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U.S. DEPARTMENT OF COMMERCE**

**FIELD HEARING ON
OIL POLLUTION ISSUES IN WASHINGTON STATE**

**BEFORE THE SUBCOMMITTEE ON FISHERIES AND COAST GUARD
COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION
UNITED STATES SENATE**

AUGUST 1, 2005

Thank you for the opportunity to testify on the role of the National Oceanic and Atmospheric Administration (NOAA) in response, restoration, and research under the Oil Pollution Act of 1990 (OPA; 33 U.S.C. 2701-2761). I am Douglas Helton, Incident Operations Coordinator for the Office of Response and Restoration, National Oceanic and Atmospheric Administration within the Department of Commerce. NOAA's spill response program is headquartered in Seattle, WA, and has over 45 scientists and responders available 24 hours a day, seven days a week, to provide technical support for oil spills nationwide. As the Incident Operations Coordinator, my role is to plan and staff incident responses, and to ensure that NOAA products are timely and useful. I also help to coordinate preliminary natural resource damage assessment studies, working closely with biologists, economists, and legal counsel in the NOAA Damage Assessment and Restoration Program. Over the past 12 years, I have been involved with most major spills in the United States, including several here in the Puget Sound region.

BRIEF OVERVIEW

The *Exxon Valdez* oil spill taught us a valuable lesson. Our Nation must be prepared to respond to major oil spills. Some time has passed since a domestic spill rivaled the *Exxon Valdez* in size. However, the recent *Prestige* spill in Europe and the near simultaneous spills in Delaware and Alaska last winter serve as reminders that, although rare, significant oil spills still happen. We must therefore continue to be prepared to respond to these spills when they do occur. OPA created a comprehensive prevention, response, liability, and compensation regime that is needed to respond to these types of oil pollution incidents from both vessels and on-shore facilities. OPA authorized NOAA to represent the public as a natural resource trustee for ocean and coastal resources regarding the discharge or threatened discharge of oil into the environment. NOAA is mandated to seek damages on behalf of the public to restore natural resources injured by oil spills. When oil spills threaten or injure these resources, NOAA and other natural resource trustees are responsible for:

- Working through the Regional Response Teams and National Response Team to ensure that the most appropriate response and cleanup actions are taken to protect resources from further injury;
- Assessing and recovering natural resource damages to compensate for the loss of services that the natural resources provided; and
- Implementing restoration projects for injured natural resources.

OPA required NOAA to draft regulations under which all natural resource trustees perform natural resource damage assessments. In addition, OPA mandates oil spill research and development under Title VII, and created the Interagency Coordinating Committee on Oil Pollution Research to coordinate research and development efforts among industry, universities, and others.

NOAA'S RESPONSE ROLE

When a spill occurs a multi-agency interdisciplinary scientific response team provides and coordinates advice on response, cleanup, and natural resource issues. For spills in the marine environment, or spills in areas where the U.S. Coast Guard (USCG) has jurisdiction, NOAA assumes the role of Scientific Support Coordinator (SSC). NOAA has SSCs in USCG offices to assist the USCG in its role as federal On-Scene Coordinators. The SSC also supports the Unified Command, an organizational structure that allows the Incident Commander position to be shared among several agencies and organizations that have jurisdiction, in order to enhance coordination among these agencies. SSCs lead a team of scientists who provide support in such areas as pollutant fate and transport, resource identification and protection strategies, shoreline cleanup assessment, and natural resource trustee coordination.

NOAA's response to each incident is dependent upon the spill's characteristics. Scientific coordination is critical. Through experience, expertise, and state-of-the-art technology NOAA forecasts the movement and behavior of spilled oil, evaluates the risk to resources, and recommends protection priorities and appropriate cleanup actions.

Effective spill response depends on effective planning and preparation. NOAA promotes preparedness by working closely with Regional Response Teams on a variety of issues including dispersant use, best cleanup practices, communications, and response organization. In addition, NOAA enhances the state of readiness by developing better response tools including trajectory models, fate models, and integration of improved weather data and data from ocean observing systems into spill trajectory forecasts.

