19.06.02

FY 99 Final Work Plan

Approved DPDs and Budgets

19.6.2

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178

MEMORANDUM

TO: Restoration Work Force

FROM: Sandra Schubert
Project Coordinator

RE: Copies of FY 99 DPDs and Budgets

DATE: May 3, 1999

Attached for your binders are the FY 99 DPDs and budgets approved by the Trustee Council since August 1998, as listed below. This includes funds for Project 99291 approved in September, the deferred projects approved in December, and additional funds for Project 99250 approved in January.

99052B	TEK	Replacement budget
99131	Clam restoration	DPD and budget
99250	Project management (ADEC)	Additional funds (memo)
99252	Rockfish and pollock genetics	DPD and budget
99263	Port Graham stream restoration	DPD and budget
99289	Black oystercatcher	DPD and budget
99291	Chenega shoreline oiling reduction	DPD and budget
99329	Pink salmon synthesis	Additional budget pages
99361	Graphical techniques for SEA	DPD and budget
99379	P450 in fishes	DPD and budget
99381	Seabird colonies in northeastern PWS	DPD and budget
99393	Food webs	DPD and budget
99401	Spot shrimp	DPD and budget
99405	Port Graham hatchery	DPD and budget
99434	East Amatuli Island remote video link	DPD and budget
99459	Residual oiling in Gulf of Alaska	DPD and budget
99466	Barrow's goldeneyes	DPD and budget
99470	10 Year Symposium	Additional funds (memo & budget)

New index sheets are also attached.

Exxon Valdez Oil Spill Trustee Council

645 G Street, Suite 401, Anchorage, AK 99501-3451 907/278-8012 fax:907/276-7178

MEMORANDUM

TO: Agency Liaisons and Other Staff

FROM: Sandra Schubert
Project Coordinator

RE: Attached Binders of FY 99 DPDs and Budgets

DATE: October 29, 1998

The attached binders contain the Detailed Project Descriptions and budgets for projects approved by the Trustee Council on August 13, 1998. Following the Council's action on deferred projects (tentatively scheduled for December 15, 1998), you will be provided copies of any additional approved DPDs and budgets .

FY 99 WORK PLAN - INDEX OF DETAILED PROJECT DESCRIPTIONS

FY 99 WORK PLAN - INDEX OF DETAILED PROJECT DESCRIPTIONS

FY 99 WORK PLAN - INDEX OF DETAILED PROJECT DESCRIPTIONS

FY 99 WORK PLAN - INDEX OF DETAILED PROJECT DESCRIPTIONS

FY 99 WORK PLAN - INDEX OF DETAILED BUDGETS

FY 99 WORK PLAN - INDEX OF DETAILED BUDGETS

FY 99 WORK PLAN - INDEX OF DETAILED BUDGETS

FY 99 WORK PLAN - INDEX OF DETAILED BUDGETS

Approved TC 8-13-98

Archaeological Index Site Monitoring

Project Number:	99007A
Restoration Category:	Monitoring
Proposer:	ADNR- Office of History and Archaeology
Lead Trustee Agency:	ADNR
Cooperating Agencies:	DOI-FWS, DOI-NPS, USFS
Alaska SeaLife Center:	No
Duration:	5th-year. 10-year project
Cost FY 99:	$151,500
Cost FY 00:	$136,300
Cost FY 01:	$151,500
Cost FY 02:	$136,300
Geographic Area:	Prince Willam Sound, Kenai Peninsula, Kodiak Island
Injured Resource:	Archaeological Resources

ABSTRACT

Monitoring of archaeological sites on public land injured by vandalism and oiling will concentrate on a sample of index sites in the three regions of the spill. Oiled sites will be tested for re-introduced oil. Scattered instances of vandalism continue and monitoring continues with return to sites initially identified but not recently monitored.

INTRODUCTION

Damage to archaeological sites as a result of cleanup activities after the Exxon Valdez Oil Spill has been amply documented in damage assessment studies performed since the spill. Damage from vandals has continued to be documented at several sites on public lands during the past several seasons. Although damage from vandals at other sites has not been documented, they are still active in the region and their level of depredations needs to be monitored. Monitoring of damaged sites as a gauge of vandal activities in the spill area was identified as a primary strategy for site restoration during 1995 and is being continued to provide a long term assessment of the problem. A consensus was reached among agency archaeologists and concurred with by the peer reviewer that the most efficient way to monitor vandalized sites would be to select "index" damaged sites to provide an indication of the level of vandal activity in the spill area.

The archaeological peer reviewer for the Trustee Council recommended during the 1995 science workshop that monitoring continue at oiled sites to check for new movement of buried oil into site deposits. His concern was that subsurface oil would move into archaeological deposits and compromise possible data recovery. That recommendation continues to guide field work proposed during the 1999 field season.

Monitoring of archaeological sites injured by the spill or spill related activities will target a small number of sites on public lands which are determined to represent those that are most vulnerable to looting or oiling. Those index sites will serve as a gauge for levels of vandalism in the spill area. Index sites oiled during the early time immediately after the spill in March 1989 were monitored during 1995, 1997, and will be returned to during 1999. Sites in Prince William Sound will include SEW-469 and SEW-431. Outer Kenai Peninsula sites are SEL-178 and SEL-215. In the Kodiak Island area sites AFG-098, AFG-081, and AFG-046 will be visited by the State. The U.S. Fish and Wildlife Service will re-visit KOD-171, and visit AFG-098, AFG-099, and AFG-100.

NEED FOR THE PROJECT

A. Statement of Problem

Sites monitored under project 99007A are index archaeological sites thought to be representative of archaeological sites on the public lands in the spill area which have been oiled or are being vandalized. Some sites were oiled during the spill and are being monitored to check for recent movement of subsurface oil into site deposits.

Vandalism during cleanup appears to have been associated with people placed near sites while living on chartered boats. Circumstantial evidence indicates that some crew members, many of whom are residents of coastal communities, were involved in looting of sites. Agency

resource managers fear that looting associated with cleanup continued on and spread to other sites of the area.

Oil was found in beach sediments at several of the sites selected as index localities although none was initially documented in site deposits. A goal of this project is to monitor those sites to detect movement of the persistent oil into cultural deposits from the surrounding sediments.

B. Rationale

Loss of sites to vandals and pollution of sites from remaining oil removes the ability of archaeologists to recover data about the prehistory from those sites. The number of sites in the area is finite and will not increase. Reasonable efforts must be made to protect the cultural heritage data base from degradation. Sites in the area continue to be lost to erosion. making loss from this human degradation more critical.

C. Location

The project occurs in Prince William Sound, on the outer coast of the Kenai Peninsula, and in the Kodiak Island archipelago. Most sites are located in very remote areas.

COMMUNITY INVOLVEMENT

The sites being monitored under this project are remote. Because of the remoteness, no direct community involvement is anticipated.

PROJECT DESIGN

A. Objectives

The overall intent of the archaeological site monitoring program is to maintain a current assessment of the status of vandalized sites in the oil spill area and sites oiled during the spill. Knowledge of continuing and current site status is required to protect the sites from degradation. The objectives of the FY97 project are:

1. Monitor vandalized sites to identify continuing vandal activity in order to protect the sites. Information about index sites will be projected for management planning to the larger inventory of sites in the spill area.
2. Monitor sites contaminated by oil during the Exxon Valdez Oil Spill to identify any encroachment of subsurface oil into the cultural deposits from surrounding sediments.

The intent of the project at its conclusion is to have maintained a presence at the vandalized sites for a long enough period of time to gauge levels of vandalism and discourage that activity by our presence. The long range intent by FY2004 is to reduce that activity to zero.

Oiled sites will be considered restored when they have remained oil free for the life of the project. Oil in surrounding sediments will be considered stable or immobile by that time.

B. Methods

A strategy was identified during the 1994 restoration workshop of designating index sites vulnerable to looting which will be monitored bi-annually as a check over a broader area. The second group of sites may vary over time in order to maintain flexible response to new information such as fresh reports of vandalism or new findings on patterns of looting. The second group of sites provides a cross-check to monitoring data collected at the index sites. Focusing annual monitoring on 4 index sites and using a 2-year monitoring schedule on the additional 4 sites, expenditures will be significantly reduced while maintaining continuity of tracking levels of vandalism over the years. Vulnerability to looting will be the primary criteria of selection with managerial jurisdiction a secondary concern. Sites which were oiled will be monitored for oil so that behavior and effect of oiling can be observed over the long term in archaeological deposits.

Testing for presence of oil in site sediments will be done with the HNU-Hanby field test kit which can identify the presence of petroleum hydrocarbons and give an estimate of the relative concentration of the contaminants in the soil. Once the field tests show positive for oil, plans will be made to obtain funding so that the Auke Bay lab can send personnel to collect suitable samples for identifying the source of the oil and more accurately determine the amount present. This procedure was suggested by Auke Bay lab representatives at the 1995 workplan session so that suitable samples could be properly collected and processed.

Documentation of site status at the localities monitored for vandalism will include re-locating previously established reference points and referring all observations to those points. Field maps will be drawn or surveyed as appropriate. Photo and video documentation will be referenced to datum points and will duplicate earlier perspectives as closely as possible. Test localities will be mapped in reference to site reference points.

SEW-469 This site will be re-visited in 1999 to check for signs of vandalism. The location of vandal activity documented during 1990 will be re-examined and photographed with reference to established photo points.

SEW-431 This cave site reportedly has remains eroding out and is highly vulnerable to vandal damage. It was reported during the damage assessment phase of the oil spill and will be documented with mapping and photography.

SEL-188 The National Park Service will return to this site to sample current status of oiled beach sediments. During 1995 oil identified as from the *Exxon Valdez* was present on that beach. The beach will also be examined for any evidence for vandal disturbance of exposed artifacts.

SEL-178 The Port Dick Cabin Site. SEL-178 will be visited to monitor vandal damage to the site. During 1995, damage to a previously undocumented part of the site deposits was noted. Status of that damage will be documented with maps and photography. Areas of artifact exposure in other parts of the site, documented during 1991 will be re-checked and re-documented.

AFG-046 Erosion and vandal collecting at this site continues and this site will be visited during 1999 to map the current position of the erosional scarp and collect any displaced artifacts.

AFG-081 The AFG-081 will be re-visited during 1999 to monitor the location of 1991 vandalism. The damage was restored during 1994 by covering the area with fill and logs. The area was re-damaged during 1995 and replacement of the restorative cover will be a goal of a site visit during 1999. Site status will be documented through photography.

AFG-098 The site was visited during 1995 to document reported damage from the prior winter. Sediment samples from the intertidal zone tested negative for presence of petroleum hydrocarbons. The site will be re-visited during 1999 to monitor site condition through photography and mapping of any damage found.

KOD-098
KOD-099
KOD-100 These three sites have been subjected to vandalism and will be visited to document current site status. Vandal damage will be documented with maps and photographs.

KOD-171 The Chief Cove Site will be re-visited to monitor evidence for continuing disturbance of the midden. Slumpage in the midden deposits was documented during 1995 however the agent of disturbance was not established. Findings will be mapped on the existing map which is based on the field map created by the Dekin, et al., damage assessment study done in 1991.

C. Cooperating Agencies, Contracts, and Other Agency Assistance

Cooperating agencies under this project are the DOI-U.S. Fish and Wildlife Service, DOI-National Park Service, and the USDA- Forest Service. Each of the federal agencies has management responsibilities for resources on lands assigned to them, including cultural resources. Each of those agencies has on staff qualified archaeologists who will conduct archaeological activities on agency lands. The Alaska Department of Natural Resources is designated the lead agency only to coordinate all agency activities and oversee compilation of results. Each agency will oversee its own budget and fieldwork.

No major contracts are anticipated by any agency for this project. The only contractual activity will be aircraft or boat charters processed by individual agencies on a per hour or day basis. Normal agency contracting procedures will be followed. The same will be true when contracting for radiocarbon dating or sediment analysis services. Radiocarbon dating will be done in commercial facilities, none of which exist within Alaska.

SCHEDULE

A. Measurable Project Tasks for FY 99 (October 1, 1998 - September 30, 1999)

October 1. 1998 - December 31, 1998:	Complete requirements for NEPA requirements and prepare draft report for FY 98 field activities.
April 15, 1999:	Submit annual report of FY 98 activities for peer and Chief Scientist review.
May 1, 1999 - June 1, 1999:	Finalize arrangements for fieldwork; make changes in FY 98 report for submission to OSPIC.
June 1, 1999 - September 30, 1999:	Complete fieldwork and followup office work. Submit charcoal and sediment samples for analysis.

B. Completion Date

The archaeological index site monitoring has been scheduled for completion in FY 2004. That is the time span which agency experience suggests a pattern of vandal activity will be demonstrated and EVOS related. Findings of negative results at specific sites for a period of at least three years will delete that index site from further monitoring. A final report closing out the project will be written during FY 2004 unless dictated sooner.

PUBLICATIONS AND REPORTS

No formal publications are anticipated for this monitoring project. An annual report will be produced by April 15, 1999 as dictated in the submittal instructions for project proposals. At the end of the continuing project, a final closeout report will be prepared.

PROFESSIONAL CONFERENCES

No professional conferences will be attended nor papers presented in respect to this monitoring project.

NORMAL AGENCY MANAGEMENT

Federal and state laws assign general responsibility for dealing with cultural resource matters

to the various land managing agencies. None of the agencies cooperating in this monitoring project has ever funded a program of site monitoring or data collection at the sites identified in the project proposal. The sites identified have been specifically linked to the *Exxon Valdez* Oil Spill which clearly is outside the normal agency responsibility. The duration of this monitoring project has a estimated length of ten years or a period of sustained negative finding of damages.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

Because monitoring of sites are for specific locations for short periods, chances of coordinating travel or facilities with other restoration projects is very limited. Where possible, sharing of boat and airplane charters will be coordinated with other restoration projects within agencies.

EXPLANATION OF CHANGES IN CONTINUING PROJECTS

No major changes in methodology have been proposed from the detailed project descriptions of prior years other than sites monitored. Part of the originally established procedure of using "index" sites was that monitored sites would vary between years to make coverage more efficient. That variation is reflected in the sites selected for FY 99.

PROPOSED PRINCIPAL INVESTIGATOR

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1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Approved TC 8-13-98

Budget Category:	Authorized FY 1998	Proposed FY 1999	PROPOSED FY 1999 TRUSTEE AGENCIES TOTALS					
			ADEC	ADF&G	ADNR	USFS	DOI	NOAA
					$91.8	$28.0	$39.7	
Personnel	$84.0	$86.5						
Travel	$19.1	$20.1						
Contractual	$20.3	$24.6						
Commodities	$3.4	$5.6						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$126.8	$136.8		Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		
General Administration	$14.0	$14.7						
Project Total	$140.8	$151.5		$136.3	$151.5	$136.3		
Full-time Equivalents (FTE)	1.3	1.2						
			Dollar amounts are shown in thousands of dollars.					
Other Resources	$0.0	$0.0		$0.0	$0.0	$0.0		

Comments: This is a continuation of projects 95007A, 96007A, 97007A, and 98007A.

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Lead Agency: AK Department of Natural Resources

FORM 2A
MULTI-TRUSTEE
AGENCY
SUMMARY

4/10/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel	$55.5	$56.4
Travel	$9.2	$10.0
Contractual	$12.4	$14.0
Commodities	$2.0	$2.0
Equipment		$0.0
Subtotal	$79.1	$82.4
General Administration	$9.2	$9.4
Project Total	$88.3	$91.8
Full-time Equivalents (FTE)	0.8	0.8

LONG RANGE FUNDING REQUIREMENTS

	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		
	$91.8	$91.8	$91.8		

Dollar amounts are shown in thousands of dollars.

Other Resources

Comments: Project is a continuation of 95007A, 96007A, 97007A, and 98007A

1999

Prepared: 2 of 21

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: AK Department of Natural Resources

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/10/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FY 1999
	Position Description					
Douglas R. Reger	Archaeologist II	18M	6.0	6.6		39.6
J. David McMahan	Archeologist I	16K	3.0	5.6		16.8
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		9.0	12.2	0.0	
					Personnel Total	$56.4

Travel Costs:	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FY 1999
Travel to Homer to monitor sites	0.2	4	23	0.115	3.4
Travel to Kodiak to monitor sites	0.5	4	40	0.115	6.6
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$10.0

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: AK Department of Natural Resources

FORM 3B
Personnel
& Travel
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FY 1999
Air Charter (Kodiak 22 hours, Homer 14 hours @ $285/hour)	10.3
Radio carbon dating, 4 samples @ $300 /sample	1.2
Film processing	1.5
Report duplication	1.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$14.0

Commodities Costs:	Proposed
Description	FY 1999
Field supplies	1.0
Office supplies	1.0
Commodities Total	$2.0

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: AK Department of Natural Resources

FORM 3B
Contractual & Commodities
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: AK Department of Natural Resources

FORM 3B
Equipment
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel	$15.0	$9.6
Travel	$4.3	$3.1
Contractual	$2.8	$2.2
Commodities		$0.0
Equipment		$0.0
Subtotal	$22.1	$14.9
General Administration	$2.4	$1.6
Project Total	$24.5	$16.5
Full-time Equivalents (FTE)	0.3	0.1
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

Estimated FY 2000	Estimated FY 2001	Estimated FY 2002
$16.5	$16.5	$16.5

Dollar amounts are shown in thousands of dollars.

