BIRD STUDY NUMBER 3

Study Title: Population Surveys of Seabird Colonies in the Spill Area (Murres)

Lead Agency: USFWS

PROJECT JUSTIFICATION

Following the Exxon Valdez oil spill, seabird colonies in Prince William Sound and other areas westward along the spill trajectory were surveyed to determine the immediate effects of the spill. Cliff-nesting species such as the black-legged kittiwake and common and thick-billed murres were the primary emphasis of the 1989-90 censuses. Timing of egg laying and productivity were also noted for each of these species. In 1990 and 1991, the major effort was placed on replicate counts of murres in those areas that showed the most drastic changes relative to historical data. Study objectives included comparison of pre- and post-spill numbers of breeding colony seabirds within the oiled area and comparison of reproductive chronology and productivity for murres in oiled areas.

As the oil exited Prince William Sound, it passed through areas where large rafts of breeding age murres were congregating around major colonies in preparation for the nesting season. The resulting mortality included an estimated 198,000 adult breeding birds, representing 60 to 70 percent of the total breeding population of certain major colonies. Extrapolating to include mortality of non-breeders, mortality is estimated to be as high as 300,000 murres. This loss resulted in a major disruption of breeding behavior and phenology resulting in reproductive failure for 1989-91. Significant decreases in the number of murres at nesting colonies in the Exxon Valdez oil spill area were noted in 1989-91 surveys. Murres at all sites associated with oil had either low or no success in producing chicks with either very late egg laying or no egg laying at all in 1989-91.

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 murres, particularly murres breeding in the Exxon Valdez oil spill zone. 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	$ 56.3	
Travel	1.6	
Contractual	1.0	
Commodities	8.3	
Equipment	0.0	
Other Non-Contractual		0.0
Subtotal	$ 67.2	
General Administration	8.5	
Total	$ 75.7	