NOAA'S RESTORATION AND DAMAGE ASSESSMENT ROLE

Oil spills can harm natural resources in a number of ways. The most immediate and visible impacts may be oiled beaches and injured or dead organisms, such as fish, lobsters, birds and wetland plants. Other impacts may not be readily apparent and may not show up for weeks, months, or even years. Nurseries for fish or

nesting sites for birds and turtles may be destroyed, and birds and other wildlife may become ill from eating contaminated food.

Wetlands may slowly be destroyed several months after an incident, coral reefs may continue to erode and be more susceptible to disease, and fish may be unable to reproduce. A spill may also diminish the services that natural resources provide us, such as fishing, boating, beach going, and wildlife viewing, as well as ecological services, such as providing habitat, nutrient cycling, and energy transfer through food webs.

Many factors affect how quickly restoration actions can be implemented and how fast recovery can occur. These factors include the type of resource that was injured, the time of year it was injured, and the type, amount, and duration of the oil spilled. In some circumstances, natural recovery may be sufficient to restore resources. In other instances, active restoration efforts may be necessary.

NOAA and other natural resource trustees ensure that restoration projects satisfy the OPA's goal of restoring natural resources and services to baseline (the pre-incident condition) and compensating the public for interim losses resulting from the injury. Trustees are responsible for two types of restoration: primary and compensatory. The purpose of primary restoration action is to return the injured natural resources and services to baseline conditions, while the purpose of compensatory restoration is to compensate the public for losses occurring from the time of the incident to the return of injured resources and services to baseline. In developing primary restoration plans, trustees focus on actions that accelerate the recovery of the injured resources, such as reconstructing physical habitat that was destroyed. In developing compensatory restoration plans, trustees ensure that restoration projects address the period from injury until recovery. This is vital because while a resource is impaired, it is unable to provide services on which other parts of the ecosystem and the public rely.

NOAA scientists and economists provide the technical foundation for natural resource damage assessments and work with other trustees and responsible parties to restore resources injured by oil spills. To accomplish this effort NOAA experts collect data, conduct studies, and perform analyses needed to determine whether coastal resources have sustained injury from oil spills. NOAA experts determine how best to restore injured resources and to ascertain the most appropriate restoration projects to compensate the public for associated lost services.

Regulations promulgated by NOAA under OPA provide a framework for conducting natural resource damage assessments when oil spills injure the public's natural resources. The regulations require the following steps in the natural resource damage assessment process:

- 1) Preassessment – Trustees evaluate data on impacts to natural resources to determine whether natural resources and their associated services have been injured;
- 2) Restoration Planning – Trustees quantify injuries to natural resources and their services and use that information to determine the type and scale of restoration activities that fully compensate the public for the injures; and
- 3) Restoration Implementation – Trustees, often working with those responsible for the release, implement restoration actions.

NOAA has long been interested in looking at alternative ways to expedite and cut costs for natural resource damage assessment. One alternative is the cooperative assessment in which the Responsible Party plays a major role with the natural resource trustees. Based on NOAA's successful experiences in cooperative assessments, NOAA is promoting this approach through national and regional dialogues. The intent is to expedite restoration, encourage innovative approaches, strengthen partnerships, and provide meaningful public involvement. Cooperative assessments offer industry the opportunity for a greater role and more control over the timing of restoration actions without undermining the natural resource trustee responsibilities. This approach also reduces damage assessment costs and the risk of litigation.

ENVIRONMENTAL AND NAVIGATION SAFETY AT WORK

A catastrophic discharge of oil or hazardous materials remains one of the greatest threats facing the Olympic Coast National Marine Sanctuary. Reducing this threat has been one of NOAA's highest priorities. The sanctuary, the third largest in the United States, sits at the entrance to the Strait of Juan de Fuca, a major commercial thoroughfare linking the ports of Seattle, Tacoma, and Vancouver with trading partners around the Pacific Rim. The juxtaposition of such an important international trade route and a national marine sanctuary requires the balancing of political, social, economic, and natural resource issues.