Comments: Project is continuation of 95007A, 96007A, 97007A, 98007A

1999

Prepared: 6 of 21

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: DOI-Fish and Wildlife

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/10/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
Charles E. Diters	Archaeologist	GS-12	1.6	6.0		9.6
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		1.6	6.0	0.0	
					Personnel Total	$9.6

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
Travel to Kodiak to monitor sites	0.4	2	10	0.225	3.1
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$3.1

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: DOI-Fish and Wildlife

FORM 3B
Personnel
& Travel
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed FY 1999
Description	
Air Charter (Kodiak, 3.5 hours @ $285 /hour)	1.0
Film processing	0.5
Radiocarbon dating (4 samples @ $275)	0.7
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$2.2

Commodities Costs:	Proposed FY 1999
Description	
Commodities Total	$0.0

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: DOI-Fish and Wildlife

FORM 3B
Contractual & Commodities DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: DOI-Fish and Wildlife Service

FORM 3B
Equipment
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel	$0.0	$7.0
Travel	$0.0	$1.7
Contractual	$0.0	$3.3
Commodities	$0.0	$1.9
Equipment	$0.0	$0.0
Subtotal	$0.0	$13.9
General Administration	$0.0	$1.3
Project Total	$0.0	$15.2
Full-time Equivalents (FTE)		0.1
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

Estimated FY 2000	Estimated FY 2001	Estimated FY 2002
$0.0	$15.2	$0.0

Dollar amounts are shown in thousands of dollars.

Comments: Project is continuation of 95007A, 96007A, 97007A, 98007A.

1999

Prepared: 10 of 21

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: DOI-National Park Service

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/10/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
	Archaeologist	GS-13	0.7	6.3		4.4
	Archaeologist	GS-11	0.5	5.1		2.6
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		1.2	11.4	0.0	
					Personnel Total	$7.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
Travel to Seward to monitor site	0.150	2	6	0.225	1.7
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$1.7

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: DOI-National Park Service

FORM 3B
Personnel
& Travel
DETAIL

4/10/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FY 1999
Air Charter, one helicopter trip	1.0
Film processing	1.3
Photo printing	1.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$3.3

Commodities Costs:	Proposed
Description	FY 1999
Office supplies	1.0
Field supplies	0.9
Commodities Total	$1.9

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: DOI-National Park Service

FORM 3B
Contractual & Commodities DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: DOI-National Park Service

FORM 3B
Equipment
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel	$13.5	$13.5
Travel	$5.6	$5.3
Contractual	$5.1	$5.1
Commodities	$1.4	$1.7
Equipment		$0.0
Subtotal	$25.6	$25.6
General Administration	$2.4	$2.4
Project Total	$28.0	$28.0
Full-time Equivalents (FTE)	0.2	0.2
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

Estimated FY 2000	Estimated FY 2001	Estimated FY 2002
$28.0	$28.0	$28.0

Dollar amounts are shown in thousands of dollars.

Comments: Project is continuation of 95007A, 96007A, 97007A, 98007A

1999

Prepared: 14 of 21

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: USDA Forest Service

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/10/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
L. Yarborough	Archaeologist	GS-11	2.6	5.2		13.5
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		2.6	5.2	0.0	
					Personnel Total	$13.5

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
Travel to Prince William Sound to monitor sites	0.3	3	22	0.2	5.3
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$5.3

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: USDA-Forest Service

FORM 3B
Personnel
& Travel
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FY 1999
Air charter (10 hours @ $275/ hour)	2.8
Film processing	0.5
Drafting support	1.8
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$5.1

Commodities Costs:	Proposed
Description	FY 1999
Office supplies	0.7
Field supplies	1.0
Commodities Total	$1.7

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: USDA-Forest Service

FORM 3B
Contractual & Commodities DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99007A
Project Title: Archaeological Index Site Monitoring
Agency: USDA-Forest Service

FORM 3B
Equipment
DETAIL

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Approved TC 8-13-98

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel		$0.0
Travel		$0.0
Contractual		$79.8
Commodities		$0.0
Equipment		$0.0
Subtotal		$79.8
General Administration		$5.6
Project Total		$85.4
Full-time Equivalents (FTE)		0.0
Other Resources		

LONG RANGE FUNDING REQUIREMENTS					
	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		

Dollar amounts are shown in thousands of dollars.

FY 99

Project Number: 99012
Project Title: Comprehensive Killer Whale Investigation in PWS
Agency: NOAA

FORM 3A
TRUSTEE
AGENCY
SUMMARY

Approved TC 8-13-98

Comprehensive Killer Whale Investigation in Prince William Sound

Project Number:	99012A-BAA
Restoration Category:	Research
Proposer:	C. Matkin/North Gulf Oceanic Society
Lead Trustee Agency:	NOAA
Cooperating Agencies:	None
Alaska SeaLife Center:	No
New or Continued:	Cont'd
Duration:	7th yr. 9 yr. project
Cost FY 99:	$85.4
Cost FY 2000:	
Cost FY 01:	
Cost FY 02:	
Geographic Area:	Prince William Sound, Kenai Fjords
Injured Resource/Service:	Killer whales

ABSTRACT

This project will continue the monitoring of the damaged AB pod and other Prince William Sound/Kenai Fjords killer whales that has occurred on a yearly basis since 1984. Methods include the photo identification of individual whales and acoustic monitoring with remote and vessel-based hydrophone systems. The project will finalize interpretation and provide for publication of the results of a multi-year examination of killer whale population biology, genetics, acoustics, trophic interactions, spatial and temporal distribution patterns, and contaminant accumulation.

INTRODUCTION

This project is a continuation of the reduced annual killer whale monitoring program. Killer whales were monitored under EVOS Trustee Council funding in 1989, 1990, and 1991 (damage assessment) and in 1993 and 1995 (restoration monitoring) with a reduced annual monitoring program initiated in 1996.In addition this project provides for final data analysis and publication of aspects of the comprehensive killer whale investigation initiated in FY95 and continued in FY96, FY97, and FY98.

On March 31, 1989 AB pod was observed in oil sheens and six of the 36 pod members were missing. A total of 14 whales were lost from resident AB pod in the two years following the *Exxon Valdez* oil spill and there was no recruitment into the pod during those years. Since that time the social structure within AB pod has shown signs of deterioration. Maternal groups have traveled independently or with other pods, and pod members have not consistently traveled with closest relatives. Although 4 calves were recruited during the period 1992-1994, there were 5 additional mortalities in 1994. There has been a net increase of two indivduals since 1995 and the pod currently contains 24 individuals. The rate of mortality observed in this pod after the oil spill far exceeds that recorded for other resident pods observed in Prince William Sound over the past 13 years or for 19 pods in British Columbia over the past 20 years.

Nine whales from the transient AT1 group have not been observed since 1989. Two additional AT1 whales have not been sighted for five years or more. From genetic and photographic data from beached whales, two of these eleven whales are known to be dead. However transient killer whale social structure is not fully understood and we cannot be certain that the other missing AT1 whales are dead. Statistical analysis strongly suggests that they have either died or permanantly emigrated from the area.

This project will continue the monitoring program necessary to map the changes (recovery or non-recovery) of Prince William Sound killer whales on a reduced annual basis. Behavioral observations and spatial and temporal data will be collected opportunistically in the course of photographic and acoustic monitoring, but there will be no new analysis of this data.

Fourteen years of systematic data collected under public and private funding have been placed in a specially designed GIS system at the Prince William Sound Science Center. The database contains 713 records of encounters with killer whales in and near Prince William Sound. Among these are 197 encounters with transient-type whales. Analyses have found large-scale differences in spatial distribuition patterns between resient and transient whales over time. Changes in transient whale distributions have been examined in relation to changes harbor seal populations. Detailed distribution patterns in space and for both residents and transients have been examined potential critical habitats are being described in FY98.

FY98 will be the final year for collection of killer whale biopsy samples and observation and collection of killer whale prey remains. We have obtained solid results from mitochondrial DNA analysis of Prince William Sound killer whales, although FY98 fieldwork will attempt to enlarge sample size from some groups. For this reason we have delayed publication of mtDNA results until FY98 samples are analyzed and seek funding in FY99 for final statistical analysis and publication of results. Current results show fixed differences in mitochondrial DNA between of the resident and transient groups and between three transient and two resident populations. Because mitochondrial DNA is maternally inherited, it accurately reflects patterns of female dispersal. Thus, it is commonly used as a first step in population analyses. It does not, however, shed light on male dispersal. Male dispersal, genetic divergence and variation can be assessed directly by analysis of nuclear DNA, thus we combined both mitochondrial and nuclear analyses. Microsattelite markers in nuclear DNA were developed in FY97 are being used in FY98 to investigate a wide variety of population properties, including mating systems, inbreeding levels, effective population size, and the extent of population subdivision (Queller et al.

1993). The uniqueness of pods or groups (particularly AB pod and the AT1 population) are being tested and the potential vulnerability of populations to extinction from random causes or from increases in mortality associated with human activity examined. In FY99 request funds for completion and publication of this extensive and groundbreaking analysis.

There is worldwide concern that specific PCB and dioxin congeners may have negative effects on reproduction in mammals. The recovery of killer whales in Prince William Sound and the long-term health of the population is dependent on unimpeded reproductive processes. In FY 97 we determined contaminant levels in both resident and transient killer whales, and found much higher levels in the transient population. Contaminants seem to passed from mother to offspring via lactation and levels follow consistent patterns within genealogies. Samples were obtained from individually identified living whales that can be resampled to assess future changes. The ability to sample and potentially resample specific known individuals and their known kin is a unique aspect of this project. FY98 is the final year of field sampling and analysis. Final publication of results will occur in FY99. All analysis of tissue has been provided by the NMFS/NOAA Environmental Contaminant Laboratory, Seattle, Washington.

In FY97 we initiated a remote hydrophone and acoustic analysis element to this project. Initial analysis and separation of pods was competed and monitoring of a remote hydrophone in lower Knight Island Passage is currently in process. An additional hydrophone will be established in Resurrection Bay in FY98 in cooperation with the Alaska Sea Life Center and call analysis and pod separations continued. The current setup has established winter use of the southwestern Sound by acoustically identifiable resident and transient killer whales The recordings also detailed residency of humpback whales in the area and included the recordings of humpback whale song development in Prince William Sound.

Final analysis of pod specific dialects will be completed in FY99 to clearly establish pod identities of whales in the recordings (NGOS is using a 14 year database of killer whale recordings to establish these dialects). Recordings will be analyzed to document which specific killer whale pods and groups were present throughout the year, and specifically, when AB pod was present. With cooperation of the Alaska Sea Life Center another remote hydrophone system will be established in either outer Resurrection Bay or southwestern Prince William Sound, based on results of the systems operating in FY98. The long-term goal of this aspect of project is to determine the year-round habitat use of southwestern Prince William Sound and Kenai Fjords by AB pod and other killer whale pods and provide an additional, innovative, and cost effective tool for monitoring killer whales year round. Also a hydrophone in Resurrection Bay has the added benefit of providing a continous live feed to the Alaska Sea Life Center for education of visitors and residents.

NEED FOR THE PROJECT

A. Statement of Problem

The AB pod of killer whales was injured by the EVOS. Although it had shown signs of recovery from 1991 to 1993, mortalities in 1994/95 reduced the number of surviving AB pod whales to 22. Since 1995 there has been a net gain of two individuals but recovery is still uncertain. At least 11 of the AT1 group of transient killer whales have either died or left the Sound since 1989. This project will continue to monitor the status of AB pod and the AT1 group.

The behavior of killer whales in Prince William Sound has changed since the spill. Mortalities following the spill have led to additional mortalities, a deterioration in AB pod social structure, and a splitting of the pod. Despite considerable effort, re-sightings of the

AT1 group have declined and fewer individuals are seen when members of this transient group group are located.

These patterns reflect changes in killer whale social behavior and distribution - the basic patterns that mark normal use of their habitats in Prince William Sound. In recent years resident killer whales have been sighted much more frequently in the Kenai Fjords region. Our analyses found continuing declines in use by both resident pods and the AT1 transient groups in Prince William Sound (FY97 annual report). As yet no increase has been detected in sightings of other transient groups, suggesting that other transients are not increasing their use of the Sound as use by the AT1 group declines. Further, the occurrence of harbor seals in transient whale's diet may be declining (FY96 annual report). It is not clear whether such changes can be related to changes in the Sound ecosystem (e.g. the decline in harbor seals, changes in hatchery production, changes in fish species composition).

Ecological studies on killer whales emphasize the need to identify and protect critical feeding, transit, or social areas and rubbing beaches used by these animals (Matkin & Saulitis 1994, Heimlich-Boran 1988). Work attempting to identify these areas is being completed in FY98.

Nuclear DNA analysis of the microsatellite regions of Prince William Sound's killer whales will help determine whether the surviving members of AB pod are closely related to other resident whales in the Sound. It will detail aspects of the resident pod social structure and mating system. MtDNA analysis has demonstrated the genetic uniqueness of the AT1 group from residents as well as from other transients. Nuclear DNA analysis will clarify those differences. The loss of either AB pod or the AT1 group could represent a serious overall loss of genetic diversity.

Another gap in our understanding of killer whale behavior and ecology is the extent of their use of the Prince William Sound/Kenai Fjords region in the winter months. The remote hydrophone system is a cost-effective means of examining use by resident pods during the winter months. This could also provide an educational tool for the newy opened Alaska Sea Life Center and other institutions.

Some environmental contaminants have been linked to reproductive dysfunction in mammals. In FY98 we are completing our assessment of the levels of environmental contaminants in the killer whales particularly in the transient (marine mammal eating) killer whale populations which demonstrate little or no recruitment.

B. Rationale/Link to Restoration

Annual killer whale population monitoring will determine recovery status of AB pod and the AT1 transient group. The actual status of AB pod appears to be non-recovering at this time. Long term patterns will only be clarified by continued monitoring. A low level annual monitoring program was initiated in FY96 and is proposed to continue in FY99. A detailed summary of pod status was completed in FY97. Since all pods and whales are not observed in every year, annual monitoring will prevent extensive data gaps and allow certain determination of recruitment and mortalities in a much shorter time frame. An annual killer whale behavioral database of spanning 14 years now exists in a GIS format. It is accompanied by a photographic database the includes identiffications of all individuals from each frame of film for every encounter logged in the GIS system. Continuation of this approach will provide consistency in analysis and interpretation. Because killer whales are a long-lived species with low reproductive and mortality rates, this monitoring must be consistent and long-term to be meaningful.

The acoustic monitoring and final dialect analysis proposed here seeks to provide a cost-effective year- round extension of the monitoring program. We plan to work cooperatively with the Alaska Sea Life Center, Kenai Fjords National Park, and Port San Juan and Chenega Village residents. This will directly involve residents and visitors in the process of monitoring and restoration.

C. Location

This project is part of an ongoing killer whale research in Prince William Sound and the Kenai Fjords region, Alaska. The project involves the village of Chenega, Port San Juan Hatchery, the Alaska Sea Life Center, Kenai Fjords National Park, and other residents and visitors to the region. It operates cooperatively with the Kenai Fjords and Prince William Sound tourboat industry.

COMMUNITY INVOLVEMENT AND TRADITIONAL ECOLOGICAL KNOWLEDGE

There is great public concern and interest for killer whales in Prince William Sound and in Kenai Fjords. The rapidly expanding tourboat industry depends on a healthy killer whale population to attract and satisfy visitors and residents. We have been closely involved with tourboat and recreational operators and residents by exchanging sighting information on a daily basis and providing a catalogue of individual whales to enhance enjoyment of whale observation. We have begun an educational program to provide guidelines for operations of vessels around whales for both the public and commercial operators, concentrating on the Kenai Fjords region. Our presentation of research results in Cordova, Seward, Kodiak, Homer, Chenega and Anchorage will continue.

With our supervision, the residents of the spill area will be directly involved in the killer whale project by assisting in monitoring and maintaining a remote hydrophone system and participating in the data analysis. Chenega or Port San Juan residents will be contracted to maintain the system in Prince William Sound and Kenai Fjords National Park and the Alaska Scence Center will provide maintanance and monitoring in Resurrection Bay.

We continue to collect observations and stories from native residents and others that will provide background for interpretation of our findings and place the work in a historical and cultural context.

PROJECT DESIGN

A. Objectives

1. Continue photographic monitoring program and determine status of resident killer whale pods, particularly AB pod. Examine the demographics of this pod in relation to other resident killer whale pods.

2. Monitor the AT1 group of transient killer whales to determine if there is further emigration or mortality or if there are signs of recovery to pre-spill distribution and abundance.

3. Monitor year round movements of resident and transient killer whales using remote hydrophones in Resurection Bay and southwestern Prince William Sound.

4. Final analysis of calls and separation of pod dialects necessary for interpretation of remote hydrophone data. Prepare for publication.

5. Compare calls of Prince William Sound resident pods with those of British Columbia resident pods.

6. Examine the relationship between Prince William Sound killer whales and those genetically analyzed in a concurrent study in British Columbia, prepare for publication.

