EXXON VALDEZ OIL SPILL — MARCH 24, 1989 — PRINCE WILLIAM SOUND, ALASKA

Spill Data

- Approximately 11 million gallons, or 257,000 barrels, of oil spilled into Prince William Sound.
- Only 14 percent of the approximately 11 million gallons of oil spilled was recovered.
    - 8-9 percent was recovered by skimming, while the rest was removed as solid waste from beaches.
- Approximately 1,300 miles of shoreline were impacted by oil.
- The spill area stretched for 460 miles, impacting 10,000 square miles of Prince William Sound.

Cleanup Efforts

- Four summers of cleanup efforts could not clean all beaches.
- Some beaches remain oiled today.
- About 10,000 workers, 1,000 boats, and 100 airplanes and helicopters were involved in the cleanup effort.

Cleanup Techniques

- High pressure water treatment: People used fire hoses to spray beaches, forcing oil to the shore where it was trapped by layers of boom and removed or absorbed by special materials. Hot water was used until it was determined that hot water cooked small organisms; cold water was used afterwards.
- Mechanical cleanup: Backhoes and other heavy equipment combed the beaches to expose the oil underneath. High pressure water treatment washed the oil to the shore where it was removed.
- Bioremediation: Cleanup crews applied fertilizer to beaches in order to spur growth of microscopic bacteria to eat the oil. The technique was successful on beaches with thin oil cover.
- A lack of available resources, such as skimmers, booms and dispersants, hampered cleanup efforts of oil on the water's surface.
    - A response barge operated by the Alyeska Pipeline Service Company was out of service.
    - There were not enough skimmers and boom available.
    - Dispersants were applied, but were ineffective due to weather conditions.

Economic Impacts

- A report to the Attorney General of the State of Alaska estimated lost passive use value, essentially the existence value of an intact Prince William Sound ecosystem, at $2.8 billion in 1989.
    - It measured the cost of natural resource injuries, including oiled shoreline, bird and mammal deaths and effects on fish.
    - Alaska's GDP in 1989 was $23.4 billion, according to the Bureau of Economic Analysis.
- In the spill area in 1989, the number of anglers (13 percent), household trips (21 percent), days fished (10 percent), and fish harvested (12 percent) decreased from 1988 levels.
- According to the EIA, the spill resulted in a 13 million barrel disruption in supply– enough to fuel roughly 18 hours of total national consumption of petroleum products.
    - Despite the small disruption, the national average gasoline price per gallon jumped over 10 cents after the spill.
    - Los Angeles experienced an extreme spike in gasoline prices, peaking at $1.18, 50 cents more than pre-spill levels.

Animal Deaths

- Carcasses of over 35,000 birds and 1,000 sea otters were found after the spill.
- Best estimates for total number of wildlife killed:
    - 250,000 seabirds
    - 2,800 sea otters
    - 300 harbor seals
    - 250 bald eagles
    - Up to 22 killer whales
    - Billions of salmon and herring eggs

Continued Impacts

- On May 6, 2010, the Wall Street Journal reported that thick oil can still be found on beaches throughout Prince William Sound just inches below the sand.
- A 2001 Alaska Fisheries Science Report study found approximately 20 acres of contaminated shoreline, or 3.6 miles of beaches, in Prince William Sound.
- Subsurface oil remains toxic for many years.
- The study listed sea otters and harlequin ducks as species particularly vulnerable to the remaining oil.
- 10 species are still recovering from the spill, while two species, including Pacific herring, have shown little or no improvement since the spill.
- Commercial fishing in addition to recreation, tourism, and subsistence continue to recover from the spill.

Herring Fishery

- Lesions and elevated hydrocarbon levels were found in some adult Pacific herring in oiled areas.
- Egg mortalities and larval deformities were documented in 1989.

- Four years after the spill the fishery experienced a dramatic collapse and never rebounded.
- The population began increasing in 1997, allowing the fishery to reopen in 1997 and 1998, but the increase stalled in 1999 and the fishery closed.
- Year-long closures of the herring fishery in Prince William Sound occurred 11 different times from 1989 to 2006.

Legal History

- *Exxon Shipping Co. v. Baker*
    - In 1994, an Anchorage court ruled that Exxon pay $5 billion in punitive damages.
    - Exxon launched multiple appeals – eventually leading to the Supreme Court case – and the 9th Circuit Court of Appeals held two hearings, reducing the punitive damages to $2.5 billion in 2006.
    - In 2008, the Supreme Court of the United States ruled that the punitive damages awarded to the spill victims should be reduced from $2.5 billion to $500 million.

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