NOAA worked with the USCG to propose that the International Maritime Organization approve and adopt an 'Area to be Avoided' (ATBA) off the Olympic Coast. This ATBA, which went into effect in June 1995, advises operators of vessels carrying petroleum and hazardous materials to maintain a 25-mile buffer from the coast. This distance narrows as the vessel traffic lanes converge at the entrance to the Strait of Juan de Fuca. Since the ATBA was adopted, Olympic Coast National Marine Sanctuary has ensured that information on the ATBA is included on the appropriate nautical charts and in relevant publications.

It is important to note that the boundaries of the ATBA and of the Sanctuary are not contiguous. National marine sanctuaries are not exclusionary areas (e.g., commercial fishing and shipping occur within Olympic Coast National Marine Sanctuary). While the designation of the ATBA has improved maritime and environmental safety within the

sanctuary, it is only one means of reducing risk. NOAA has been participating in other initiatives reviewing additional measures to improve maritime and environmental safety in the region.

NOAA has Navigation Response Teams (NRTs) that conduct hazardous obstructions surveys using diving operations, electronic navigation capture, data collection, and mapping support capabilities to locate potential navigation impediments and to prevent a spill. NRTs also perform emergency response surveys at the request of the USCG to locate obstructions that may have caused a spill. An NRT is on hand 365 days a year in the State of Washington to support NOAA's mission of promoting safe marine navigation.

NOAA has identified the navigable approaches to the Puget Sound as one of the critical areas in the national hydrographic survey backlog. In FY 2006, NOAA expects to conduct surveys around Puget Sound, as well as in Alaska, the Gulf of Mexico, and along the East Coast. This project will provide essential chart data and reduce the 'critical areas' backlog for hydrographic surveys. Additionally, this project will provide a response to requests from the Puget Sound Pilots Association for such a survey. The Association is concerned with this area because four major traffic lanes cross here, there are shoals in the vicinity of those traffic lanes, and the area experiences a high density of traffic.

NOAA's Physical Oceanographic Real Time System (PORTS[®]) provides quality controlled real-time oceanographic (water levels, currents, water temperature, salinity, etc.) and meteorological (wind speed, direction, air temperature, barometric pressure, etc.) data in support of safe and efficient marine navigation. PORTS[®] data also helps support response efforts when spills occur by providing responders with a better understanding of their operational environment and improving trajectory model forecasts. There are currently 12 PORTS[®] around the nation, including one in Tacoma, WA, in partnership with the Port of Tacoma. PORTS[®] is recognized as a backbone system within the Integrated Ocean Observing System (IOOS).

A fully implemented IOOS would make observations and model data from various local, state, and federal agencies available for spill response. This would include real-time and historical observations and products for meteorological, physical oceanographic and biological parameters. The resulting enhancement of data management and communications would improve the quality and quantity of model input and output for spill trajectory modeling. IOOS would provide emergency responders with access to unprecedented amounts of real-time and historical data for decision-making regarding spill response and mitigation. The envisioned Northwest Association of Networked Ocean Observing Systems component of IOOS would meet local needs and requirements of the region and enhance response and decision-making support in the event of a spill.

EXAMPLES OF RESPONSE AND RESTORATION AT WORK

The USCG is notified of approximately 20,000 incidents annually in the United States, including approximately 500 annually in the Puget Sound region. Fortunately, large spills are infrequent and most incidents are small fuel spills and mystery sheens reported in marinas and harbors, or spills from terrestrial sources such as truck accidents. The average spill report in Puget Sound is 20 gallons. However, anywhere vessels transit, there is a risk of spills and the risk is not only from tank vessels. Daily transits of fishing vessels, ferries, cruise ships, naval vessels, and even large yachts can pose a threat of spills. A typical Alaska-bound cruise ship may carry in excess of 500,000 gallons of fuel while an ocean-going tug may carry over 100,000 gallons of fuel and lube oils.

Over the past 2 years, NOAA has assisted the USCG in several spills in the region including the following:

- Mystery Spill, Port Townsend, April 2005- Unknown (small) amount
- Dalco Passage Incident, October 2004 (1500-2000 gallons)
- Foss Barge, Pt Wells, December 2003 (4600 gallons)

Now I would like to illustrate NOAA's recent efforts in regards to Northwest and Alaska oil spills.

