferry fleet in the Nation and a major cruise ship industry which has seen dramatic growth over the last several years. Over 700 tank ships arrive each year, transporting approximately 15 billion gallons of crude oil and refined products to and from the five refineries in Puget Sound waters. Puget Sound possesses one of only 15 strategic ports in the Nation transporting military supplies and equipment by vessel to support our troops overseas. The Puget Sound region is critical not only locally, but also to the Nation.

Gray's Harbor, approximately 10 miles south of the Olympic Coast National Marine Sanctuary on the Washington coast serves as a major local coastal fisheries homeport, as well as one of the principal oyster aquaculture beds for the region.

Finally, the Columbia River system, along the Washington/Oregon border, serves the principal port complexes of Longview, Washington at mile 50, and Vancouver, Washington, and Portland, Oregon, located 100 miles from the entrance. This system serves as the Pacific gateway and the second largest port complex for U.S. grain export. It also serves as a major automobile distribution port. Approximately 1,800 foreign deep draft vessels transit this 100 mile serpentine stretch of the river each year.

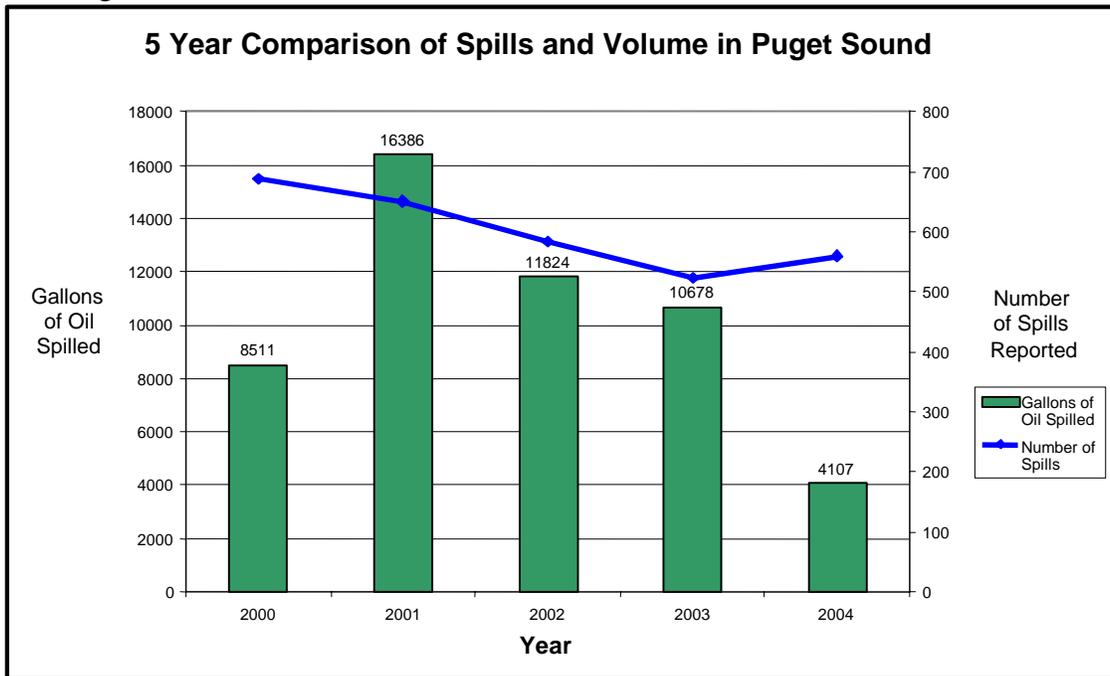
The port complexes in Puget Sound and the Columbia River are key contributors to the economic vitality of the United States, ranking on the Coast Guard's list of the most economically significant ports in the Nation.

Reducing Risk in the Pacific Northwest Maritime Environment

The Coast Guard's overarching environmental protection goal is to eliminate damage to our environment and degradation of our natural resources associated with maritime activities, including transportation, commercial fishing and recreational boating. Having set the stage for the level of activity in this marine transportation system and the resources at risk throughout the region, I will describe the key risks of pollution within the region, the substantial and unique safety net which this region boasts, and then some areas for improvement.