7. Write up and publish a determination of the extent of gene flow between a) the EVOS-impacted AB killer whale pod and other resident killer whales frequenting Prince William Sound, and b) between the declining AT1 assemblage of transient killer whales and other killer whales in Prince William Sound and the Gulf of Alaska

8. Write up and publish a description of the mating system of Prince William Sound killer whales.

B. Methods

Killer Whale Monitoring

The goal of this aspect of the study is the photoidentification of each individual in each pod/group, that regularly uses the Sound, particularly AB pod and the AT1 group. Knowledge of the demographics of all regularly sighted pods and groups may be necessary to meet new recovery definitions.

Thus, it is important that researchers maximize the time actually spent with killer whales (particularly AB pod) to insure thorough identification of all individuals. Methods proposed to obtain photographic data necessary to meet monitoring objectives will be similar to those used by the NGOS in Prince William Sound/Kenai Fjords for the past fourteen consecutive years. Searches for whales will not be made on random transects, but based on current and historical sighting information. In addition whales will be located by listening for killer whale calls with a directional hydrophone (calls can be heard up to 10 miles away), or by responding to VHF radio calls from other vessels reporting sightings of whales. We have developed network of cooperating vessel owners and tourboat operators that regularly report whale sightings. In addition requests for recent killer whale sightings will be made routinely on hailing Channel 16 VHF and working channel 77.

A vessel log and chart of the vessel track will kept for each day the research vessels operate. The elapsed time and distance traveled will be recorded and vessel track plotted. Record will be made of the time and location of all whale sightings and the weather and sea state noted at regular intervals (see attached data sheets).

Specifics of each encounter with killer whales will be recorded. The killer whale encounter data sheet developed in 1995 and specifically tailored to GIS data entry requirements will be used. Data recorded will include date, time, duration, and location of the encounter. Rolls of film exposed and the estimated number of whales photographed will also be recorded. A chart of the whales' trackline during the encounter will be completed and the distance traveled by the vessel with the whales will be calculated at the time of GIS input. General behavior of the whales (i.e. feeding, resting, traveling, socializing, milling) will be recorded by time and location.

Photographs for individual identification will be taken of the port side of each whale showing details of the dorsal fin and grey saddle patch. Photographs will be taken at no less than 1/1000 sec using Ilford HP5, a high speed black and white film, exposed at 1600 ASA. A Nikon 8008 or N70 autofocus camera with internal motor drive and a 300 mm f4.5 autofocus lens was used. When whales are encountered, researchers will systematically move from one subgroup (or individual) to the next keeping track of the whales photographed. If possible, individual whales will be photographed several times during each encounter to insure an adequate identification photograph. Whales will be followed until all whales are photographed or until weather and/or darkness makes photography impractical.

All photographic negatives will be examined under a Wild M5 stereomicroscope at 9.6 power. Identifiable individuals in each frame will be recorded. When identifications are not certain, they will not be included in the analysis. Unusual wounds or other injuries will be noted. Photographic negatives will be analyzed using a photographic database that spans twelve years. Identities of each whale that appears in every frame of usable film will be recorded and stored in VAX computer system. Final analysis and assessment will follow Matkin et al. (1994).

The primary vessel used to secure identification photographs will be a 27' diesel inboard/outboard powered vessel that can sleep two individuals (R.V. *Whale 2).* With sleeping accommodations and large fuel capacity, the R.V. *Whale 2* resupplies infrequently which greatly increases available time searching for or photographing whales.. This vessel will operate a total of 50 days, from early July through early September. From historical data these dates are judged to be to be the most likely time to encounter AB pod as well as many of the other resident pods that use the Sound. There will be some flexibility of schedule in response to sighting reports. The R.V. *Lucky Star* will also deliver fuel to designated locations and provide other logistical support for the operation of the R.V. *Whale 2.* The *Lucky Star* will operate a total of 3 days.

The report for the monitoring segment will include a summary of field effort, and summary of the pods and individuals encountered and a status report on AB pod and the AT1 group. Changes within AB pod will be examined with consideration for the age and sex structure of the pod and maternal groups within the pod. Frame by frame input of identification data from exposed film into VAX and IBM PC computer systems will occur and identifications tabulated by pod and by individual. Copies of killer whale encounter data and vessel logs will be made available to the EVOS Trustee Council and/or lead agency and this data will be archieved in the GIS database for potential future analysis. Frame by frame identification data will also be made available on disc. Copies of the GIS program and data base will also be made available by request to NGOS and the PWSSC.

Acoustic Monitoring

Pod specific dialects for resident killer whales have been determined from tape recordings made by several researchers in the Prince William Sound area and in Southeast Alaska during the spring and summer months of the years 1984 to 1997. Construction of a catalogue of pod specific dialects is ongoing and dependent on recordings that will be made during the FY98 field season. Specific calls from Prince William Sound transient (AT1 group) killer whales also have been catalogued (Saulitis 1993). A total of 8456 calls have been screened and digitized using a Kay Elemetrics Real Time Sound Spectrum Analyzer, Model 5500. Samples from this screening process were digitized using the Canary acoustic spectrum analysis software (The Cornell Bioacoustics Workstation). Calls from different killer whale pods and transient groups are being categorized using the same method used by John Ford in British Columbia, Canada. This process involves arbitrary acoustical identification paired with a visual and statistical comparison of sound spectra.

The final asssessment of repertoires of Prince WilliamSound killer whales will occur in FY99 and a paper readied for publication. Hopefully this will include the repertoires of the less frequently encountered pods from which we will attempt to obtain recordings from in FY98 and FY99. In addition, recordings from the remote hydrophone obtained in winter 1998-99 will be analyzed. The acoustic relationships between resident pods will be clarified and futher compared with genetic results. While similarities of mitochondrial DNA sequences or overall genetic similarity describes relatedness of pods within the past 10,000 to 20,000 years, dialects reflect the more redcent history of community divergence.

Because of movements of killer whales into the Kenai Fjords region in recent years, our second remote hydrophone will be placed in Resurrection Bay for FY98. An anchored and encased cable will run from the transmitter on shore to the hydrophone at a

depth of about 20 meters. The transmitter will be enclosed in a waterproof case and placed atop the bluff. It will be powered by deep cycle batteries stored in waterproof containers. A solar panel will charge batteries in summer months, in winter, National Park Service personnel will recharge and exchange batteries.

During summer months the hydrophones will be monitored from the R.V. *Whale 2* via broad band receiver as an aid in locating whales. During the summer and winter months in Kenai Fjords it will be monitored by the Alaska Sea Life Center and the National Park Service. It will be monitored in the Sound during winter months by Chuck Pratt and Sarah Mariner at Port San Juan Hatchery. The receivers will be connected to cassette recorders so that calls can be recorded. The receiver will be monitored on a regular scheduled basis and a log of operation maintained. The acoustic monitoring is projected to become a joint project with increasing involvement of the Alaska Sea Life Center and National Park Service with additional transmitters placed on the outer coast of Kenai Fjords region.

Genetic Analysis

In FY99 will we complete numerical and statistical analysis of the microsatellite DNA profiles of Prince William Sound killer whales, conduct a statistical comparison of allele frequencies between Prince William Sound populations of killer whales and killer whales biopsied off British Columbia, prepare our findings for publication, and submit them to refereed journals. Specific methods for each of the above objectives are listed below.

Objective 1 will be met by comparing microsatellite allele frequencies in both residents and transient from Prince William Sound to allele frequencies in resident and transients from British Columbia. Significant allele frequency differences between these regions would indicate that they are discrete in terms of both gene flow and emigration. A cline in allele frequencies would be suggestive of limited gene flow along the coast, and the absence of geographic structuring would indicate that substantial gene flow is occurring presently or has occurred recently. This analysis will compliment our mitochondrial DNA analysis (completed in FY97), which showed that females do not move permanently between populations, but which did not rule out inter-matings during temporary associations.

Objective 2 will be met by a statistical comparison of microsatellite allele frequencies in AB pod to other Prince William Sound resident pods, and in the AT1 transient group to the Gulf of Alaska transients, and AT1 transient assemblages. In the case of AB pod, microsatellite-based paternity exclusion tests will be used to determine the probable fathers of as many calves and juveniles as possible.

Objective 3 will be met by testing the following hypotheses:
(1) Resident killer whales do not move permanently between pods.
(2) Matings occur between and not within resident pods.

The first hypothesis predicts that pods consist of maternally-related individuals only, and will be tested by examining the pedigrees of well-sampled pods (AB, AE, AI, AK, AN) at seven independent microsatellite loci. Comparison of the genotypes of individuals at this combination of loci will provide a powerful test of immediate relatedness. The hypothesis will be refuted if pods include in their membership individuals that can be excluded, based on their genotypes, as immediate relatives of other pod members.

The second hypothesis predicts that offspring and their fathers will be found in different pods. The hypothesis will be considered refuted if microsatellite genotype comparisons exclude sampled males from other pods as potential fathers of the calves and juveniles in a given pod, while failing to exclude adult male pod members.

Sufficient DNA samples to meet these three objectives will havebeen collected by FY98 (however, additional opportunistic sampling to extend the mating system comparisons to more resident pods and to transients may be carried out). The laboratory component of the microsatellite analysis will be completed in FY98, and data analysis will be in progress.

Most equipment needed to complete the contracted field research will be provided by the North Gulf Oceanic Society, including binoculars, nets, directional hydrophones, photographic equipment and biopsy equipment. Additional remote hydrophones, transmitters, receivers, and recorders will be purchased with matching monies. Additional supplies and minor equipment will be purchased as necessary. Apple Macintosh and IBM compatible computers owned by NGOS as well and the GIS system available at the PWSSC will be used in data storage.

C. Contracts and Other Agency Assistance

The entire project will be completed under the auspices of the North Gulf Oceanic Society.. NGOS will provide a technician to enter data collected in 1999 into the GIS database using the menu interface provided by the Prince William Sound Science Center. Genetic analysis will be completed by Lance Barrett-Lennard of Pacific Ecological Services at the University of British Columbia. Acoustic analysis will be completed by Harold Jurk at the University of British Columbia. The NGOS will contract residents of Chenega Village or Port San Juan to monitor the remote hydrophone system during the October to May period. Contracts for vessel leases will be issued by the North Gulf Oceanic Society or the Society will use its own vessels for the project.

SCHEDULE

A. Measurable Project Tasks for FY99

Oct 1-30 1998: Summarize monitoring fieldwork for FY98. Input data into GIS system.

Oct. 1 - Dec. 31: Analysis and writeup of final report for Comprehensive Killer Whale Investgations.

Oct. 1 - Dec. 31: Analysis of photographs from 1998 fieldwork. Complete contaminant analysis of 1998 samples.

Oct. 1 - Dec. 31: Complete numerical and statistical analysis of pedigree and allele frequency data (begun in FY 98).

Oct. 1-Dec. 31: Acoustic analysis of killer whale calls from previous year.

Jan. 5, 1999: Draft final report for Comprehensive Killer Whale Investigations due.

Jan. 1 - July 31: Prepare and submit genetic papers.

Jan. 1 - July 31: Prepare and submit paper on acoustic separation of resident pods.

March 1 - April 15: Address review comments on draft FY98 final report and submit final report.

Aug. 1-Sept.30: Respond to reviewers comments on genetics papers and acoustic paper and revise as required.

October 1- March 30: Continue winter recordings from remote hydrophones.

July -September: Killer whale monitoring emphasis field work. Monitor hydrophone from research vessel as possible.

The R.V.*Whale 2* will operate for 50 days in July and August September. The primary function of this vessel will be killer whale photoidentification monitoring. This time period is generally a period of high encounter rate with AB pod and other resident pods. A portion of the operational expense will be funded by matching monies. A small percentage of this field time may be used in other months if sighting reports indicate it would be advantageous.

B. Project Milestones and Endpoints

The FY99 killer whale project will continue the reduced annual photoidentification monitoring program and the acoustic monitoring program initiated in FY1997. Future fieldwork will involve population monitoring and acoustic monitoring. Final analysis and publication of genetic data, final definition of acoustic dialects and publication will be completed in FY99 as well as publication of final contaminant analysis results.

C. Completion Date

All phases of the project should be completed in FY99 except for the ongoing limited monitoring and remote hydrophone projects.

PUBLICATIONS AND REPORTS

Final report: Comprehensive Killer Whale Investigations (Draft January 1999, Final April 1, 1999)

Barrett-Lennard, L.G., Matkin, C.O., Saulitis, E.L. Ellis, G.M. 1999. Molecular Ecology. Effective population sizes, patterns of gene flow, and prospects for recovery of *Exxon Valdez* oil spill-impacted AB pod and AT1 assemblage killer whales in Prince William Sound, Alaska.

Barrett-Lennard, L.G., Matkin, C.O., Saulitis, E.L., Ellis, G.M., Heise, K.A., 1999. Evolution. Niche partitioning, and population segregation of killer whales in Prince William Sound, Alaska: development, maintenance and evolutionary implications.

Barrett-Lennard, L.G., Matkin, C.O., Ellis, G.M., Saulitis, E.L. 1999. Animal Behaviour. Mating patterns in Prince William Sound Resident Killer Whales.

We anticipate submitting a fourth article, pertaining to objective 1 (the comparison of killer whales from British Columbia to Prince William Sound), in FY 2000.

Jurk, H., E.L. Saulitis, and C.O. Matkin. Dialects of Prince William Sound resident killer whales. (Draft for Canadian Journal of Zoology)

Ylitalo, G, C.O. Matkin, J. Stein. Patterns in contaminant levels in Prince William Sound killer whales.

PROFESSIONAL CONFERENCES

Funding to be obtained elsewhere.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

The monitoring of killer whales and analysis of historic and current data on killer whale behavior is part of an program to investigate killer whale recovery and the interactions of killer whales and harbor seals. It will be integrated with the harbor seal trophic studies (project 96064, Kathy Frost, project leader). In FY99 this project will rely on approximately $8,000 in matching funds from foundations or other private sources. A cooperative program with the University of British Columbia has allowed substantial reduction in laboratory costs for genetic analysis. As a non-profit research institution familiar with private funding sources and cooperative programs, NGOS can work with the Trustee Council cooperation to maximize potential for matching funds in the future.

PROPOSED PRINCIPAL INVESTIGATOR:

Craig O. Matkin
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P.O. Box 15244, Homer, Alaska 99603
Phone/Fax (907) 235-6590
COMATKIN@xyz.net

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed Fy 1999
Personnel		$31,370.0
Travel		$1,955.0
Contractual		$33,050.0
Commodities		$6,170.0
Equipment		$0.0
Subtotal	$0.0	$72,545.0
Indirect		$7,255.0
Project Total	$0.0	$79,800.0
Full-time Equivalents (FTE)		9.2
Other Resources		$8,000.0

LONG RANGE FUNDING REQUIREMENTS

Estimated FY2000	Estimated FY2001	Estimated FY2002	Estimated
$55,000.0	$50,000.0	$50,000.0	

Dollar amounts are shown in thousands of dollars.

Comments:

1999

Prepared:

Project Number: 99012
Project Title: Killer Whale Monitoring
Name: North Gulf Oceanic Society

FORM 4A
Non-Trustee
SUMMARY

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:			Months	Monthly		Proposed
Name	Position Description		Budgeted	Costs	Overtime	FY 1998
Craig O. Matkin	P.I. Field Biologist		3.0	4400.0		13,200.0
Graeme Ellis	Photo Analyst		1.0	3500.0		3,500.0
Eva Saulitis	Field Biologist		2.5	2800.0		7,000.0
	Field Assistant		0.7	1500.0		1,050.0
	Data entry technician		0.3	2800.0		840.0
	Acoustic Analyst		1.7	3400.0		5,780.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		9.2	18400.0	0.0	
					Personnel Total	$31,370.0

Travel Costs:		Ticket	Round	Total	Daily	Proposed
Description		Price	Trips	Days	Per Diem	FY 1998
Homer/Vancouver (RT)		650.0	1	3	75.0	875.0
Fairbankds/:HomerRT		380.0	1			380.0
Homer/AnchorageRT		150	2	4	100.0	700.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$1,955.0

1999

Prepared:

Project Number: 99012
Project Title: Killer Whale Monitorng
Name: North Gulf Oceanic Society

FORM 4B
Personnel
& Travel
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FY 1998
Pacific Ecological Services (genetic analysis and interpretation)	8,800.0
Hydrophone maintenance	2,000.0
27' research vessel (Whale 2) 50 days @ 400/day	20,000.0
Supply/Research Vessel 3 days @ 750/day	2,250.0
Contractual Total	$33,050.0

Commodities Costs:	Proposed
Description	FY 1998
Phone	280.0
Field Food ($14/person/day)	1,400.0
E-mail	120.0
Fuel	1,800.0
Film/Processing/Printing	1,600.0
Field Supplies	320.0
Deep Cycle batteries	180.0
Shipping	470.0
Commodities Total	$6,170.0

1999

Prepared:

Project Number: 99012
Project Title: Killer Whale Monitoring
Name: North Gulf Oceanic Society

FORM 4B
Contractual & Commodities DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1998
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	
	1	
	1	

1999

Prepared:

Project Number: 99012
Project Title: Killer Whale Monitoring
Name: North Gulf Oceanic Society

FORM 4B
Equipment
DETAIL

Revision 7-9-98
Approved TC 8-13-98

Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators (NVP)

Project Number:	99025-CLO
Restoration Category:	Research
Proposer:	L. Holland-Bartels, et al/USGS-BRD
Lead Trustee Agency:	DOI
Cooperating Agencies:	ADFG, NOAA, USFS
Alaska SeaLife Center:	No
New or Continued:	Cont'd
Duration:	5th yr. 5 yr. project
Cost FY 99:	$500.0
Cost FY 2000:	
Cost FY 01:	$0.0
Cost FY 02:	$0.0
Geographic Area:	Prince William Sound
Injured Resource/Service:	Sea otter, river otter, harlequin duck, pigeon guillemot, intertidal and subtidal organisms

ABSTRACT

FY 99 will be dedicated to production of the final report for the Nearshore Vertebrate Predator project. Funds for this year are for data analysis, final report writing, and poster/presentation preparation for the 10Years After symposium. The Nearshore Vertebrate Predator project is making an integrated assessment of trophic, health, and demographic factors across a suite of apex predators injured by the spill to determine mechanisms constraining recovery and to improve knowledge of the status of recovery. Primary hypotheses are: (1) Recovery of nearshore resources injured by EVOS is limited by recruitment processes; (2) Initial and/or residual oil in benthic habitats and in or on benthic prey organisms has had a limiting effect on the recovery of benthic foraging predators; and (3) EVOS-induced changes in populations of benthic prey species have influenced the recovery of benthic foraging predators.