M/V Selendang Ayu

During a major winter storm event on December 8, 2004, the cargo vessel *M/V Selendang Ayu* lost power, ran aground and broke in half on the shore of Unalaska Island, within Alaskan waters of the Bering Sea and part of the Alaska Maritime National Wildlife Refuge. The *Selendang Ayu* loaded here in Seattle, with approximately 60,000 tons of soybeans and was destined for China via the Great Circle Route. That navigation route took the vessel through Unimak Pass in the Aleutian Islands. During rescue operations, six *Selendang Ayu* crew members were lost at sea when a USCG helicopter crashed. Approximately 335,000 gallons of fuel oil and other miscellaneous machine oils were subsequently released to the environment. Most of the cargo was also released to the environment.

During the initial response, NOAA participated in aerial observations and mapping of floating and shoreline oiling, as well as provided on-scene weather information, including the establishment of an emergency remote weather station and the provision of a dedicated on-scene meteorologist. This expertise enabled focused operations during a severe weather time of the year. Without accurate, up to date, spot-specific forecasts, it would not have been possible to safely conduct complicated operations in such an extreme environment. To give an example of the difficult nature of work involved, a special Chinook helicopter was used to remove the remaining 140,000 gallons of fuel on the *Selendang Ayu* in 2,000 gallon fuel canisters, one at a time, through the mountains 25 miles to Dutch Harbor.

The NOAA SSC also coordinated environmental issues for the Unified Command, including technical issues related to potential dispersant use; prepared short and long-term trajectory forecasts for the residual oil onboard; reviewed satellite data and remote sensing information for potential utilization; and responded to a USCG request for assistance in locating the flight recorder of their downed helicopter.

NOAA also worked with the local community to address subsistence and seafood safety concerns. The Port of Dutch Harbor on Unalaska Island processes the largest volume of fish of any port in the United States. Many of these vessels and fishermen come from the Puget Sound region and concerns were widespread regarding the potential closure of fisheries, or potential market impacts if any seafood products were contaminated. There was particular concern for the Bering Sea crab and trawl fisheries. The crab fleet delivers its catch alive with constantly circulating sea water through the vessel holds, while the trawl vessels use large nets that could become contaminated during deployment and retrieval. Any real or perceived contamination of these fisheries products could cause world-wide marketing problems for Alaska seafood products. With a combination of trajectory analysis and advice on monitoring techniques, NOAA was able to provide assistance to the Seafood Safety Task Force. Similar concerns were expressed for the safety of the subsistence foods harvested from the sea and inter-tidal zones. As the result of information gained following the *Exxon Valdez* spill and other spills that NOAA has worked on, we were able to provide meaningful input, based on actual experiences, as a member of the Subsistence Foods Task Force.

NOAA continues to work with the other natural resource trustees (U.S. Fish & Wildlife Service and the State of Alaska) and the responsible party to conduct a natural resource damage assessment. The parties are conducting a preliminary assessment of potential injuries to natural resources and beginning to evaluate restoration alternatives. Categories of potential injuries include: shorelines (including inter-tidal habitat, wetlands, beaches, shoreline vegetation); aquatic resources (including crabs, salmon and other anadromous fish species); birds (including seabirds, gulls and shorebirds); wildlife (including sea otters and sea lions) and human uses (including impacts to subsistence, cultural and recreational uses).

We have learned that the public has confidence in NOAA's ability to deal with the diverse issues that surround an oil spill. The public relies on our experience and knowledge to assist their local agencies that do not have the same level of spill response experience. NOAA and other trustees are committed to providing the public with up to date information and meaningful opportunities for review and comment during the preliminary assessment and restoration planning process. Public meetings will be held later this year on Unalaska Island to convey to the public the status of the damage assessment activities and to solicit input on potential restoration alternatives. Public review and comment of the draft restoration plan and environmental assessment report will also be sought later in the damage assessment and restoration planning process.

FOSS BARGE, POINT WELLS

On December 30, 2003, a transfer accident at the Point Wells Asphalt terminal in Shoreline, WA, resulted in a spill of approximately 4,600 gallons of heavy bunker fuel. The oil spread across central Puget Sound and much of the oil stranded between Point Jefferson and Indianola in Kitsap County. Unfortunately, a pristine marsh and shoreline area managed by the Suquamish Tribe was hard-hit. The Do-Kag-Wats marsh was heavily oiled and significant cleanup issues were raised in this culturally and biologically sensitive area.

