

Biological assessment of the Exxon Valdez oil spill in Alaska

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The oil tanker Exxon Valdez spilled about 11 million gallons (250 000 barrels) of crude oil into Prince William Sound (PWS) on March 24, 1989. The oil spread over a huge area in the western Gulf of Alaska. It contaminated about 1200 km of beaches in PWS, the Kenai Peninsula, the Alaska Peninsula and Kodiak Island. The degree of contamination on beaches varied greatly. Most areas in western PWS were totally covered with crude oil. Areas farther south were polluted over the next 90 days as the oil was moved by ocean currents. The crude oil weathered over time, volatile compounds evaporated and water was absorbed into the oil. The weathered oil is not as toxic and the southerly beaches were not uniformly covered with oil. The Gulf of Alaska is a roadless, wilderness area with an abundance and diversity of fish and wildlife. Millions of birds use the areas. Marine mammals that occur in the area include seals, sea lions, sea otters and several species of whales. Terrestrial mammals that forage in the intertidal zone were also impacted by the spill. Natural resource agencies began an assessment of the impact within four days of the spill. Biologists began making initial observations and planning longer term studies. The assessment program is being conducted under authority of the Clean Water Act and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). These federal laws are cumbersome and an assessment program has yet to be approved. However, individual agencies have initiated about 60 long-term studies to assess the impacts. I will provide the most up to date results from some of these studies.

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