INTRODUCTION

This 5-year project, *Mechanisms of Impact and Potential Recovery of Nearshore Vertebrate Predators* (NVP), was approved by the Trustees in March 1995 and began data collection in late summer, 1995. The project examines the status of recovery of four selected top vertebrate predators (sea otter, river otter, pigeon guillemot, and harlequin duck) in the nearshore environment of Prince William Sound (PWS) and is designed to better assess their recovery and determine mechanisms constraining that recovery.

Work completed in FY 95 and early FY 96 included completion of an extensive data management plan and a data archiving and file serving system to facilitate exchange and integration of project data among the fifteen project scientists. In those years, the sea otter, harlequin duck, and avian copredator components were initiated; however, primary focus was on pilot efforts to refine prey sampling strategies for further study. Full field seasons for sea otters, harlequin ducks, river otters and pigeon guillemots took place in FY96 and FY97. The original FY98 plan was to begin final data analysis and manuscript and final report writing and to conduct minimal field work as was necessary to finish some objectives for some components of the project. In response to January 1997 and 1998 peer reviewer comments, FY98 was a full field year for sea otters, pigeon guillemots, and invertebrates as indicators of sea otter recovery status. FY98 funds that were to be used in data analysis and beginning report writing were required to address concerns of the peer reviewers. Consequently, FY99 will bear most of the fiscal burden for final data analysis, and final report writing. Funds are being requested for FY2000 to support Final Report revision and manuscript prep.

NEED FOR THE PROJECT

A. Statement of Problem

The nearshore marine ecosystem of PWS plays a critical role in the commercial, subsistence, and recreation economy of southcentral Alaska. Because of shorelines and coastal physiography, the nearshore ecosystem served as a repository for much of the oil spilled during the *Exxon Valdez* oil spill (EVOS). As a result, many of the injured resources under study by the EVOS Trustees Council are components of the nearshore system. Thus, the NVP study describes a research approach for assessing the biological and ecological significance of trophic issues and contaminants present in the nearshore environment. We focus on the status of system recovery and a suite of injured apex predators as indicators of environmental stress--the invertebrate feeding sea otter and harlequin duck, and fish feeding pigeon guillemot and river otter. NVP takes a multispecies, integrated approach to assess several potential key mechanisms constraining recovery of the nearshore system.

B. Rationale/Link to Restoration

Field efforts under NVP have addressed the question of recovery for four vertebrate predator species known to have been injured in the EVOS. For each species we asked "Is there evidence of recovery and if not, is it due to oil, food or demographic constraints?"

The final data analyses and final report writing will take place in this closeout year for NVP. The synthesis of analyses of demographic, health and trophic parameters over the life of the project will result in a better understanding of processes in the nearshore environment. This, in turn, will also allow a better understanding of possibilities for restoration of these species.

C. Location

This project was conducted in western PWS (Figure 1). For all four predator species, assessments were made at two areas, one oiled and one unoiled. Northern Knight Island was the oiled area for sea otter, river otter and harlequin duck assessments, and Naked Island was the oiled area for pigeon guillemots. Montague Island was the unoiled area for sea otter and harlequin duck assessments, whereas Jackpot Bay was the unoiled area for pigeon guillemots and river otters.

COMMUNITY INVOLVEMENT

A Traditional Ecological Knowledge workshop was planned in Chenega Village in March, 1998. Poor weather resulted in cancellation of the workshop. There will be another attempt in September 1998. Information gleaned from interactions there, and helpful in our synthesis, will be part of the final report.

PROJECT DESIGN

A. Objectives

Objective 1. *Final data analyses and final report writing.*

Objective 2. *Poster and/or presentation preparation.*

B. Methods

The data analyses and final report writing will be a combination of individual and collaborative efforts. Travel to meet as group(s) will be required.

SCHEDULE

A. Measurable Project Tasks for FY 99

Draft Final Report submitted by 30 September 1999.

C. Completion Date

30 September 1999.

PUBLICATIONS AND REPORTS

The Final Report will be the product of FY99 work. The Final Report will be structured to include manuscripts that may be produced in FY98 and 99.

PROFESSIONAL CONFERENCES

Funding has been requested to attend one NVP PI meeting and the EVOS annual workshop.

NORMAL AGENCY MANAGEMENT

The 1995 proposal was developed as a collaborative effort of a variety of research scientists from State, federal, university, and private centers under the facilitation of the U.S. Geological Survey of the Department of Interior. The USGS has no management function or responsibilities but provides information for the management of DOI trust species as its primary mission. The NVP is a focused 5-year project to identify factors constraining recovery of selected species and provide additional tools to assess status. Upon completion, the developed tools can be transferred to the appropriate management agency for further implementation.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

As in previous years, collaboration will continue. Two or three meetings of all PIs may be required for the synthesis of all analyses.

EXPLANATION OF CHANGES IN CONTINUING PROJECTS

The NVP project continues to follow the original detailed project description of 95025 submitted and approved March 1995.

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Revision 7/22/98
Approved TC 8-13-98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999	PROPOSED FY 1999 TRUSTEE AGENCIES TOTALS					
			ADEC	ADF&G	ADNR	USFS	DOI	NOAA
				$38.1			$412.9	$49.0
Personnel	$0.0	$201.5						
Travel	$0.0	$11.8						
Contractual	$0.0	$238.8						
Commodities	$0.0	$0.9						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$0.0	$453.0		Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		
General Administration	$0.0	$47.0						
Project Total	$0.0	$500.0		$196.0	$0.0	$0.0		
Full-time Equivalents (FTE)	0.0	3.4						
	Dollar amounts are shown in thousands of dollars.							
Other Resources	$0.0	$0.0		$0.0	$0.0	$0.0		

Comments:

Prepared by Lisa Thomas

Revised version (7/22/96 -1:16PM) of submitted budget addressing RO comments.

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: U.S. Geological Survey-Biological Resources Division

FORM 2A
MULTI-TRUSTEE AGENCY SUMMARY

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel		$160.5
Travel		$10.0
Contractual		$203.2
Commodities		$0.9
Equipment		$0.0
Subtotal	$0.0	$374.6
General Administration		$38.3
Project Total	$0.0	$412.9
Full-time Equivalents (FTE)		2.8
Other Resources		

LONG RANGE FUNDING REQUIREMENTS					
	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		

Dollar amounts are shown in thousands of dollars.

Comments:
SO=sea otters
HD= harlequin ducks
CS=Chief Scientist
RO/PG=river otters/pigeon guillemots
SC=subtidal clams

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: U.S. Geological Survey-Biological Resources Division

FORM 3A
TRUSTEE
AGENCY
SUMMARY

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
SO: J. Bodkin/B. Ballachey	Wildlife Biologists	GS-12	4.0	5.4		21.6
D. Monson	Wildlife Biologist	GS-9	8.0	3.6		28.8
HD: D.Esler	Wildlife Biologist	GS-12	10.0	5.7		57.0
CS: L. Holland-Bartels	Chief Scientist	GS-14	0.7	7.3		5.1
M Whalen	Data Manager	GS-11	10.0	4.8		48.0
M. Ronaldson	Secretary	GS-5	1.0	3.2		0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		33.7	30.0	0.0	
					Personnel Total	$160.5

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
SO: workshop and NVP meeting-Ballachey	1.5	2			3.0
HD: workshop and NVP meeting (Corvalis/Anchorage/Corvalis)	2.1	2			4.2
CS: LaCrosse/ANC/LaCrosse	1.4	2			2.8
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$10.0

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: U.S. Geological Survey-Biological Resources Division

FORM 3B
Personnel
& Travel
DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FY 1999
RO/PG: University of Alaska, Fairbanks Research Work Order	71.6
SC: University of Washington Research Work Order	15.4
HD: Oregon State University	0.0
CS: Statistical consulting	25.0
Contract with Coastal Resources Associates see form 4A&B for details	83.2
Purdue contract	8.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$203.2

Commodities Costs:	Proposed
Description	FY 1999
SO: printing/pub costs for manuscripts* this is more than the allowable costs(1.0K allowed)	0.0
HD: printing/pub costs for manuscripts* this is more than the allowable costs(1.0K allowed)	0.0
CS: workshop presentation materials/film/developing	0.9
Commodities Total	$0.9

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: U.S. Geological Survey-Biological Resources Division

FORM 3B
Contractual & Commodities DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: U.S. Geological Survey-Biological Resources Division

FORM 3B
Equipment
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel		$0.0
Travel		$0.0
Contractual		$35.6
Commodities		$0.0
Equipment		$0.0
Subtotal	$0.0	$35.6
General Administration		$2.5
Project Total	$0.0	$38.1
Full-time Equivalents (FTE)		0.0
	Dollar amounts are shown in thousands of dollars.	
Other Resources		

LONG RANGE FUNDING REQUIREMENTS					
	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		

Comments:
Indirect cost based on 7% rate negotiated between ADF&G and the EVOS Trustees Council

See Forms 4a/b for linkage detail.

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FY 1999
See Forms 4a/b for linkage detail.	35.6
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$35.6

Commodities Costs:	Proposed
Description	FY 1999
Commodities Total	$0.0

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

Prepared: 8 of 29

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel		$41.0
Travel		$1.8
Contractual		$0.0
Commodities		$0.0
Equipment		$0.0
Subtotal	$0.0	$42.8
General Administration		$6.2
Project Total	$0.0	$49.0
Full-time Equivalents (FTE)		0.6
Other Resources		

LONG RANGE FUNDING REQUIREMENTS					
	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		
Dollar amounts are shown in thousands of dollars.					

Comments:

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: National Oceanic and Atmospheric Administration

FORM 3A
TRUSTEE
AGENCY
SUMMARY

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
C. O'Clair	Marine Biologist	GS12/10	3.0	6.0		18.0
Lindeberg	Marine Biologist	GS11	4.0	4.5		18.0
	technician- urchin growth					5.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		7.0	10.5	0.0	
					Personnel Total	$41.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
JUN/ANC/JUN, NVP fall meeting					0.9
JUN/ANC/JUN, 1999 Oil Spill Symposium					0.9
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$1.8

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: National Oceanic and Atmospheric Administration

FORM 3B
Personnel
& Travel
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FY 1999
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed
Description	FY 1999
printing and pub costs for manuscripts (1.0K allowed)	0.0
Commodities Total	$0.0

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: National Oceanic and Atmospheric Administration

FORM 3B
Contractual & Commodities DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Lead Agency: National Oceanic and Atmospheric Administration

FORM 3B
Equipment
DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Authorized FY 1998	Proposed FY 1999						
		$53.1						
		$9.7						
		$0.0						
		$2.3						
		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$0.0	$65.1		Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		
Indirect		$6.5						
Project Total	$0.0	$71.6						
		11.7						
	Dollar amounts are shown in thousands of dollars.							

Indirect rate is 10% as per UAF/BRD agreement

FY 99

~~14 of 20~~

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: University of Alaska, Fairbanks

FORM 4A
Non-Trustee
SUMMARY

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Name	Position Description		Months Budgeted	Monthly Costs	Overtime	Proposed FY 1999
T. Bowyer	Wildlife Biologist		2.0	9.0		18.0
L. Duffy	Physiologist		1.0	9.7		9.7
	GIS Technician		2.3	3.9		0.0
	Student Technician		5.9	1.5		0.0
	Account Technician		0.5	2.7		0.0
MS fellowship(P. Seizer)						11.9
PHD fellowship(G. Blundell)						13.5
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		11.7	26.8	0.0	
					Personnel Total	$53.1

Description	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FY 1999
FAI/ANC/FAI-NVP meeting	0.3	4	1	6.7	7.9
Bowyer EVOS workshop		1	3	0.3	0.9
Duffy EVOS workshop		1	3	0.3	0.9
Blundell professional meetings (2)					0.0
Seizer professional meetings (2)					0.0
					0
					0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$9.7

FY 99

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: University of Alaska, Fairbanks

FORM 4B
Personnel & Travel DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Proposed FY 1999
Contractual Total	$0.0

	Proposed FY 1999
duplication/computer fees	1.5
publication costs for 10 pubs(1.0 K allowed per project)	0.0
presentation supplies	0.8
Commodities Total	$2.3

FY 99

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: University of Alaska, Fairbanks

FORM 4B
Contractual & Commodities DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
		New Equipment Total	$0.0

	Number of Units	

FY 99

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Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: University of Alaska, Fairbanks

FORM 4B
Equipment
DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Authorized FY 1998	Proposed FY 1999						
		$10.9						
		$2.0						
		$0.0						
		$0.5						
		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$0.0	$13.4		Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		
Indirect		$2.0						
Project Total	$0.0	$15.4						
		3.8						
	Dollar amounts are shown in thousands of dollars.							

Indirect is 15% as per UW/BRD agreement

FY 99

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: University of Washington, Seattle

FORM 4A
Non-Trustee
SUMMARY

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Name	Position Description		Months Budgeted	Monthly Costs	Overtime	Proposed FY 1999
A. Fukuyama	Ph.D. Research Assistant		1.5	1.8		2.7
Fukuyama Benefits						1.7
Fukuyama Tuition						6.5
hourly person-salary			2.3	1.3		0.0
hourly person-benefits						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		3.8	3.1	0.0	
					Personnel Total	$10.9

Description	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FY 1999
Restoration Workshop					1.0
NVP meeting					1.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$2.0

FY 99
19 of 29

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: University of Washington, Seattle

FORM 4B
Personnel & Travel DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Proposed FY 1999
statistical/taxonomic consulting	0.0
clamshell dating	0.0
Contractual Total	$0.0

	Proposed FY 1999
telephone/fax/graphics/postage/photocopy	0.5
publication costs	0.0
Commodities Total	$0.5

FY 99

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: University of Washington, Seattle

FORM 4B
Contractual & Commodities DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
New Equipment Total			$0.0

	Number of Units	

FY 99
21 of 29

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: University of Washington, Seattle

FORM 4B
Equipment
DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Authorized FY 1998	Proposed FY 1999						
		$41.8						
		$1.6						
		$0.0						
		$0.0						
		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$0.0	$43.4		Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		
Indirect		$39.8						
Project Total	$0.0	$83.2						
		5.5						
	Dollar amounts are shown in thousands of dollars.							

Comments:
Indirect fee is sum of overhead (26.9K) + general and administrative costs (9.6K) + fee (3.3K)/

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Name	Position Description		Months Budgeted	Monthly Costs	Overtime	Proposed FY 1999
T. Dean	Marine Biologist		5.0	7.6		38.0
L. Deysher			0.5	7.6		3.8
D. Jung			0.0	3.5		0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		5.5	18.7	0.0	
					Personnel Total	$41.8

Description	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FY 1999
SD/ANC/SD	0.5	2	6	0.1	1.6
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$1.6

FY 99
23 of 29

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: Coastal Resources Associates, Inc.
USGS-BRD contractor

FORM 4B
Personnel & Travel DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Proposed FY 1999
Contractual Total	$0.0

	Proposed FY 1999
Commodities Total	$0.0

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: Coastal Resources Associates, Inc.
USGS-BRD contractor

FY 99

FORM 4B
Contractual & Commodities DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
		New Equipment Total	$0.0

	Number of Units	

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: Coastal Resources Associates, Inc.
USGS-BRD contractor

FY 99

FORM 4B
Equipment
DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel		$27.3
Travel		$1.2
Contractual		$0.0
Commodities		$0.0
Equipment		$0.0
Subtotal	$0.0	$28.5
General Administration		$7.1
Project Total	$0.0	$35.6
Full-time Equivalents (FTE)		3.5
Other Resources		

LONG RANGE FUNDING REQUIREMENTS					
	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		

Dollar amounts are shown in thousands of dollars.

General Administration is calculated at 25% per the Trustee Council-UAF agreement.

