



Responding to  
Spills

## Exxon Valdez

Spill Profiles

On March 24, 1989, shortly after midnight, the oil tanker *Exxon Valdez* struck Bligh Reef in Prince William Sound, Alaska, spilling more than 11 million gallons of crude oil. The spill was the largest in U.S. history and tested the abilities of local, national, and industrial organizations to prepare for, and respond to, a disaster of such magnitude. Many factors complicated the cleanup efforts following the spill. The size of the spill and its remote location, accessible only by helicopter and boat, made government and industry efforts difficult and tested existing plans for dealing with such an event.

The spill posed threats to the delicate food chain that supports Prince William Sound's commercial fishing industry. Also in danger were ten million migratory shore birds and waterfowl, hundreds of sea otters, dozens of other species, such as harbor porpoises and sea lions, and several varieties of whales.

Since the incident occurred in open navigable waters, the U.S. Coast Guard's On-Scene Coordinator had authority for all activities related to the cleanup effort. His first action was to immediately close the Port of Valdez to all traffic. A [U.S. Coast Guard](#)  investigator, along with a representative from the Alaska Department of Environmental Conservation, visited the scene of the incident to assess the damage. By noon on Friday, March 25, the Alaska Regional Response Team was brought together by teleconference, and the [National Response Team](#) was activated soon thereafter.

Alyeska, the association that represents seven oil companies who operate in Valdez, including Exxon, first assumed responsibility for the cleanup, in accordance with the area's contingency planning. Alyeska opened an emergency communications center in Valdez shortly after the spill was reported and set up a second operations center in Anchorage, Alaska.

The Coast Guard quickly expanded its presence on the scene, and personnel from other Federal agencies also arrived to help. EPA specialists in the use of experimental bioremediation technologies assisted in the spill cleanup and the [National Oceanic and Atmospheric Administration](#)  was involved in providing weather forecasts for Prince William Sound, allowing the cleanup team to adapt their methods to changing weather conditions. Specialists from the Hubbs Marine Institute in San Diego, California, set up a facility to clean oil from otters, and the International Bird Research Center of Berkeley, California, established a center to clean and rehabilitate oiled waterfowl.

Three methods were tried in the effort to clean up the spill:

- Burning
- Mechanical Cleanup
- [Chemical Dispersants](#)

A trial burn was conducted during the early stages of the spill. A [fire-resistant boom](#) was placed on tow lines, and two ends of the boom were each attached to a ship. The two ships with the boom between them moved slowly throughout the main portion of the slick until the boom was full of oil. The two ships then towed the boom away from the slick and the oil was ignited. The fire did not endanger the main slick or the *Exxon Valdez* because of the distance separating them. Because of unfavorable weather, however, no additional burning was attempted in this cleanup effort.

Shortly after the spill, mechanical cleanup was started using booms and [skimmers](#). However, skimmers were not readily available during the first 24 hours following the spill. Thick oil and heavy kelp tended to clog the equipment. Repairs to damaged skimmers were time consuming. Transferring oil from temporary storage vessels into more permanent containers was also difficult because of the oil's weight and thickness. Continued bad weather slowed down the recovery efforts.

In addition, a trial application of [dispersants](#) was performed. The use of dispersants proved to be controversial. Alyeska had less than 4,000 gallons of dispersant available in its terminal in Valdez, and no application equipment or aircraft. A private company applied dispersants on March 24, with a helicopter and dispersant bucket. Because there was not enough wave action to mix the dispersant with the oil in the water, the Coast Guard representatives at the site concluded that the dispersants were not working and so their use was discontinued.

Efforts to save sensitive areas were begun early in the cleanup. Sensitive environments were identified, defined according to degree of cleanup, and then ranked for their priority for cleanup. Seal pupping locations and fish hatcheries were given the highest importance, and for these areas special cleaning techniques were approved. Despite the identification of sensitive areas and the rapid start-up of shoreline cleaning, however, [wildlife rescue](#) was slow. Adequate resources for this task did not reach the accident scene quickly enough. Through direct contact with oil or because of a loss of food resources, many birds and mammals died.

In the aftermath of the *Exxon Valdez* incident, Congress passed the [Oil Pollution Act of 1990](#), which required the Coast Guard to strengthen its regulations on oil tank vessels and oil tank owners and operators. Today, tank hulls provide better protection against spills resulting from a similar accident, and communications between vessel captains and vessel traffic centers have improved to make for safer sailing.

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