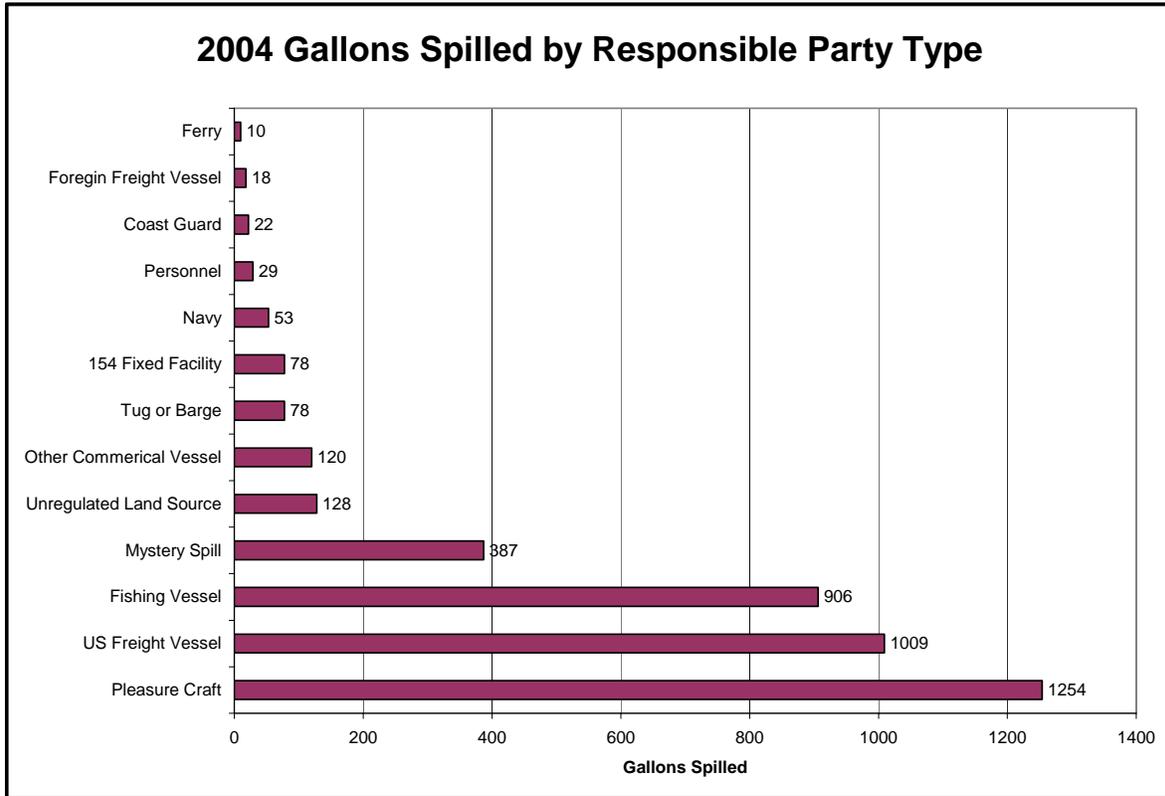
Causes of Spills: Spills can originate from every type of vessel and facility on or near the water. However many spills, including some high volume spills, come from sources completely outside the Coast Guard’s jurisdiction, such as rail, small plane, truck and industrial accidents, highway runoff, or underground storage tanks leaking into storm drains. In the National Research Council report, Oil in the Sea III: Inputs...and Effects (2002), it is noted that 16.2 million gallons of a total of 29 million gallons spilled annually in the United States are attributable to street runoff, industrial waste, municipal wastewater, refinery wastewater and recreational vessels. Of that amount, approximately 1.5 million gallons are attributable to spills from tank vessels.

Regionally, our record is much brighter. While we have averaged about 10,300 gallons per year of oil spilled for the past five years, in 2004 less than 5,000 gallons of oil were spilled in Washington waters, and that included the 1,000 gallon spill attributable to the Dalco Passage incident. That is a remarkably low amount of oil spilled, given the excess of 15 billion gallons of oil that is transferred annually by Washington marine sources.