NOAA provided several services to the response and on-going assessment, including tracking the floating oil, evaporation and dispersion predictions, systematic shoreline surveys, seafood sampling, and natural resource damage assessment studies. NOAA is currently working with the State, the U.S. Fish and Wildlife Service, and the Suquamish Tribe in the completion of a cooperative damage assessment.

DALCO PASS

On October 14, 2004, the USCG received a report of a mystery oil spill in the vicinity of Dalco Passage in southern Puget Sound. NOAA and Washington State conducted flights over the area the next day and estimated that 1,500-2,000 gallons of product had been released and was spreading, mostly around Vashon Island. Weather conditions were nearly calm during this time. As a result, the oil was able to slowly spread over a large area giving the appearance that a large volume of oil had been released. Response teams treated the impacted beaches promptly and thoroughly, and the clean up of all oiled beaches was signed off as complete by the Unified Command only two weeks after the spill was first reported. Follow up inspections indicated little to no apparent environmental impact. In total, one bird was killed and one was cleaned and released. Several dead harbor seal pups were collected during the spill but necropsy results found no link to the spill.

WHATCOM CREEK

Perhaps the most significant recent spill incident in the Puget Sound Region was the 1999 Olympic Pipe Line Company spill into Whatcom Creek in Bellingham, WA. This spill highlights the fact that vessels are not responsible for all oil pollution events; land-based sources of oil can also invade the marine environment and have significant impacts. The restoration efforts for the June 10, 1999, gasoline spill illustrate NOAA's damage assessment functions at a spill, and highlight the benefits of NOAA regulations that encourage cooperative and restoration-based damage assessment.

The incident resulted in the release of approximately 236,000 gallons of gasoline into Whatcom Creek, Bellingham, WA. The spilled gasoline ignited, burning much of the riparian vegetation including a large section of mature forest in an urban park. Whatcom Creek and adjacent forests, parks, and open-space areas are important ecological and recreational resources for the City of Bellingham. During the past decade, a concerted

effort by local governments, tribes, non-profit organizations, and private citizens has led to habitat improvements in and along Whatcom Creek. The creek also has important cultural and subsistence values. The creek falls within the 1855 Point Elliott Treaty Area for the Lummi Nation and Nooksack Tribe.

The fire that resulted from the Olympic Pipeline Oil Company spill killed three people, and the combination of the fire and toxic levels of hydrocarbons eliminated nearly all aquatic biota from the spill site to the mouth of the creek. Over 100,000 fish were killed. Affected biota included several species of juvenile salmonids, including chinook salmon. Most of the dead salmonids were fry and smolts. Over 26 acres of forest, including approximately 16 acres of mature riparian forest within the adjacent park, was lost as a result of the fire.

Shortly after the incident, NOAA and the state and tribal trustees entered into a cooperative assessment process with Olympic Pipe Line Company. NOAA was the lead administrative trustee and worked to develop both emergency and long-term restoration plans for the creek. This cooperative process reduced duplication of studies, increased the cost-effectiveness of the assessment process, increased sharing of information, and, most importantly, sped the restoration process. Because salmon would be returning to spawn in the creek in the months following the spill, a concerted effort was made to conduct early restoration in the stream. At the same time, data were collected for long-term restoration needs. A number of emergency projects were implemented and salmon successfully spawned in the fall after the incident. A long-term plan was prepared and finalized following a period of public comment. NOAA worked closely with Washington State, the City of Bellingham, the Lummi Nation and the Nooksack Tribe, and successfully protected funding for the long-term restoration plan. This plan includes projects that are currently being implemented in the following areas: Land Acquisition and Park Enhancements, Fish Habitat Projects, and a Long-term Monitoring and Maintenance.

CONCLUSION

Thank you for the opportunity to talk about NOAA's important role under OPA. NOAA's expertise is critical to prevent further harm, restore adverse effects on natural resources, aid planning and response decision-making, and document damages associated with oil spills. I look forward to any questions that you may have.