FY 99

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: Ak. Dept. Fish and Game Contractor-University of Alaska, Fairbanks

FORM 4A
Non-Trustee
SUMMARY

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Name	Position Description		Months Budgeted	Monthly Costs	Overtime	Proposed FY 1999
Stephen Jewet	marine biologist		3.5	7.8		27.3
	Subtotal		3.5	7.8	0.0	
					Personnel Total	$27.3

Description	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FY 1999
FBX/ANC/FBX (NVP meeting and annual workshop)	0.2	2	4	0.2	1.2
FBX/SD/FBX	0.8	0	4	0.2	
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$1.2

FY 99

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: AK. Dept. Fish and Game contractor- University of Alaska, Fairbanks

FORM 4B
Personnel & Travel DETAIL

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Proposed FY 1999
Contractual Total	$0.0

	Proposed FY 1999
Commodities Total	$0.0

FY 99

Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: AK. Dept. Fish and Game contractor-University of Alaska, Fairbanks

FORM 4B
Contractual & Commodities DETAIL

7/22/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
		New Equipment Total	$0.0

	Number of Units	

FY 99

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Project Number: 99025
Project Title: Mechanisms of Impact & Potential Recovery of Nearshore Vertebrate Predators
Name: AK. Dept. Fish and Game Contractor: University of Alaska, Fairbanks

FORM 4B
Equipment
DETAIL

7/22/98

Approved 4c 8-13-98

Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures

Project Number:	99043B
Restoration Category:	Monitoring
Proposer:	USFS
Lead Trustee Agency:	USFS
Cooperative Agencies:	None
Alaska Sea Life Center:	No
Duration:	4th year, 4-year project
Cost FY 99:	$9.5
Cost FY 00:	$0.0
Cost FY 01:	$0.0
Cost FY 02:	$0.0
Geography Area:	Western Prince William Sound
Injured Resource / Service:	Cutthroat Trout and Dolly Varden

ABSTRACT

This proposal provides for the final report and analysis of data collected from the EVOS Project *Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures* conducted from 1995 to 1998. The sixty three habitat improvement structures were installed in 1995 under EVOS Restoration Project number 95043B. At that time there were concerns raised that habitat structures may inadvertently increase coho salmon populations, thereby increasing competitive stress on Dolly Varden, and cutthroat trout populations. The final report will address the five working null hypotheses presented in previous proposals to determine if the improvements were a benefit to cutthroat trout and Dolly Varden.

INTRODUCTION

In 1989 the oil tanker *Exxon Valdez* ran aground on Bligh Reef spilling millions of gallons of crude oil into Prince William Sound (PWS). The ensuing oil spill damage assessment identified oil spill related injuries to cutthroat trout *(Oncorhynchus clarki*) and Dolly Varden char (*Salvelinus malma*) populations among other species in PWS. Information collected in 1989-1991 by the Natural Resources Damage Assessment (NRDA) study, documented lower growth rates for cutthroat trout and Dolly Varden char in oiled areas than in unoiled areas. The reduced growth rates persisted into 1991 when studies were discontinued. It is unknown if growth rates have since returned to normal. Mortality rates for anadromous Dolly Varden char in oiled areas were significantly higher than rates from sites in the non-oiled areas of eastern PWS (EVOS Trustee Council, 1994).

The cutthroat trout populations found in PWS are at the northern extent of the species' North American range. Generally speaking, species inhabiting the extreme limits of their habitat exhibit higher sensitivities to environmental stresses than the same species well within their normal range. Little is known of the genetic diversity, distribution, or life histories of cutthroat trout in PWS. The cutthroat trout stocks known to exist within PWS are few in number and appear to be discrete populations with limited interbreeding with other cutthroat stocks. It is highly possible that there have been unique genetic adaptations in these populations due to local conditions and their relative isolation from other stocks. Several stocks of cutthroats within PWS appear to be anadromous and have a limited home range within streams (Heggenes et al., 1991). Both adults and subadults of anadromous populations migrate to the ocean for summer feeding (Trotter, 1989; Hepler et al, 1993). Emigration to saltwater occurs in early May through July (Hepler et al, 1993). They return to freshwater in July through November, peaking in September and October (Trotter 1989; Wedemeyer 1993).

During the 1995 field season, USFS, Glacier Ranger District Fisheries crews installed a total of 63 habitat improvement structures at Otter Lake, Gunboat Lakes, Red Creek and Billy's Hole to improve cutthroat trout and Dolly Varden habitats in PWS. The distribution and abundance of cutthroat trout, Dolly Varden and coho salmon *(Oncorhynchus kisutch*) were monitored at these locations using standard mark- recapture techniques to provide baseline information on the various systems prior to enhancement activities. The existing habitat at each project site was surveyed using a modified Hankin and Reeves (1988) methodology before and after structure installation to provide a basis of comparison. The completed stream surveys were also used to determine the proper sampling distribution to trap fish in a stratified random sampling design within the affected stream reaches. Trapping effort was conducted proportional to the availability of the three major habitat types found in each sampling area.

Minnow traps were used to capture the juvenile fish. The trapping effectiveness varies with the stream characteristics at a particular location. It was assumed that a single minnow trap could effectively trap a 10 m^2 area of slow water habitat, and a linear 3 m segment of fast water habitat. The difference in trapping effectiveness resulted in fewer traps being used to trap equal sized

habitat units in slow water than in fast water providing an assumed equal amount of trapping effort for each habitat type.

The exception to this is the work done at Billy's Hole where initial sampling indicated cutthroat trout in numbers too low to be sampled in a statistically valid manner using the proposed mark recapture design. Nearly 100 traps were set at this location throughout the summer that resulted in the capture of only two juvenile cutthroat trout within the proposed project area. Instead, trapping was conducted in a nonrandom manner to maximize capture for cutthroat trout throughout the entire project area prior to any construction.

Bailey's modification of the Lincoln-Petersen Mark and Recapture model (as described in Kohler and Hubert, 1993) was used to estimate the populations of coho, cutthroat trout and Dolly Varden juveniles in the affected stream reaches and a coefficient of variation (CV) was calculated for each population estimate. Sampling in 1996 produced many population estimates with a CV value of greater than 0.20 which is generally inadequate and indicates low precision of the estimates. This is due to the small sample size and the low numbers of recaptures of cutthroat trout. The sampling design for subsequent years was modified to address this problem. The modification involved adding a second day of trapping during the recapture phase using the same techniques as discussed above thereby increasing the sample size during the recapture phase which was expected to increase the precision of the estimates.

Table 1 in Appendix A summarizes the mark- recapture and CPUE (catch per unit effort) datum collected from 1995 to 1997 for each of the project locations. Estimates of cutthroat trout populations did not appear to improve using this modified technique. However estimates of other species did improve. It appears that cutthroat trout are "trap shy" making the likelihood of a recapture more difficult than anticipated. The additional trapping time is providing useful CPUE information on habitat distribution and to assess possible benefits or negative consequences of placing enhancement structures in a stream system.

Sampling by Glacier Fisheries Crews in 1996 again suggested that cutthroat trout densities were greatest in the upper reaches of these inlet tributary streams. This is consistent with studies that have shown that cutthroat trout juveniles are pushed to less desirable habitats by the more dominant coho salmon juveniles (Glova and Mason, 1976). Interspecific competition with juvenile coho salmon is believed to limit cutthroat trout production in quality pool rearing habitat which is one of the key factors for cutthroat trout survival.

Preliminary catch per unit effort (CPUE) information is presented in Appendix A, Figures 2-7, this information is based on pre-project trapping in 1995 of enhancement sites and project area streams, and the data collected from 1996 and 1997 at these same project locations.

NEED FOR THE PROJECT

A. Statement of Problem

Limited information is available on the genetic diversity, distribution, competitive interactions or general life histories of cutthroat trout in PWS. In addition, there is concern that habitat enhancement structures installed under EVOS Project 95043B may inadvertently increase coho salmon populations thereby increasing competitive stress on cutthroat trout populations.

B. Rationale/Links to Restoration

Additional information on cutthroat trout distribution, habitat utilization and competitive interaction with juvenile coho will assist managers in making decisions for future fisheries enhancement work that may affect cutthroat trout in PWS.

Monitoring before and after the installation of improvement structures was conducted to provide necessary information to ascertain the effectiveness of the various projects or of a particular structure. The final year of post-project sampling is scheduled to be completed in FY 98. This proposal is to fund the final data analysis and report writing for this monitoring project.

C. Location

Monitoring occurred at the project sites listed for the Cutthroat Trout / Dolly Varden Habitat Improvement Project, number 95043B.

Otter Creek, Bay of Isle, Knight Island, PWS.
Gunboat Creek, Eshamy Bay, Western PWS.
Red Creek, Esther Passage, NW., PWS.
Billy's Hole, Long Bay, Northern PWS.

COMMUNITY INVOLVEMENT AND TRADITIONAL ECOLOGICAL KNOWLEDGE

On January 20 , 1994 letters were mailed to 156 individuals, agencies and organizations requesting comments on the proposed habitat enhancement for cutthroat trout in PWS that this proposal is designed to monitor.

In January of 1994, the "Chugach National Forest Schedule of Proposed Actions for Environmental Analysis" was mailed to more than 600 individuals, agencies and organizations. This document has since been mailed on a quarterly basis. The mailings included the PWS projects and a contact person for additional information concerning the project.

PROJECT DESIGN

A. Objectives

The objective of this project, has been to monitor and document the response of cutthroat trout to modifications made to their habitat by enhancement activities.

Specific objectives were:

1. Measure abundance and distribution of cutthroat trout, Dolly Varden and juvenile coho in the proposed project locations for the period specified.

2. Measure and monitor cutthroat trout, Dolly Varden and juvenile coho utilization of newly installed habitat improvements.

3. Measure and monitor the effects that structures have on adjacent aquatic macrohabitats.

4. Provide annual project monitoring results.

5. Provide a project completion report and a summary of our findings on the effectiveness of the habitat structures installed in 1995.

B. Methods

The null hypotheses for this project is that the number of cutthroat trout at the project locations will not increase due to the habitat improvements made in 1995. To test this and meet the project's objectives, five working null hypotheses were developed:

Hypotheses 1. The abundance of cutthroat trout at the project sites will not increase over the monitoring project duration.

Hypotheses 2. The current distribution of cutthroat trout within the project area will not change over the duration of the monitoring project.

Hypotheses 3. Cutthroat trout and Dolly Varden will not be the predominant species to utilize the newly created habitat structures.

Hypotheses 4. Aquatic macrohabitats adjacent to areas of improvement will not be affected by the structures installed in 1995.

Hypotheses 5. The structures installed in 1995 will not have benefitted cutthroat trout over the duration of the monitoring project.

To test hypotheses number one through three, data on the relative abundance, distribution and habitat utilization of cutthroat trout at the project locations were collected during the 1995 through 1998 field season.

Cutthroat abundance will be estimated using a method described in Hankin's (1986) report, *Sampling Designs for Estimating the Total Number of Fish in Small Streams.* This method consists of a two stage stratified random sampling design utilizing auxiliary variables to improve the precision of estimators. It is described in detail as Design B: Ratio Estimation in Hankin's (1986) report. Population estimates for each primary unit will be derived using the mark-recapture method known as the Petersen Index with Bailey's 1951 formula to correct for bias, as described by Ricker (1975). Collection was conducted using baited minnow traps and fish were marked by caudal punches.

Project area streams have been surveyed and habitats classified using a modified Hankin and Reeves (1988) methodology. Stream habitat surveys were conducted during the early part of the 1995 field season in conjunction with the installation of the improvement structures. Data collected from the surveys have been analyzed and the associated habitat units characterized. Primary units (those to be sampled) were then selected by stratified random sampling. The strata consist of various pools, riffles, runs and glides that are then categorized as either slow, turbulent or non-turbulent habitat types (Figure 1, Appendix A).

The percentage of a habitat type found within a given reach can be taken from the total area or length of a particular habitat type in that reach to produce a value that is proportional to the entire reach. It was assumed that a single minnow trap could effectively trap a 10 m^2 area of slow water habitat, and a linear 3 m segment of fast water habitat types. Dividing the proportional value by the appropriate segment length provides the number of traps required to sample the proportional value. The sums of the areas for slow water types and the lengths for the fast habitat types were stratified into primary units based on the trapping segment lengths for each habitat type throughout the entire reach. From these segments a random selection of segments to be sampled was made to correspond to the number of traps required to sample each habitat type. Each season new sampling segments were selected based on the method described above. If the areas where improvements occurred did not fall into the random samples they were trapped separately. The amount of trapping effort was also recorded at each location, since a proportional and equal trapping effort was applied throughout the entire reach, CPUE data will also be used to identify trends in population structures and distribution for a given location.

These estimations were done in mid to late summer to minimize bias due to seasonal migration of fish within the stream. Annual population estimates of the primary units for the project duration should provide enough information to detect a change in the relative abundance and distribution of cutthroat trout at the project sites.

Hankin in his (1986) report discusses errors of estimation of the total number of fish in a stream arising from two sources: (1) extrapolation from the small number of sampled sections to the

entire stream, and (2) errors of estimated fish numbers within sampled sections. Hankin demonstrated that errors arising from the first source will usually be far greater than those from the second source, and that total errors of estimation can be reduced by making sampled sections equivalent to natural habitat units. By stratifying these habitat units and selecting sampling units randomly the precision of estimators can be improved and information on the distribution of cutthroat trout within the stream can be gathered.

Mark-recapture population estimates for primary units utilizing minnow trapping techniques will lead to errors in estimated fish numbers for sampled sections due to size selectivity and inefficiency of minnow traps to capture all individuals within a population. There is however a correlation between the sampled catch and the true population for a given size of individuals within a population. This is discussed in a 1976 paper by Arthur M. Bloom, *Evaluation of Minnow Traps for Estimating Populations of Juvenile Coho Salmon and Dolly Varden.*

C. Cooperating Agencies, Contracts, and Other Agency Assistance

This project will be implemented by the U.S. Forest Service no contracts are expected.

SCHEDULE

A. Measurable Project Task for FY 99 (October 1, 1998 - September 30, 1999)

January 31:	Complete data analysis.
April 15	Provide a final report for peer review summarizing project results. This will satisfy objectives (1, 2, 3, 5)

B. Project Milestones and Endpoints

April 15:	Provide a final report for peer review summarizing project results. This will satisfy objectives (1, 2, 3, 5).

C. Completion Date

Baseline data were collected in 1995 prior to any effects from the habitat improvement work. Data to meet the project objective were collected in 1996, '97, '98, with a final report summarizing the project results being provided for peer review in 1999.

PUBLICATIONS AND REPORTS

No professional publications are planned for at this time. The Forest Service does however

understand that results from this project need to be shared with other resource managers to assist them in making decisions regarding enhancement activities where cutthroat trout are present. Annual Reports will be prepared during each year of the project and provided to the Trustee Council by April 15 of the following year with a final report submitted for peer review by April 15, 1999.

PROFESSIONAL CONFERENCES

At this time there are no plans to present this project at professional conferences. However a poster board display is planned for in 1998 with updates in 1999 for presentation at the District office and at science conferences.

NORMAL AGENCY MANAGEMENT

This project provides for monitoring of habitat improvement structures and their effects on cutthroat trout and Dolly Varden populations. These structures were installed in 1995 under EVOS Restoration Project number 95043B. The Forest Service has focused on this species as a result of the injury incurred from the oil spill. The proposal is not part of the normal Forest outyear planning program, therefore no funds have been directed towards this project within the Forest Service budgeting process. Current budgets and Forest Service priorities would not provide an opportunity to conduct this project under normal agency management.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

The proposed project is an integration of project number 95043B, Cutthroat Trout and Dolly Varden Habitat Restoration in PWS. Additionally during the summer of 1994, the Forest Service made significant improvements to an existing fishway at Otter Creek, under EVOS Project 94139-B1 to facilitate pink salmon *(Oncorhynchus gorbuscha)* access to previously inaccessible spawning habitat.

This project is designed to monitor the long term effects of implementing project number 95043B. The effects from project 94139-B at Otter Creek are beyond the scope of the proposal and will not be consider in the analysis. The proposal is a response from a primary land and resource manager (Forest Service) in Prince William Sound to the effects of the *Exxon Valdez* oil spill.

EXPLANATION OF CHANGES IN CONTINUING PROJECTS

The FY99 proposal differs from the FY98 by dropping the final year of data collection from the

project. In the previous proposals a five year monitoring plan has been presented, however based on the recommendations of the Trustees, 1998 will be the last year of data collection.

PROPOSED PRINCIPAL INVESTIGATOR

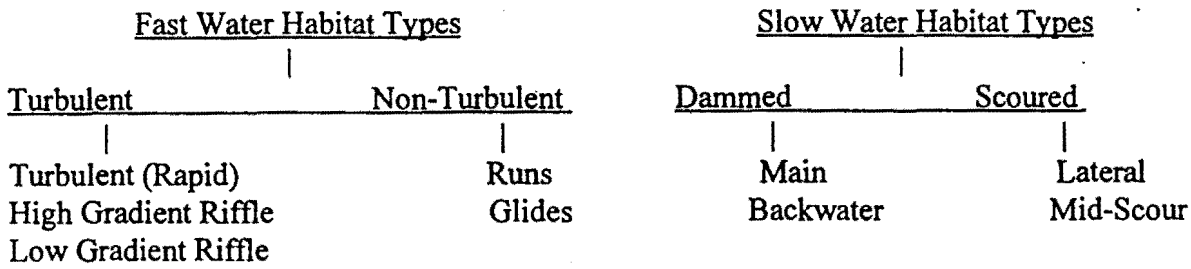
Dan Gillikin, Project Leader
U.S. Forest Service
P.O. Box 129
Girdwood, AK 99587
(907) 783-3242
FAX: (907) 783-2094

APPENDIX A

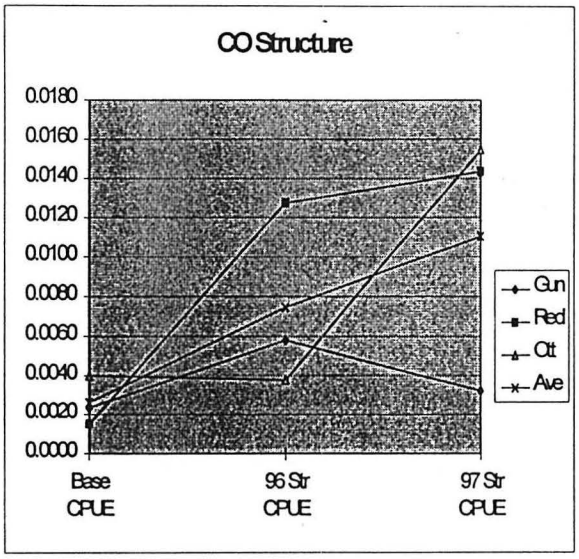
Table 1. Summary of mark recapture and CPUE data for project 95043B. for 1995 and 1996, shaded values indicate a CV less than or near 0.20.