Recreational vessels and fishing vessels typically account for the highest number of identified marine related spills each year. The pollution threat potential from recreational vessels is relatively small in the total volume spilled per incident; however, for 2004, the recreational vessel spills accounted for the most gallons spilled within the Puget Sound region. Tank vessels and bulk liquid oil facilities are highly regulated and are operated by highly trained and certified professionals. The probability of spills from tank vessels and facilities is understandably lower. However, should such spills occur, the potential spill volumes are much greater in magnitude. The volume from one spill from those sources could easily be over 1,000 gallons given quantities and typical handling rates. Likewise, spills from uninspected commercial vessels (fishing and towing vessels) and derelict vessels can also involve relatively high potential oil volumes. Together, known recreational vessels and fishing vessels accounted for over 50% of the oil spilled within the Washington coastal zone in 2004. A significant amount attributable to “mystery spills” is also considered likely to come from these mostly uninspected and unregulated marine sources.

Hundreds of oil transfers take place every week in the Pacific Northwest region. These may range from a recreational boater getting a fill-up at a marina, to a 900-foot tank ship unloading a cargo of crude oil at a local refinery. During each transfer, there is a risk of an oil spill. In 2004, 58 of the 560 spills reported were linked to oil transfer operations, accounting for 6% of the total volume spilled.

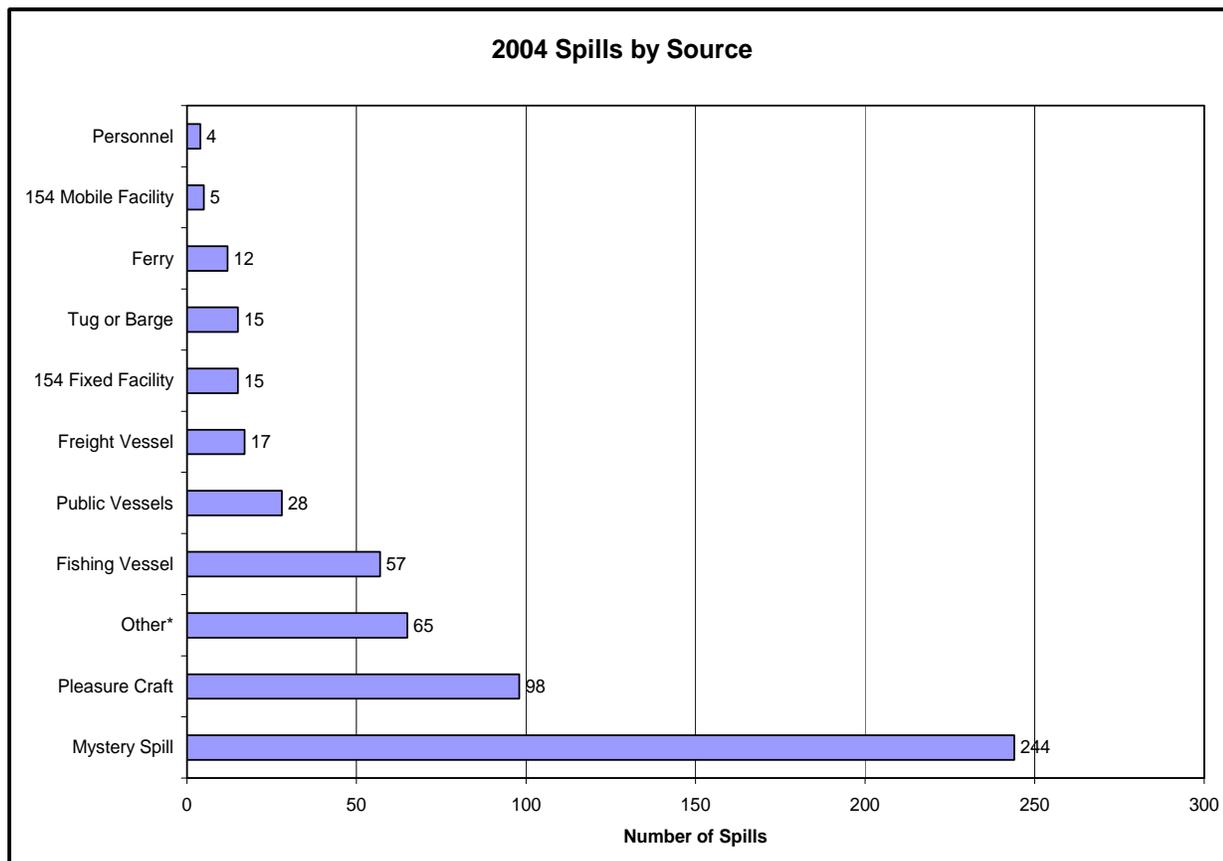


The cause of oil spills is, of course, related to the source. While most spills from vessels occur at the dock, rather than while the vessel is underway, there can be many contributing factors causing these spills. The most common causes include:

