

MARINE MAMMAL STUDY NUMBER 2

Study Title: Assessment of Injuries to Killer Whales in Prince William Sound and Southeast Alaska

Lead Agency: NOAA

PROJECT JUSTIFICATION

Photographs of individual killer whales occurring in Prince William Sound were collected from May to September in 1989, 1990, and 1991 to assess the potential impacts of the Exxon Valdez oil spill on killer whale life history and ecology. Over 25,000 nautical miles were traversed in search of whales or while photographing whales, reflecting 617 days of field research for the three-year period.

An unusually high number of killer whales were reported missing from one of the resident pods named AB pod. The stability of resident pods of killer whales is such that when an animal is listed as missing for more than one year, that animal is considered dead. Prior to the oil spill, the number of whales in AB pod changed from 35 to 36 (1984-1988). During this time period, 8 whales died and 9 whales were born.

During 1989, 7 whales were missing from the AB pod. During 1990, six additional whales from AB pod were added to the missing list. This represents an average mortality rate of approximately 20%, an order of magnitude greater than that seen in the 20-year study of killer whales in British Columbia and Washington State (1.8%) and more than three times the average mortality rate (6.1%) seen in AB pod during the 1984-88 period. Additionally, in 1989 and 1990, no calves were born in the AB pod. In 1991, one whale was reported missing and one calf was born to AB pod.

In addition to missing whales in the AB pod, significant changes occurred in the pod's social structure. Although carcasses of missing whales have not been found, there is a correlation between the discovery of unusually high mortality in AB pod and the Exxon Valdez oil spill.

For this closeout project, a complete analysis will be conducted. This will allow an evaluation of all aspects of the killer whale data. The final report will make available information useful in understanding and managing the killer whales of Prince William Sound.

	BUDGET (\$K)	
Salaries	\$	28.0
Travel		1.0
Contracts		0.0
Supplies		0.0
Equipment		0.0
Subtotal	\$	<u>29.0</u>
General Administration		4.3
Total	\$	<u>33.3</u>