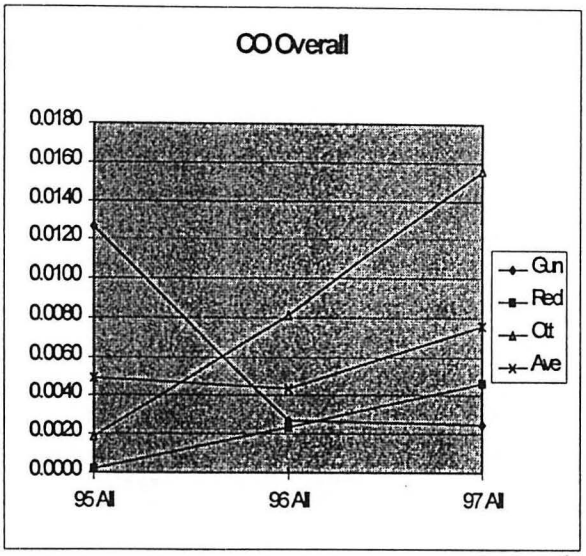
Project Location	Species	Population Estimate, N			Variance of Estimate, V(N)			Coefficient of Variation, CV			Catch Per Unit Effort, CPUE		
		95	96	97	95	96	97	95	96	97	95	96	97
Otter Ck.	CO	45			324	10848	5156	0.4	0.085	0.048	0.0019	0.0081	0.0156
	CT	6	56	300	9	1344	15000	0.5	0.654	0.408	0.0003	0.0002	0.0010
	DV	128			1536	7597	1118	0.31	0.085	0.045	0.0039	0.0081	0.0103
Red Ck.	CO		760		0	60805	2869	0	0.324	0.06	0.0002	0.0024	0.0047
	CT	105	72	852	1125	1344	69005	0.32	0.509	0.308	0.0007	0.0003	0.0012
	DV		374		8169	16456	6802	0.21	0.343	0.081	0.0024	0.0012	0.0041
Gunboat Reach 2	CO	504			6720	9975	1025	3.25	0.23	0.201	0.0127	0.0027	0.0025
	CT	50	36		300	1296	0	0.38	1	0	0.0009	0.0004	0.0036
	DV		594	28	768	24293	187	0.21	0.262	0.488	0.0004	0.0034	0.0010
Gunboat Reach 3	CO	N/A	30	16	N/A	244	64	N/A	0.51	0.5	N/A	N/A	N/A
	CT	N/A	54	43	N/A	1215	138	N/A	0.64	0.272	N/A	N/A	N/A
	DV	N/A		55	N/A	23	1210	N/A	0.068	0.633	N/A	N/A	N/A
Billy's Hole	CO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0244	0.0282	0.0205
	CT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0012	0.0001	N/A
	DV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0589	0.0124	0.0260

Figure 1. Description of habitat classification technique.

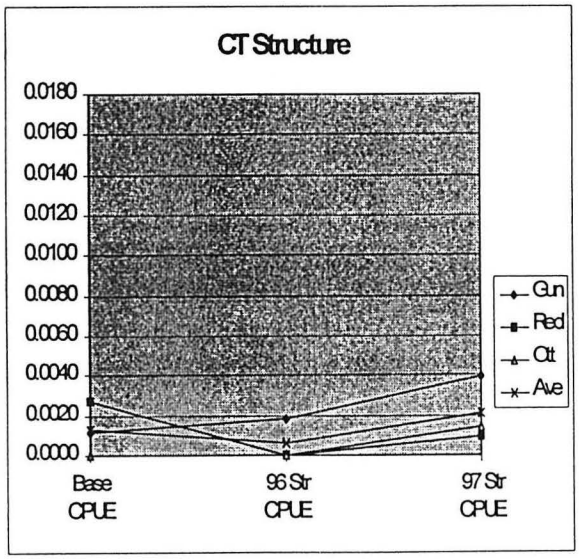


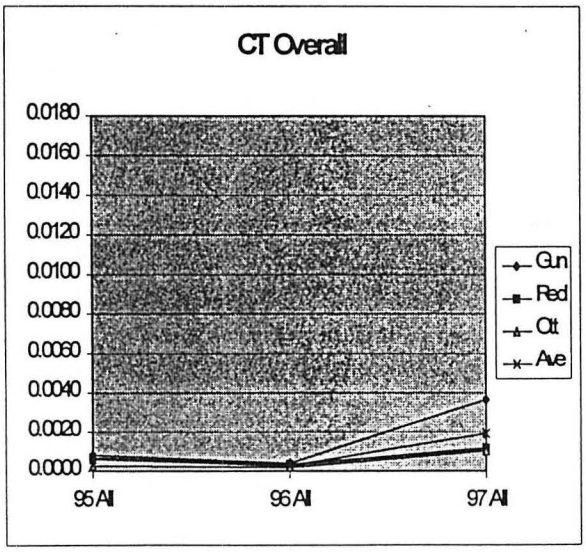
Figures 2,3. Catch Per Unit Effort (CPUE) data for juvenile coho salmon (CO) at the four project locations. Structures are at enhancement sites, Overall is for the entire stream reach within the project areas. Base CPUE is pre-project CPUE at enhancement sites.



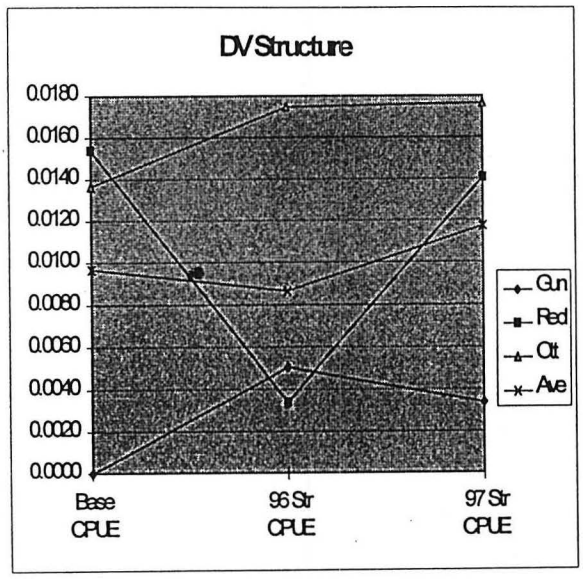


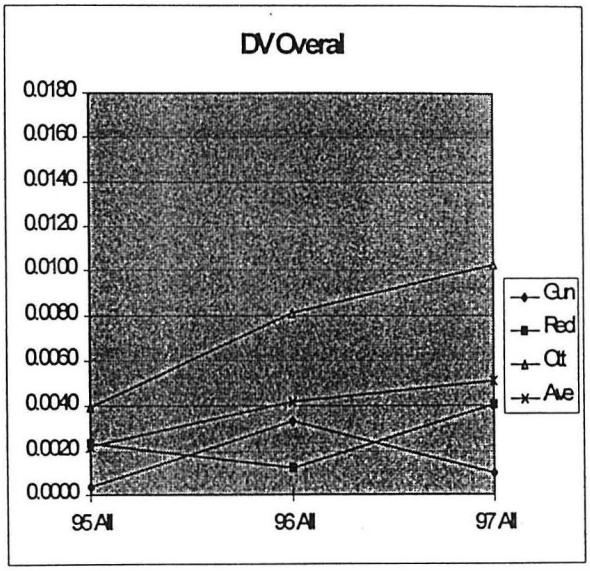
Figures 4,5. Catch Per Unit Effort (CPUE) data for juvenile cutthroat trout (CT) at the four project locations. Structures are at enhancement sites, Overall is for the entire stream reach within the project areas. Base CPUE is pre-project CPUE at enhancement sites.





Figures 6,7. Catch Per Unit Effort (CPUE) data for juvenile Dolly Varden (DV) at the four project locations. Structures are at enhancement sites, Overall is for the entire stream reach within the project areas. Base CPUE is pre-project CPUE at enhancement sites.





Revision 8-98
Approved TC 8-13-98

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel	$15.0	$8.3
Travel	$0.0	$0.0
Contractual	$3.0	$0.0
Commodities	$3.5	$0.0
Equipment	$0.0	$0.0
Subtotal	$21.5	$8.3
General Administration	$2.5	$1.2
Project Total	$24.0	$9.5
Full-time Equivalents (FTE)		0.2

LONG RANGE FUNDING REQUIREMENTS

Estimated FY 2000	Estimated FY 2001	Estimated FY 2002
$0.0	$0.0	$0.0

Dollar amounts are shown in thousands of dollars.

Other Resources

Comments: Provides for Final Report for EVOS Project: *Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures.*

Note: Project costs increased slightly due to the addition of time for a statistician to assist in the analysis of the mark and recapture data.

FY 99

Prepared: 4/8/98

Project Number: 99043B
Project Title: Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures.
Agency: USFS

FORM 3A
TRUSTEE
AGENCY
SUMMARY

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
D.Gillikin	Fisheries Technician	GS-9	1.5	3.2		4.8
R. Spangler	Fisheries Biologist	GS-9	0.5	4.0		2.0
Unknown	Statisitican	GS-11	0.3	5.0		1.5
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		2.3	12.2	0.0	
					Personnel Total	$8.3

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

FY 99

Prepared: 4/8/98

Project Number: 99043B
Project Title: Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures.
Agency: USFS

FORM 3B
Personnel
& Travel
DETAIL

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FY 1999
Description	
Commodities Total	$0.0

FY 99

Prepared: 4/8/98

Project Number: 99043B
Project Title: Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures.
Agency: USFS

FORM 3B
Contractual & Commodities
DETAIL

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

FY 99

Project Number: 99043B
Project Title: Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures.
Agency: USFS

FORM 3B
Equipment
DETAIL

Prepared: 4/8/98

Approved TC 8-13-98

Community Involvement

Project Number:	99052A
Restoration Category:	General Restoration
Proposer:	P. Brown- Schwalenberg/CRRC
Lead Trustee Agency:	ADFG
Cooperating Agencies:	None
Alaska SeaLife Center:	No
New or Continued:	Cont'd
Duration:	5th yr. 8 yr. project
Cost FY 99:	$243.4
Cost FY 2000:	$180.0
Cost FY 01:	$180.0
Cost FY 02:	$180.0
Geographic Area:	Spill-area wide
Injured Resource/Service:	Subsistence

ABSTRACT

This project will increase community involvement in the restoration process. The Spill Area-Wide Coordinator's work will continue through a contract with the Chugach Regional Resources Commission (CRRC). Through direct communication with a network of local facilitators, the Spill Area-Wide Coordinator will continue to actively involve local residents in the restoration program. (Local facilitators are located in Tatitlek, Chenega Bay, Port Graham, Nanwalek, Cordova, Seward, Seldovia, Valdez, Ouzinkie, and Alaska Peninsula.) In FY 99, a network of high school interns will be created in the Kodiak Island region. In cooperation with CRRC, the Kodiak Island Borough School District will select one high school student from each of six communities (Port Lions, Larsen Bay, Karluk, Akhiok, Old Harbor, Kodiak City) to serve as local facilitators. In addition, the interns will facilitate school and community discussions about the restoration program.

INTRODUCTION

Nine local facilitators were hired in FY 96 through cooperative agreements with the village councils of Tatitlek, Chenega Bay, Port Graham, Nanwalek, Eyak (Cordova), Qutekcak (Seward), Valdez, and the Native associations in Bristol Bay and Kodiak. Under 97052A, the number of CF's was expanded by one to include the community of Seldovia. Kodiak Island internships will be added in FY 99. Hugh Short, the full time SAWCIC, will continue to serve as an employee of CRRC and continue his work out of the Restoration Office. The following tasks will be completed by the SAWCIC:

1. Increase involvement of community members and organizations throughout the spill region in restoration projects. This community process will include a CF.

2. Serve as the contact point for a CF in each of the sixteen participating communities (Tatitlek, Chenega Bay, Valdez, Cordova, Port Graham, Nanwalek, Seldovia, Ouzinkie, Port Lions, Kodiak, Old Harbor, Akhiok, Larsen Bay, Karluk, Chignik Lake, Seward -- the CF's will be subcontractors to CRRC, the interns will be students with the Kodiak Island Borough School District). The tasks of the SAWCIC in relation to the CF's and interns would be to:

   a. At least every month, fax a comprehensive report to the CF's and interns to keep them informed of Trustee Council actions, Restoration Office activities, upcoming events, new research findings, etc. The report will be in the form of a newsletter.

   b. Update the local resources inventories for each community (lodging and meeting space available, human and equipment resources, etc.). This information will be consolidated and distributed to all Principal Investigators. The SAWCIC and CF's will then assist in arranging the use of the local resources.

   c. Coordinate the participation of the CF's and interns in the 10th Anniversary Symposium and other meetings/workshops as appropriate.

   d. Work with the TEK Specialist (99052B) to coordinate an annual review by CF's, interns, and village councils of restoration project proposals involving indigenous knowledge and develop recommendations to the Executive Director.

3. Annually review the community involvement component of all restoration project proposals. Inform the CF's of proposals that would involve their communities. Make recommendations to the Executive Director on the adequacy of, as well as ways to strengthen, the community involvement component. Once funding decisions are made by the Trustee Council, initiate contact with the PI's to offer assistance in implementing their

community involvement components.

4. Assist in organizing Trustee Council/Restoration Office community meetings held in conjunction with the Invitation/Draft Work Plan. This may include arranging presentations in specific communities by PI's.

5. Participate in Restoration Work Force meetings.

6. Provide a "community report" to the PAG at each of its' meetings.

7. Attend (in person or by teleconference) all Trustee Council meetings and report to the CF's on actions taken.

8. Work with the Science Coordinator, Communications Specialist, and TEK Specialist (99052B) to get research results to communities.

9. Coordinate the provision of technical assistance to the villages by the Trustee Council staff and agency personnel to develop project proposals.

10. Provide input to the Restoration Update newsletter.

11. Prepare quarterly project status updates for the Restoration Office and ensure all reports are submitted on a timely basis by the CF's.

The tasks of the local CF's include:

1. Provide a written monthly report to the SAWCIC each month identifying community issues, concerns or questions regarding restoration. These issues could be identified through community meetings or other means and should include relevant issues discussed at village council meetings. Ideas for new projects should also be included.

2. Assist the SAWCIC in increasing community involvement in restoration projects. This will include updating the local resources inventory manual, which includes facilities available for rent (lodging, meeting rooms, storage space) and the names, telephone numbers, areas of expertise, and compensation requirements of specific community members who are interested and able to work on Trustee Council-funded projects. Areas of expertise may include skiff and other equipment availability, general laborers, interviewers, research assistants, guides, and traditional knowledge holders.

3. Work with the SAWCIC in coordinating the Trustee Council community meetings as well as community visits from PI's. Under the TEK protocols adopted by the Trustee Council, the CF will also serve as the initial contact in the village for any project involving TEK. The CF should be knowledgeable about the TEK protocols. All interested CF's will serve on the TEK Advisory Group (99052B).

4. Disseminate monthly newsletter to community members. This could be done by posting the update in a public location, making a presentation to the village council or city, or other ways of communication.

5. All CF's shall attend the 10th Annual Exxon Valdez Oil Spill Symposium and other meetings, including scientific review sessions when appropriate.

Duties of Kodiak Island interns will include:

1. All duties required of the CF's.

2. To work with the Kodiak Island Borough School District coordinator, Science Coordinator, SAWCIC, and Kodiak Island CF to develop strategies to incorporate research data and designs into school curriculum.

3. To make presentations to the community and school to enhance understanding and involvement in the restoration process.

Duties to be undertaken by the ADF&G Subsistence Division include:

1. Work with communities to develop restoration project proposals.

2. Provide technical expertise and general assistance to the Restoration Office, Trustee Council, SAWCIC, and PI's on subsistence restoration.

3. Administer the cooperative agreement with CRRC, which will include renewing the contract and amending the RAP, reviewing and processing invoices, reviewing quarterly reports, and monitoring contractor performance.