- Mechanical failure of hydraulic lines.
- Structural failure of hulls of derelict vessels (vessel sinkings).
- Structural failure of cargo tanks, cargo piping, or cargo relief valves.
- Operator error during fueling – generally related to overfilling a tank.
- Human factors engineering related spills, such as poorly documented procedures.
- Truck rollovers, collisions, mechanical failures and human errors from non-marine sources such as trucks, trains, factories, etc.

Of the 8 billion gallons of crude oil typically transported and transferred by tank vessels within Puget Sound each year, less than 1,500 gallons of crude oil were spilled within the last five years. Another 7 billion gallons of refined products are annually transported by tank vessels; again, only 500 gallons of refined oil was spilled over the last five years by tankers. These spills were the result of human error during cargo handling or ballasting operations. None of these spills from tank ships were attributable to collisions, allisions or groundings.

Despite this extraordinary tank vessel safety history, and an acknowledgement that the likelihood of in-transit accidents within the Puget Sound region are greatly mitigated by the existing safety net within Puget Sound region, the inherent hazards associated with the transport and transfer of such significant volumes of oil through an extremely difficult navigation area represent a very high consequence should a major grounding and large-volume oil spill occur. Therefore, the Coast Guard and industry must remain prepared, regardless of source, to monitor and direct a proper response for all spills impacting coastal zone waters, and specifically be prepared to address the acute damaging impact to the environment of a large oil spill from a vessel.



Unique Pacific Northwest Marine Safety Net

Within the Pacific Northwest we have one of the strongest maritime safety nets in the Nation to help prevent and mitigate the effects of oil and hazardous material spills on our environment. The Coast Guard employs a threat-based, risk managed approach to mitigate the potential for a serious marine incident that might result in a substantial threat to the marine environment.

Prevention Systems:

- Pre-Arrival Checks and Offshore Routing: Before any vessel greater than 1,600 gross tons enters U.S. waters its crew is obligated to perform safety checks of propulsion and steering equipment, and report any deficiencies prior to entering port, to help guard against a mechanical malfunction occurring close to U.S. shorelines or within maneuvering waters. In addition, tank vessels enroute or departing the region are required to follow offshore routing schemes that hold them further off the pristine coastlines of Washington and Vancouver Island, British Columbia. On the U.S. side, the International Maritime Organization has recognized an “Area To Be Avoided” (ATBA) buffer zone extending 25 miles out from the Washington coast along the

Olympic Coast National Marine Sanctuary, for all laden tank vessels and other vessels of 1,600 gross tons and above. Similarly, a 50-mile wide Tanker Exclusion Zone has been established off of the Canadian coast to route the Trans-Alaskan Pipeline tanker traffic further offshore to protect against groundings as a result of any potential disabling vessel conditions. Most deep draft freight vessels operating off the Washington coast comply with the voluntary Olympic Coast National Marine Sanctuary ATBA.

