

Marine Mammals of Prince William Sound: Biology and Population Monitoring

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Prince William Sound (PWS) provides a variety of marine mammal habitats and is inhabited by the oceanic and coastal species common to the North Pacific fauna. Among the most common species are sea otters, Steller sea lions, harbor seals, killer whales, humpback whales, Dall's porpoise, and harbor porpoise.

Initial studies of these species in PWS began in the 1970s prior to the construction of the Trans-Alaska Pipeline terminal. The Alaska Department of Fish and Game flew aerial surveys in 1973-1974 to determine the distribution and relative abundance of harbor seals, Steller sea lions, and sea otters. The expansion of the sea otter population across PWS provided unique opportunities for studies that were conducted mostly by the U. S. Fish and Wildlife Service. During 1976-1979 the NOAA Outer Continental Shelf Environmental Assessment Program provided funding to agencies and contractors for detailed studies of the distribution and ecology of seals, sea lions, and to a lesser extent cetaceans, in the Gulf of Alaska including PWS. Counts of seals and sea lions continued at intervals through 1988 and indicated declining populations for both species. Killer whale and humpback whale studies were conducted in the 1980s using individual photo-identification to look at distribution and population biology.

Following the *Exxon Valdez* oil spill, damage assessment studies were conducted on seals, sea lions, sea otters, killer whales, and humpback whales. Baseline information collected prior to the spill allowed some assessment of the damage to harbor seals, sea otters, and killer whales. Research and monitoring programs put in place during and after the spill will provide a more detailed understanding of abundance, population trend, and ecology of these species. Information on most large whales and porpoises remains inadequate.

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