4. Contribute to annual project report.

5. Respond to contracts from the general public in regard to EVOS subsistence projects.

NEED FOR THE PROJECT

A. Statement of Problem

The Exxon Valdez oil spill caused severe disruption in the lives of many people living in the spill impacted area. The spill also caused residents of the area to be concerned about the safety of their wild food sources, and the integrity of the surrounding natural environment. While scientific studies aimed at restoring the resources and services damaged by the oil spill have occurred throughout the spill area, most of the researchers work for agencies or institutions based in Anchorage, Fairbanks, or outside Alaska. This project was created in response to concerns voiced by communities over a lack of involvement by spill area communities in the restoration effort and incomplete communication to spill area inhabitants of study proposals and results.

Kodiak Island has proved to be especially difficult in terms of involvement and the quality of communication to the residents. In an effort to facilitate better communication to the residents of the island, an intern would act as a community facilitator to the local residents. The responsibilities of the other CF's would be incorporated into the internship. Curriculum to involve the youth in scientific research would also be developed, much like the Youth Area Watch program. Better communication to spill affected communities and youth education would be the twofold benefit of this aspect of the project.

B. Rationale

This project furthers the Trustee Council's goal of facilitating the involvement of spill area residents and resource users in the restoration process. It also reaffirms the Trustee Council's dedication to the involvement and education of area youth in the restoration process.

C. Location

This project will be spill area wide. All communities will have a CF or an intern within their community, except for the Alaska Peninsula, which is covered by a region-wide CF.

COMMUNITY INVOLVEMENT

The core of this project is community involvement.

FY 99 BUDGET

Budget line items	CRRC	ADF&G	Total
Personnel	$48,500	$5,400	$53,900
SAWCIC	*$48,500*	*$0.00*	*$48,500*
Division Project Coor.	*$0.00*	*$5,400*	*$5,400*
Travel	$33,000	$0.00	$33,000
Contractual	$127,000	$0.00	$127,000
Village councils	$120,000	$0.00	$120,000
Kodiak Island School District	$7,000	$0.00	$7,000
Commodities	$500	$500	$500
Equipment	$2,500	$0.00	$2,500
Subtotal	$211,500	$5,900	$217,400
General Admin.	$21,150	$17,100	$38,250
Project Total	$232,650	$23,000	$255,650

PROJECT DESIGN

A. Objectives

1. To increase the involvement of spill area communities in the restoration efforts of the Trustee Council

2. To improve communication of findings and results of restoration efforts to spill area residents, including village and city councils, other community groups, and the appropriate regional organizations in a format that is meaningful and easy to understand.

3. To enhance the involvement and education of Kodiak Island youth in the restoration efforts through internships.

B. Methods

The project will be implemented by the SAWCIC, Kodiak Island Borough School District and local community facilitators, and with the assistance of the Alaska Department of Fish and Game's Division of Subsistence.

The objectives will be achieved using the following methods:

A contract will be renewed by ADF&G Division of Subsistence to CRRC for overall coordination of the CF's and SAWCIC. CRRC will be expected to arrange for the hiring (where applicable) and coordination of local CF's in the communities of Chenega Bay, Tatitlek, Port Graham, Nanwalek, Seldovia, Valdez, Cordova, Seward and regional coordinators for Kodiak Island and the Alaska Peninsula regions. The remaining communities on Kodiak Island will select local high school interns to serve as community facilitators. All other communities in the oil spill impacted area will be included in the outreach efforts, even though a local facilitator will not be hired in each community.

Working with the CF's and interns, the SAWCIC will increase meaningful public involvement in the restoration process. The goal will be to continue the partnership begun under 95052 between the residents of the oil spill area and scientific researchers. Outreach will include communication of research proposals and study results.

The effectiveness of the project will be evaluated on an annual basis by the Trustee Council staff working in cooperation with the SAWCIC, the oil spill communities, and the Subsistence Division.

C. Contracts and Other Agency Assistance

A contract will be let to CRRC for overall coordination of a facilitator network through a SAWCIC. These tasks are being contracted out for the following reasons:

1. The use of a regional organization as opposed to a state agency will better serve the needs of the local community members.

2. The Trustee Council has encouraged contracting tasks out to the private sector as much as possible, and as appropriate.

3. The state procurement system makes it difficult to contract directly with the communities in the oil spill region. It has proven to be simpler to contract out the coordination of the facilitator network on a sole source basis with CRRC, who has an established working relationship with the communities.

SCHEDULE

A. Measurable Project Tasks for FY 99

October 1, 1998	Contract between CRRC and ADF&G renewed
October 1, 1998	SAWCIC continues CRRC employment
October 1, 1998	Intern begins work
October 1, 1998	Subcontracts with communities renewed
November, 1998	Training workshop/orientation for CF's
December, 1998	Update local resource inventories submitted to SAWCIC and compile for distribution
March, 1999	Participation in 10th Anniversary Symposium
April, 1999	Communities' FY 99 proposals submitted
May, 1999	End of the year projects due for internships
May, 1999	Submit recommendations to Executive Director on community involvement component of FY 99 restoration project proposals; inform CF's of proposals that would include their communities.
Each month	Mail/fax newsletter to CF's
Each month	Report from CF's

B. Project Milestone and Endpoint

The project should be continued as long as there are significant restoration efforts underway. The project should be evaluated on a yearly basis to determine the most efficient way to continue to keep the communities involved in the Trustee Council restoration efforts.

C. Completion Date

Since the objective of this project is to integrate the local communities into the restoration program, this project will continue throughout the life of the restoration effort. The project will be evaluated on a yearly basis to determine how it can best serve the needs of the Trustee Council and the communities.

D. PUBLICATIONS AND REPORTS

Annual reports will be compiled in coordination with ADF&G and submitted to the Chief Scientist on April 15th of each year by CRRC. The annual reports will describe and summarize the progress made toward increasing community involvement during the previous federal fiscal year. In addition, monthly newsletters will be provided to the communities by the SAWCIC and monthly reports will be provided by the CF's to the SAWCIC.

COORDINATION AND INTEGRATION OF RESTORATION EFFORTS

This project is an effort to coordinate the Restoration Program with the local residents and builds on the established relationship between CRRC and the communities in Prince William Sound and Lower Cook Inlet. Under this project, CRRC will work to establish new relationships with Seldovia, Kodiak Island, and the Alaska Peninsula residents.

CRRC is contributing in-kind services to the project through its' other natural resources programs.

PROPOSED PRINCIPAL INVESTIGATOR

Patty Brown-Schwalenberg
Chugach Regional Resources Commission
4201 Tudor Centre Dr., Ste. 300
Anchorage, AK. 99508
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Revise 7/20/98
Approved 8-13-98

1999 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1997	Proposed FY 1998
Personnel		$5.4
Travel		$0.0
Contractual		$221.7
Commodities		$0.0
Equipment		$0.0
Subtotal	$0.0	$227.1
General Administration		$16.3
Project Total	$0.0	$243.4
Full-time Equivalents (FTE)		0.1
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

	Estimated FY 1999	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002	
Project Total	$240.0	$240.0	$240.0	$240.0	

Dollar amounts are shown in thousands of dollars.

Comments:

1999

Prepared: 7-7-98

Project Number: 99052A
Project Title: Community Involvement
Name: Alaska Dept. of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

7/20/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1998
Miraglia		18C	1.0	5.4		5.4
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		1.0	5.4	0.0	
					Personnel Total	$5.4

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1998
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1999

Prepared: 7-7-98

Project Number: 99052A
Project Title: Community Involvement
Name: Alaska Dept. of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

7/20/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed
Description	FY 1998
Contract with Chugach Regional Resources Commission	221.7
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$221.7

Commodities Costs:	Proposed
Description	FY 1998
Commodities Total	$0.0

1999

Prepared: 7-7-98

Project Number: 99052A
Project Title: Community Involvement
Name: Alaska Dept. of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

7/20/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1998
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		New Equipment Total	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Prepared: 7-7-98

Project Number: 99052A
Project Title: Community Involvement
Name: Alaska Dept. of Fish and Game

FORM 3B
Equipment
DETAIL

7/20/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1997 - September 30, 1998

Budget Category:	Authorized FY 1997	Proposed FY 1998
Personnel		$48.5
Travel		$26.0
Contractual		$127.0
Commodities		$0.0
Equipment		$0.0
Subtotal	$0.0	$201.5
Indirect		$20.2
Project Total	$0.0	$221.7
Full-time Equivalents (FTE)		12.0
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

Estimated FY 1999	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002
$220.0	$220.0	$220.0	$220.0

Dollar amounts are shown in thousands of dollars.

Comments:

1999

Prepared: 7-7-98

Project Number: 99052A
Project Title: Community Involvement
Name: Chugach Regional Resources Commission

FORM 4A
Non-Trustee
SUMMARY

7/20/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Personnel Costs:			Months	Monthly		Proposed
	Name	Position Description	Budgeted	Costs	Overtime	FY 1998
	Hugh Short	Community Involvement Coordinator	12.0	4.1	0.0	48.5
				Actual monthly cost		0.0
				is $4,041.67		0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
		Subtotal	12.0	4.1	0.0	
					Personnel Total	$48.5

Travel Costs:		Ticket	Round	Total	Daily	Proposed
	Description	Price	Trips	Days	Per Diem	FY 1998
	Port Graham - Anchorage	0.3	3	8	0.1	1.7
	Tatitlek - Anchorage	0.5	3	8	0.1	2.3
	Chenega Bay - Anchorage	0.5	3	8	0.1	2.30
	Seldovia - Anchorage	0.3	3	8	0.1	1.7
	Nanwalek - Anchorage	0.3	3	8	0.1	1.7
	Seward - Anchorage	0.2	3	8	0.1	1.4
	Cordova - Anchorage	0.3	3	8	0.1	1.7
	Valdez - Anchorage	0.2	3	8	0.1	1.4
	Ouzinkie - Anchorage	0.7	3	8	0.1	2.4
	Chignik Lake - Anchorage	0.7	3	8	0.1	3.2
	Kodiak Island communities - Anchorage (interns for 10th symposium)	0.6	6	24	0.1	6.2
					Travel Total	$26.0

1999

Prepared: 7-7-98

Project Number: 99052A
Project Title: Community Involvement
Name: Chugach Regional Resources Commission

FORM 4B
Personnel
& Travel
DETAIL

7/21/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

Contractual Costs:	Proposed FY 1998
CRRC will subcontract with 10 communities to hire facilitators for this project ($12,000 per community)	120.0
Contract with the Kodiak Island Borough School District to assist in internship coordination	7.0
This will go towards a school district employees salary to coordinate the project, travel to villages from Kodiak, and supplies.	
Contractual Total	$127.0

Commodities Costs:	Proposed FY 1998
Description	
	0.0
Commodities Total	$0.0

1999

Prepared: 7-7-98

Project Number: 99052A
Project Title: Community Involvement
Name: Chugach Regional Resources Commission

FORM 4B
Contractual & Commodities DETAIL

7/20/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1997 - September 30, 1998

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1998
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		New Equipment Total	$0.0

Existing Equipment Usage: Description	Number of Units	

1999

Prepared: 7-7-98

Project Number: 99052A
Project Title: Community Involvement
Name: Chugach Regional Resources Commission

FORM 4B
Equipment
DETAIL

7/20/98

Revision 7/27/98
Approved 8-13-98
(Obj. 1, 2, 4)
Deferred Obj. 3

Traditional Ecological Knowledge

Project Number:	99052B
Restoration Category:	General Restoration
Proposer:	Chugach Regional Resources Commission
Lead Trustee Agency:	ADF&G, Division of Subsistence
Cooperating Agencies:	None
Alaska SeaLife Center:	
Duration:	2 years; may be continued
Cost FY 99:	$46,100.00
Cost FY00:	
Cost FY01:	
Geographic Area	Spill Area Wide
APR 1 5 1998	
Injured Resource/Service	All Resources/Services

ABSTRACT

The project, which is one component of the Community Involvement Project (99052A), would fund a TEK (Traditional Ecological Knowledge) Specialist to (1) provide technical assistance to project 99320T - supp., (2) provide technical training to community members to build local capacity for research and management involving TEK, (3) organize and facilitate Information Workshops between PIs and community experts, and (4) serve as a contact point for spill area communities, the community facilitators and spill area wide coordinator hired under Project /052A, and principal investigators on issues related to TEK.

INTRODUCTION

This project would continue work begun under the Community Involvement and Use of Traditional Knowledge Project (/052). Much progress has been made in making Principal Investigators (PIs) aware of the availability and value of traditional knowledge. This project would continue the EVOS Trustee Council's initiative to enhance community involvement in the restoration program through the application of traditional ecological knowledge (TEK) in Trustee Council-funded projects. In FY 99, there are four primary tasks: (1) provide technical assistance to project 99320T - supp., (2) provide technical training to community members to build local capacity for research and management involving TEK, (3) organize and facilitate Information Workshops between PIs and community experts, and (4) serve as a contact point for spill area communities, the community facilitators and spill area wide coordinator hired under Project /052A, and principal investigators on issues related to TEK.

To meet these goals, this project would provide funds to contract with a TEK Specialist. In FY 99 the TEK specialist would (1) serve as a contact point for spill area communities, the community facilitators and spill area wide coordinator hired under Project /052A, and principal investigators on issues related to TEK, (2) provide technical assistance to Jody Seitz in her work to document TEK of herring under the SEA program; (3) conduct technical training for community members on methods to conduct TEK assessments and cataloging, and (4) organize and coordinate four Information Workshops between PIs and community members.

NEED FOR THE PROJECT

A. Statement of Problem

Through the efforts of the Community Involvement project (/052A) and the TEK project to date (/052B), progress has been made toward making principal investigators aware of the value of traditional ecological knowledge for their projects. Traditional ecological knowledge was a major theme of the annual Restoration Science Workshop in January 1996. Principal investigators have requested technical assistance in the collection of traditional knowledge. This project would continue to provide that assistance.

B. Rationale: Link to Restoration

People living in the spill area have detailed knowledge about the condition of resources, which can add to data collected as part of scientific studies and may enhance the success of the restoration effort. This includes knowledge of the historic population sizes and ranges of many of the species injured by the spill, as well as observations concerning the diet, behavior and interrelationships of injured species. This information can help researchers evaluate the injury and recovery status of these species. In addition, long-term stewardship and protection of land throughout the oil-impacted region will require the cooperation between the major landholders within the region, including Native corporations and state and federal managing agencies, and those living within the communities in the region . In order to build relationships between the major landholders and those living in oil-impacted communities to cooperatively manage the land, the local residents need the tools to develop stewardship programs that will protect the land. TEK is one of the pieces of the puzzle when discussing cooperation between state and federal agencies and local residents in the long-term stewardship, protection, and community-based co-management of injured resources.

C. Location

Spill area wide, including Prince William Sound, the lower Kenai Peninsula, Kodiak and the Alaska Peninsula

COMMUNITY INVOLVEMENT

Community involvement is a major emphasis of this project. The project would foster communication between the principal investigators and residents of the communities impacted by the oil spill. The TEK Specialists would work closely with the Spill Area Wide Community Involvement Coordinator and the local facilitators hired under the Community Involvement project (/052A) and with the Youth Area Watch (Project /210) students.

PROJECT DESIGN

A. Objectives

1. Use the TEK as the primary contact point for spill area communities and principal investigators on issues related to TEK. Also incorporate Community Facilitators and Spill Area Wide Community Involvement Coordinator as needed as additional contact points.

2. Continue to provide technical assistance to Jody Seitz in her work documenting TEK of herring, a project carried out under SEA (99320T), including assistance on documentation, interpretation, analysis, and reporting.

3. Following a recommendation developed at the community facilitators retreat in June 1998 and subsequently endorsed by the Village Councils, conduct Technical Workshops to train community members in methods of documenting, analyzing, and using TEK. The goal of these technical sessions is to build local capacity to engage in and undertake research and management projects involving the use of TEK to promote long-term stewardship of the region's resources, complementing training work in related areas provided by CRRC, ADF&G, and others.

4. Organize and coordinate at least four Information Workshops, bringing together PIs and community members to discuss topics of mutual interest and significance. These workshops will help in the application of TEK to restoration by engaging local experts in the analysis of research findings, and will help communicate the results of research project(s) by substantive dialogue between scientists and community members.

B. Methods

The TEK Specialist will be contracted to carry out the objectives of this project. The methods for each objective are:

1. *Serve as a contact point.* PIs and community members will be informed about the position and role of the TEK Specialist, and encouraged to contact him/her for advice on including a TEK component in their research and related activities. Since this position is currently in its second year, publicity has been good and a number of useful contacts have already been made. As before, interaction between the TEK Specialist and the Principal Investigators may occur in one of two ways. Either the PI will approach the TEK Specialist with a request for information, or the TEK Specialist will approach a PI to suggest the use of traditional knowledge. In either case, if both agree a TEK component would be of benefit to restoration, the TEK Specialist and the Principal Investigator will work together to formulate a research tool in order to elicit the desired information. The TEK Specialist will work closely with the Spill Area Wide Community Involvement Coordinator (Project /052A) to ensure appropriate community involvement in the TEK effort.

2. *Technical assistance.* The TEK Specialist has been providing technical assistance to Jody Seitz in her efforts to document TEK of herring in Prince William Sound and the outer Kenai Peninsula. This work has gone well, with the TEK Specialist accompanying Seitz on some of her research trips to interview fishermen, pilots, and others, and also providing advice and ideas for documenting and reporting the compiled information. As Seitz prepares to complete her project and prepare final reports and journal publications, the TEK Specialist will continue to provide assistance as needed. The work will include traveling to Cordova to work with Seitz, possibly traveling to one or more communities to give final reports (possibly in the form of an Information Workshop), and correspondence related to reports and journal manuscripts. (Note that this

component of the project was contained in the original FY 99 SEA budget, but has been moved here to consolidate the TEK activities funded by the EVOS Trustee Council.)