- The United States and Canada jointly operated Cooperative Vessel Traffic Service (CVTS) and the International Maritime Organization adopted Traffic Separation Scheme (TSS) within the Puget Sound Waters have existed for decades and serve to ensure an ordered and predictable traffic pattern for shipping in the region. All deep draft vessels (all above 300 gross tons) are obligated to participate in the CVTS and follow the TSS according to the International Navigation Rules of the Road. The TSS establishes one-way traffic lanes, similar to an interstate highway, with a separation zone between the opposing lanes of marine traffic. The Cooperative Vessel Traffic Service actually tracks and directs all participating vessels transiting the region as necessary to ensure collisions and powered groundings will not occur. Significant improvements to the TSS were implemented with international approval in 2004, after an extensive analysis and collaboration with Canada and tribal interests and as complimented by the discussions and recommendations from the Long-term Risk Management Panel. The most significant adjustments ensure greater separation for tankers while in transit throughout the system, particularly in more confined waters. The CVTS system is a model of bilateral cooperation and waterways safety management, ensuring the environmental protection and safety of our shared waters.
- Automated Identification System (AIS): In addition to the required participation in the CVTS, as of December 2004 nearly all commercial vessels, including tugs, are required to have AIS transponders installed which automatically broadcast vessel name, position course, speed and other marine information to other shipping and to U.S. and Canadian safety officials. These broadcasts are being received as far away as several hundred miles from shore, greatly enhancing our awareness of vessels in our environ and their activities. Indeed, the AIS has enhanced the CVTS coverage by providing vessel tracking within waters which were previously not covered by the existing Vessel Traffic Service radars.
- Port State Control Examination Program. In 1994, the Coast Guard enhanced our pre-existing foreign tank vessel examination program to include foreign freight vessels, such as container ships and bulk carriers, in an effort to eliminate substandard shipping in U.S. waters. Every foreign vessel bound for a U.S. port is screened upon receipt of their 96-hour Advance Notice of Arrival to the United States utilizing a targeting matrix which considers numerous risk factors, including vessel type, ownership, flag state, classification society and vessel's operating history as indicated in the USCG's marine information databases. All vessels above a certain score are then targeted for a USCG safety and environmental protection compliance examination either at sea prior to port entry or after docking, depending on the relative risk determined. Vessels found in non-compliance may be denied entry. If already in port, they will be detained until major discrepancies are corrected. While the national average percentage of foreign vessels examined is approximately 19%, the two Captains of the Port in the Thirteenth District examined over 38% of all foreign vessel arrivals, and over 80% of distinct vessel arrivals accounting for the fact that many foreign vessel may make repeat port calls.

-

Pilotage Requirements: Upon arrival at Port Angeles, all deep draft vessels and most foreign vessels other than small yachts are obligated to embark a Puget Sound pilot, a local knowledge expert and professional mariner, for continued transit of the vessel to its final destination. Vessels bound for Canadian ports are similarly obligated to embark a British Columbia pilot.

- Tug Escorts: Almost all oil laden tank vessels must also be under the escort of two tugs which are capable of stopping the vessel's movement within strict parameters. No vessel above 100 gross tons is permitted to meet a laden tanker transiting Rosario Strait, the typical route for tankers destined for Washington refineries. Typically, as tankers enter Rosario Strait, escort tugs actually tether themselves to the tanker for enhanced ability to positively control the tanker's movement if needed.
- Weather Sensors & Decision Aids: As a result of a special appropriation for Puget Sound pollution prevention enhancement, two sophisticated weather buoys and numerous other weather sensors and cameras have been installed throughout Puget Sound waters to enhance the mariners' and the Coast Guard's situational awareness in the region. In addition, a Rescue Tug Deployment Decision Making tool has been created to assist the Captain of the Port in objectively determining the need for the dispatch and pre-staging of stand-by tug capabilities to protect against adverse weather and potential disabled vessels combining to create an unacceptable risk for particular areas within the region. These measures all combine to facilitate both normal voyage planning and emergency response decision making.
- Double Hull Requirements: Most tankers servicing these ports have a double hull, in compliance with OPA-90 standards; and many are also equipped with redundant propulsion systems to mitigate even further any loss of vessel control.
- Oil Pollution Prevention and Response Agreements: In 2003, the Thirteenth Coast Guard District and Washington Department of Ecology established a series of protocols to implement and guide our respective operations in the area of spill prevention, preparedness and response to reduce duplication of effort, and instill better coordination and communication.
- Harbor Safety Committees: In addition to government safety and pollution prevention efforts, the Puget Sound and Columbia River region's maritime industries have established strong Harbor Safety Committees, with members from a broad spectrum of industry. These Committees have established Standards of Care, voluntary measures for operating practices and equipment testing that supplement the federal and state standards. These additional measures have proven a valuable tool in quickly improving the maritime industry's performance, without the need to embark in regulatory changes.
- MARPOL Enforcement: The Thirteenth Coast Guard District Captains of the Port, in close cooperation with the U.S. Attorney, Environmental Protection Agency and Washington Department of Ecology Investigators have gained international acclaim for trailblazing efforts to uncover criminal acts of intentional marine pollution at sea. This collaborative tenacious effort has produced Federal prosecutions of 21 ship owners, numerous convictions of the vessels' senior crew, and the collection of over \$38 million in criminal fines and settlements, including over \$7 million for environmental restoration projects within the Pacific Northwest.

