

INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 2000	Park: Glacier Bay NP & PRES
Principal Investigator: Philip N. Hooge	Office Phone: (907) 697-2367
	Email: Philip_hooge@usgs.gov
Address: Glacier Bay Field Station, P.O. Box 140, Gustavus, Alaska 99826	Office Fax: (907) 697-2654
Additional investigator or key field assistants(first name, last name, office phone, office email)	
Name: Elizabeth Ross Hooge Phone: (907) 697-2644 Email:	
Permit #: N/A	
Park-assigned Study Id.#: unknown	
Study Title: Fjord oceanographic survey and monitoring of Glacier Bay, Alaska.	
Permit Start Date: Jan 01, 1990	Permit End Date: Jan 01, 1990
Study Start Date: Jan 01, 1990	Study End Date: Jan 01, 1990
Study Status: Continuing	
Activity Type: Monitoring	
Objectives: <p>This project involves the monitoring of within and between year oceanographic patterns along the glacial chronosequence in Glacier Bay, Alaska. Glacier Bay exhibits large spatial and temporal differences in oceanographic patterns due to complex fjord and estuarine processes the recent history of glaciation, and large numbers of tidewater glaciers. A lack of understanding of the natural variation in this system make the elucidation of anthropogenic changes problematic and fraught with controversy.</p>	
Findings and Status: <p>This was the eighth year of a continuing study to monitor oceanographic patterns in Glacier Bay. This year marked a significant advance in the analysis of this long term study with the production of an extensive report on the last eight years of efforts, a detailed monitoring handbook, and a two-CDROM data set of all data integrated into a user-friendly GIS. In addition, a software program was created (Oceanographic Analyst) to allow the analysis and visualization of 3 and 4 dimensional oceanographic data sets within a 2D GIS. Field efforts continued this year with eight surveys of twenty-four stations. A profile with salinity, temperature, primary productivity, (chlorophyll a concentration), light penetration, and turbidity was taken at one meter intervals at each site. There were several major findings this year, changing the paradigm of oceanographic dynamics in Glacier Bay, these included: deep water renewal occurring throughout the year, that Glacier Bay is not a traditional estuary but instead is a tidally mixed estuary, that there is a mid-bay front creating conditions for extremely high primary productivity which was observed to continue throughout the spring, and that temperatures have increased since the 1960s which may explain the lowered salinity and some of the major differences seen in this study.</p> <p>Reports Produced:</p> <ol style="list-style-type: none"> 1)Fjord Oceanographic Processes in Glacier Bay 2)Fjord Oceanographic Monitoring Handbook: Glacier Bay 3)Glacier Bay Oceanography CDROM 	

4)The Oceanographic Analyst Software CDROM	
For this study, where one or more specimens collected and removed from the park but not destroyed during analyses? No	
Funding provided this reporting year by NPS: 52000	Funding provided this reporting year by other sources: 40000
Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college	
Full name of college or university: N/A	Annual funding provided by NPS to university or college this reporting year: 0
<p>Paperwork Reduction Act Statement: A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information form is estimated to average 1.38 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms. Direct comments regarding this burden estimate or any aspect of this form to Dr. John G. Dennis, Natural Resources (3130 MIB), National Park Service, 1849 C Street, N.W., Washington, DC 20240.</p> <p>Privacy Act Notice: Scientific research, education and collecting activities within units of the National Park System that may impact parks invoke a permitting and reporting requirement per regulations at 36 CFR 1.6 (Permits), 36 CFR 2.1 (Preservation of Natural, Cultural and Archeological Resources), and 36 CFR 2.5 (Research Specimens). The National Park Service collects information about permit applicants and permittees to administer and document research, collecting, and reporting activities within parks. The information disclosed on this form is required and may result in denial of permit applications if not provided.</p>	