

BIRD STUDY NUMBER 4

Study Title: Assessing the Effects of Exxon Valdez Oil Spill on Bald Eagles

Lead Agency: USFWS

PROJECT JUSTIFICATION

Surveys were conducted following the oil spill to estimate bald eagle numbers and reproductive success of eagles residing in the Exxon Valdez oil spill area. Eagles were radio-tagged and monitored to determine survival, and document movements and exposure to oiled areas. Toxicological tests were conducted on tissue samples, and addled eggs, prey remains, blood, and feathers were collected and analyzed for evidence of hydrocarbon exposure.

Preliminary results have shown that oil contamination of the intertidal habitats used extensively by breeding, wintering and migrating bald eagles have resulted in impacts to these birds. Conservative estimates of total mortality of bald eagles due to Exxon Valdez oil spill is 553 eagles. Bald eagle nesting surveys revealed a significantly low nest success and productivity in Prince William Sound with approximately 69% of occupied nests failing in 1989 and 43% failing in 1990. A conservative estimate of lost production in 1989 was 133 chicks. Hydrocarbon analysis of addled eggs, prey remains, blood, and feathers in 1989 and 1990 indicated exposure. Two of 3 eggshell samples collected in 1989 on the Alaska Peninsula and Kodiak area were exposed to hydrocarbons. Concentrations of uric acid in blood serum from adult eagles in oiled areas were higher than those from un-oiled areas in 1989. Eggs collected in 1990 in eastern Prince William Sound also indicated exposure to petrogenic hydrocarbons.

A preliminary report of results has been prepared for this study but comprehensive data synthesis and analysis have not been completed. The preparation of a final report will be essential for understanding the injuries the spill caused to bald eagles. If this information is not clearly and completely available to those responsible for restoration, it will not be possible to adequately address the restoration needs of the resource.

BUDGET (\$K)

Salaries	\$	37.2
Travel		5.0
Contractual		12.0
Commodities		0.0
Equipment		0.0
Other Non-Contractual		0.0
Subtotal		<hr/> \$ 54.2
General Administration		6.4
Total		<hr/> \$ 60.6