Response System:

- Regional Response Team, Region 10/Northwest Area Committee and Contingency Plan: The Oil Pollution Act of 1990 and the National Contingency Plan mandates each Federal On-Scene Coordinator establish Area Committees to protect public health, safety and environment by ensuring coordinated, efficient and effective response to oil and hazardous material spills. Within the Pacific Northwest, the two Coast Guard FOSCs, the EPA FOSCs, and Washington, Oregon and Idaho state environmental response organizations established a single Area Committee to address all regional environmental response activities in a more collective manner. Further, the Regional Response Team and Area Committee established a single Contingency Plan to address responses executed by each authority.
- Orphan Spills: In the absence of an identified responsible party (spiller), or in case of a party's failure to adequately respond to a spill, the Federal On-Scene Coordinator is responsible to mount such response. As noted earlier, many of the oil spills within this region are "mystery" spills, and as such, fall to the Coast Guard and state environmental response agencies to mount an effective and coordinated response action.
- National Preparedness for Response Program (NPREP) was established under OPA-90 to ensure Area Committees and facility and vessel operators maintain an active exercise program to continually test their regional response capability to address both worst case and most probable spill scenarios on a regular basis. The results of these exercises feed into a lessons learned database accessible to all within the national response system. The lessons learned are then taken for action by the Area Committee and individual operators, as appropriate.
- Non- tank Vessel Response Plans: Next week vessel spill response plans for non-tankers must be implemented, as mandated by Congress. This initiative will compel virtually all deep draft vessels to have detailed plans and capabilities in place to ensure an aggressive and effective response to spills occurring from those vessels, similar to the system already required of tank vessels. Washington State has had a state-driven requirement since the early 1990s, when the state legislature established a vessel fee and a maritime commission to serve as an umbrella response management structure to effect a "first 24-hours" response to spills.
- Standby Rescue Tugs: Since 1999, Washington State has maintained a dedicated rescue tug at the mouth of the Strait of Juan de Fuca to respond to disabled vessels and to participate in response drills and exercises. That same year, a Coast Guard cost-benefit analysis suggested that the International Tug of Opportunity System (ITOS), paid for by industry fees collected through Puget Sound Marine Exchange, was a fiscally responsible alternative. In contrast, a standby rescue tug system, which incorporates tug deployment in areas deemed to present a higher risk due to severe weather or other causes, is also an effective countermeasure to groundings in the region, but at greater cost. The Automated Identification System has greatly expanded the Coast Guard's maritime domain awareness, providing the ability to identify a tug's presence, capabilities and availability to assist vessels in distress and has successfully been employed by the Captain of the Port in the past.

Areas for improvement

As a result of the recent Dalco Passage Spill, an Oil Spill Early Action Task Force was convened under the auspices of the Regional Response Team, Region 10 and the Northwest Area Committee. The task force was charged to evaluate actions to be taken during the early stages of oil spills when meteorological conditions are adverse, and make recommendations to improve notification procedures, response policies and response technology, including any recommended changes to the Northwest Area Contingency Plan. The task force developed 11 broad recommendations, many of which the Area Committee has already integrated into the NWAC strategic work plan for implementation. It was clear that the assessment and response to the relatively minor (1,000 gallon) oil spill was exacerbated by weather conditions, and that the Area Committee needs to further explore means to more effectively and aggressively assess spills during reduced visibility to permit more rapid implementation and coordination of appropriate response strategies, particularly in situations where no responsible party has acknowledged the spill and taken action to respond.

Conclusion

While we must always remain vigilant in assuring our ability to respond aggressively and appropriately to oil and hazardous material spills, it is evident that the Pacific Northwest's broad prevention efforts and its collaborative maritime safety net have greatly mitigated the potential for a catastrophic spill within this region. We endeavor to improve the system through continual self-examination. The tremendous successes we have achieved in this endeavor are due, in large part, to the cooperation and prompt measures taken by the government, the spill response community, the environmental community, scientists and industry working together as partners. Much work remains to be done to reduce America's vulnerability to pollution and other maritime safety threats, but with the continued support of the Congress and the Administration I know that we will succeed in delivering the robust maritime safety and environmental security America expects and deserves well into the 21st Century.

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