3. *Technical training*. Under 97052B and 98052B, we conducted a TEK training workshop in Port Graham on January 19-21, the goals of which were to increase community awareness and understanding of TEK, its use, and the implications of TEK research. This workshop served it purpose, and at the community facilitators' retreat held in June 1998, the facilitators expressed a strong desire to change from general training to specific training in the technical aspects of designing, planning, conducting, and reporting of TEK research. This change has been endorsed by several Village Councils in the weeks following the retreat. The TEK manual developed by the Alaska Department of Fish & Game, Subsistence Division, has been helpful in identifying points that should be covered in the technical workshops. These workshops are the next logical step in this process. We propose to conduct the training by holding two workshops in Anchorage. The first would introduce the purpose and methods of TEK research, giving workshop participants an understanding of how and why TEK research is conducted. After the first workshop, the participants would be responsible for exploring these ideas in their communities before the second workshop. At the second workshop, we would discuss specific ideas that the participants have, and develop plans for projects to carry out those ideas. Funding for the actual projects would be sought separately from this project.

Participants in the training sessions will be chosen by the communities, but are expected to be persons with a strong interest in community-based stewardship and a commitment to following through on their training. The Community Facilitators hired under /052A, the Tribal Natural Resource Specialists hired by the village councils and trained by the Chugach Regional Resources Commission, and persons in similar positions elsewhere are potential candidates for the workshops. Ideally, the TEK training provided here would complement training provided by the Division of Subsistence training to be held for the subsistence services assessment, in an effort to enhance community capacity for local research and management activities. The TEK technical training proposed here will not be addressed by these other programs. In conducting the Technical Workshops, we will work with those involved in other training efforts such as the Natural Resource Specialist training in many villages and the ongoing mission of CRRC to train in all aspects of resource management and, using these various methods, maximize the benefits to the communities and individuals taking part.

4. *Information Workshops*. Two Information Workshops were held in FY98, one in Tatitlek and one in Port Graham, both with Dan Rosenberg of ADF&G on sea ducks. A third was to be held in Chenega Bay in March involving Rosenberg and researchers from the NVP program, but was postponed due to weather. It may be rescheduled for September.

For the FY99 Information Workshops, the TEK Specialist will identify PIs who are interested in utilizing TEK expertise through focused discussions, or Information Workshops, with community experts. So far, we have indications of interest from communities on seals and herring, and the Community Involvement Coordinator is helping to contact PIs to determine their interest.

Once interested PIs and communities have been identified, the TEK Specialist will work with the PIs and the communities to schedule, prepare for, facilitate, and report on the workshops. The workshops will last 2-3 days, and will be limited to the PIs, local experts identified by the community, and a facilitator (probably the TEK Specialist). The workshops will likely be held during late fall, winter, or early spring. Preparations for the workshop will include distributing relevant information, discussing the objectives of the workshop with the participants, and creating a list of topics to be covered. The workshops will be held in a setting chosen to encourage interactions between participants, both during formal discussions and informally at other times. Following the workshops, the participants will hold a community meeting to share the results of their discussions with community members. The TEK Specialist will prepare a report of the

workshop, incorporating the views and comments of the participants and making recommendations for future workshops as appropriate.

The goal of the workshops is to promote substantive interactions between Pls and community members on topics related to spill area resources, restoration and stewardship. This will be achieved by focusing discussions on the Pls' research and findings, and local observations related to the subject of research. There are five objectives for the workshops:

A. to help the Pls and community members understand each other's perspectives;
B. to see whether and how the information each has can help the other understand better what is happening to the resources and the ecosystem;
C. to analyze together the various observations and findings, to see if a common understanding can be reached regarding the state of the resource and the need for further information;
D. to determine whether further collaboration between the PIs and the communities will help better understand or manage the resource; and
E. to plan future collaboration, if desired.

Not all objectives may be relevant to every workshop, and the overall success of each workshop will be evaluated less on the number of objectives achieved and more on the quality of interaction for each achieved objective.

In FY99, it is expected that four Information Workshops will take place. Potential workshops include seal and herring research projects in Tatitlek and Chenega Bay.

TEK Specialist: Duties and Responsibilities

1. Serve as a contact point for spill area communities, the community facilitators and spill area wide coordinator hired under Project /052A, and principal investigators on issues related to TEK. (with #2, .25 months)

2. Review the FY00 workplan to identify restoration projects that may benefit from a TEK component, initiate contact with the PI(s) to determine whether adding a TEK component is desired and feasible, and develop plans for such a component.

3. Provide technical assistance to Jody Seitz in the conduct and reporting of project 99320T on TEK of herring. (1 month)

4. Provide technical training to community members through two Technical Workshops as described above. (.75 month)

5. Organize and facilitate Information Workshops as described above. (1.5 months)

C. Cooperating Agencies & Organizations

National Park Service, and other Trustee Council agencies as appropriate

SCHEDULE

A. Measurable Project Tasks for FY99 (October 1, 1998-September 30, 1999)

October 1, 1998	Contract between ADF&G and CRRC renewed
October 1998	TEK Specialist contract renewed Identify community interest in and priorities for Information Workshops Initiate contact with appropriate PIs regarding their participating in the Information Workshops Plan Technical Workshops and work with communities to select participants and schedule the workshops
October 1998 to September 1999	Work with Seitz to prepare reports and journal manuscripts (exact schedule to be determined by Seitz)
November 1998 to April 1999	Hold four Information Workshops; prepare reports Hold two Technical Workshops; prepare reports
March 1999	Attend 10th Anniversary Symposium and make contacts with PIs re: including TEK component in FY00 proposals
May 1999	Review all proposals submitted for FY00 and develop recommendations for Executive Director re: TEK
July 1999	Review all projects recommended for funding in FY99 to determine which would benefit from a TEK component
July to September 1999	Work with Community Involvement Coordinator and others to evaluate FY99 work and prepare for FY00 activities

B. Project Milestones and Endpoints

October 1998	TEK Specialist contract renewed
October 1998	Information and Technical Workshop planning begins
November 1998	Information and Technical Workshops scheduled and initiated
April 1999	Information and Technical Workshops completed, reports done
Ongoing	Provide technical assistance to Seitz

C. Completion Date April 15, 2002

PUBLICATIONS AND REPORTS

An annual report on the development, progress, and accomplishments of this TEK project will be provided to the Trustee Council on April 15, 2000. Reports on the Information Workshops will be prepared and completed by September, 1999. These reports will summarize discussions held during the workshops, and identify what was gained by the participants.

Following the Information and Technical Workshops, the TEK Specialist, Community Involvement Coordinator, community participants, and PIs involved will review whether publication of results in a peer-reviewed journal is desirable and feasible. If so, manuscript(s) will be prepared for appropriate journals. Consideration will also be given to publishing a review of the TEK effort as a whole.

PROFESSIONAL CONFERENCES

Participation in professional conferences is not anticipated during this year of the project.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This project is focused more than most on the coordination and integration of the restoration effort. The TEK Specialist will work with the Principal Investigators of other projects, providing a service that is expected to benefit those projects and the restoration effort as a whole. This project will also be closely coordinated with the Community Involvement Project (99052A), and the Youth Area Watch Project (99210).

EXPLANATION OF CHANGES IN CONTINUING PROJECTS

This project has been modified to address the suggestions provided by the community facilitators at the July 1998 retreat in order to improve the outcome of the project objectives. Specifically, the training workshops conducted in FY98 will not be held in FY99. These workshops were held to develop community understanding of the benefits and implications of working with TEK. This objective was met in FY98 and does not need to be repeated. In addition, the synthesis workshops are being replaced by information workshops. This is due to the fact that after conducting the synthesis workshops, it was determined that information workshops held in the communities on important subsistence resources would be of more value to the communities and principle investigators alike. The project will also include a component for technical training in the aspects of designing, planning, conducting, and reporting of TEK research. This training is more fully described on page four of this DPD. Finally, all parties involved in this project have mutually agreed to disband the TEK Advisory Group. Their function in previous years was to provide technical assistance and advice to the TEK Specialist in setting up the project and determining project objectives and how best to meet those objectives. We feel the TEK Advisory Group has served their role, and will not be needed through the remainder of the project. The TEK Specialist has maintained and will continue to maintain a good working relationship with the TEK Advisory Group members, and can still call upon them informally as the need arises.

PROPOSED PRINCIPAL INVESTIGATORS

Patty Brown-Schwalenberg, Executive Director
Chugach Regional Resources Commission
4201 Tudor Drive, Suite 300
Anchorage, Alaska 99508
Phone: 907/562-6647
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TEK Specialist
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Revision 1 - 10-98
approved TC 12-15-98
(interim + balance)

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel		$0.0
Travel		$0.0
Contractual		$36.4
Commodities		$0.0
Equipment		$0.0
Subtotal	$0.0	$36.4
General Administration		$2.5
Project Total	$0.0	$38.9
Full-time Equivalents (FTE)		0.0
Other Resources		

LONG RANGE FUNDING REQUIREMENTS					
	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		

Dollar amounts are shown in thousands of dollars.

Comments:

FY 99

Prepared: 12-10-98

Project Number: 99052B
Project Title: Traditional Ecological Knowledge
Agency: ADFG

FORM 3A
TRUSTEE
AGENCY
SUMMARY

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Personnel Costs: Name	Position Description	GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FY 1999
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs: Description	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FY 1999
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

FY 99

Prepared: 12-10-98

Project Number: 99052B
Project Title: Traditional Ecological Knowledge
Agency: ADFG

FORM 3B
Personnel
& Travel
DETAIL

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Contractual Costs:		Proposed FY 1999
Description		
4A Linkage	Cooperative Agreement with Chugach Regional Resources Commission	36.4
When a non-trustee organization is used, the form 4A is required.	Contractual Total	$36.4

Commodities Costs:	Proposed FY 1999
Description	
Commodities Total	$0.0

FY 99

Prepared: 12-10-98

Project Number: 99052B
Project Title: Traditional Ecological Knowledge
Agency: ADFG

FORM 3B
Contractual & Commodities DETAIL

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		New Equipment Total	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

FY 99

Prepared: 12-10-98

Project Number: 99052B
Project Title: Traditional Ecological Knowledge
Agency: ADFG

FORM 3B
Equipment
DETAIL

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel		$0.0
Travel		$15.2
Contractual		$17.9
Commodities		$0.0
Equipment		$0.0
Subtotal	$0.0	$33.1
Indirect		$3.3
Project Total	$0.0	$36.4
Full-time Equivalents (FTE)		0.0
Other Resources		

LONG RANGE FUNDING REQUIREMENTS					
	Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		

Dollar amounts are shown in thousands of dollars.

Comments:

FY 99

Prepared: 12-10-98

Project Number: 99052B
Project Title: Traditional Ecological Knowledge
Name: Chugach Regional Resources Commission

FORM 4A
Non-Trustee
SUMMARY

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Personnel Costs: Name	Position Description		Months Budgeted	Monthly Costs	Overtime	Proposed FY 1999
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs: Description	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FY 1999
Technical Workshop					0.0
(1 workshop x 15 participants x 3 days)					10.0
Project Assistance					0.0
(Henry Huntington; 2 trips, 3 days each)					1.2
Informational Workshops					0.0
(Henry Huntington, prep. & workshop trips; 8 trips, 2.5 days each)					3.0
PI Travel to Synthesis Workshops					0.0
(Some PIs would cover their own travel, this would help those without a budget for it; 3 trips, 3 days each)					0.0
					1.0
					0.0
					0.0
					0.0
				Travel Total	$15.2

FY 99

Prepared: 12-10-98

Project Number: 99052B
Project Title: Traditional Ecological Knowledge
Name: Chugach Regional Resources Commission

FORM 4B
Personnel
& Travel
DETAIL

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed
Description	FY 1999
TEK Specialist (Henry Huntington)	17.9
Contractual Total	$17.9

Commodities Costs:	Proposed
Description	FY 1999
Commodities Total	$0.0

FY 99

Prepared: 12-10-98

Project Number: 99052B
Project Title: Traditional Ecological Knowledge
Name: Chugach Regional Resources Commission

FORM 4B
Contractual & Commodities DETAIL

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		New Equipment Total	$0.0

Existing Equipment Usage: Description	Number of Units	

FY 99

Prepared: 12-10-98

Project Number: 99052B
Project Title: Traditional Ecological Knowledge
Name: ADFG

FORM 4B
Equipment
DETAIL

Revision 7-7-98
Approved TC 8-13-98

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel	$116.4	$109.2
Travel	$9.8	$7.8
Contractual	$92.9	$91.3
Commodities	$29.4	$32.2
Equipment	$0.0	$0.0
Subtotal	$248.5	$240.5
General Administration	$24.0	$22.8
Project Total	$272.5	$263.3
Full-time Equivalents (FTE)	1.8	1.5
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

Estimated FY 2000	Estimated FY 2001	Estimated FY 2002		
$130.0	$0.0			

Dollar amounts are shown in thousands of dollars.

Comments:

This proposal is for an ongoing harbor seal study. It provides information on population trends, movements, and ecology of harbor seals, including changes in diet, in order to identify causes of the apparently ongoing decline among harbor seals in central PWS. The research component in FY 99 will emphasize pup seals and the analysis of previously gathered telemetry data on adults.

None of the costs identified in this budget are for NEPA compliance. Marine mammals projects obtain permits required under the Marine Mammal Protection Act from NOAA as part of routine operations. Costs for workshop and meeting attendance are identified under travel costs and total $1.6 K. There are no additional costs for professional conferences in FY 99. Community involvement (Harbor Seal Commission meeting) cost is $0.7 K.

The proposed FY 99 budget is within the guideline presented in the FY 99 Invitation to Submit Restoration Proposals. This project achieves major cost savings by collaborating with other studies and agencies to conduct this work. For example,ADF&G receives funds to conduct harbor seal studies in other parts of Alaska. This enables investigators to share costs for equipment, coomputers and software, as well as new methodologies and approaches to data analysis. Costs for fatty acid model development will be shared with Scotian Shelf research projects. Fatty acid samples to be use din comparisons of PWS and other geographic areas will be provided by other ADF&G harbor seal studies.

APD 2

FY 99

Project Number: 99064
Project Title: Monitoring. Habitat Use and Trophic Interactions of Harbor Seals in Prince William Sound
Agency: ADF&G

FORM 3A
TRUSTEE
AGENCY
SUMMARY

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
K. Frost	WBIII - Program Coordinator and Mngt	18K	8.0	6.5		52.0
L. Lowry	WBIV-Permits, Analysis & Interpretation	20J	3.5	7.0		24.5
R. DeLong	Analyst Programmer III-GIS Programmin	17F	1.5	6.0		9.0
J. Ver Hoef	Biometrician II - survey statistical analysis	19F	1.0	6.4		6.4
G. Sheffield	WBI - data anlysis and graphics	14A	3.0	4.0		12.0
G. Pendleton	Biometrician II - sat tag analysis	19B	1.0	5.3		5.3
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		18.0	35.2	0.0	
					Personnel Total	$109.2

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
Fbks-Cordova for Aug surveys, 1 person	0.5	1	12	0.1	1.7
Fbks-Anchorage, tagging, 2 persons X 1 field trip	0.3	2	2	0.1	0.8
PWS-Anchorage 1-way charter, crew rotation	0.1	1	0	0.0	0.1
Portage-Whittier by train (2 vehicles per trip)	0.8	2	0	0.0	1.6
Fbks-Portage, personal vehicles	0.3	2	0	0.0	0.6
Fbks-Cordova?, Harbor Seal Commission, 1 person	0.5	1	2	0.1	0.7
Fbks-Anchorage, annual workshop, 1 person	0.2	1	5	0.1	0.7
Fbks-Anchorage, coordination committee, 1 person	0.2	1	2	0.1	0.4
Rental car, Cordova for surveys			12	0.1	1.2
					0.0
					0.0
				Travel Total	$7.8

FY 99

Project Number: 99064
Project Title: Monitoring. Habitat Use and Trophic Interactions of Harbor Seals in Prince William Sound
Agency: ADF&G

FORM 3B
Personnel
& Travel
DETAIL

Prepared: 7 July 1998

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed
Description	FY 1999
NOAA contract and ARGOS expenses for ARGOS satellite data, new FY 99 tags	10.0
Print/graphics (slides for workshops, report production, summary for villages)	0.3
Long distance phone calls	0.3
Postage (DHL, courier, etc.)	0.2
Trailer parking & launch fees, Whittier ($100/vehicle X 2 vehicles)	0.2
Aircraft charter 30 hrs @ $.23/hr	6.9
Vessel charter for tagging/sampling @ 1.8/day x 12 days	21.6
Lipid analysis contract with Dalhousie University	40.8
Freight and shipping of samples	1.0
RSA with UAF for Bayesian survey analysis	10.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$91.3

Commodities Costs:	Proposed
Description	FY 1999
Fuel for boats and skiffs	0.5
Biopsy punches, flipper tags, epoxy. tag supplies, film, net	1.0
Small boat supplies (propellers, oars, oil, etc.)	1.5
Laboratory supplies (D2O, cryovials, vacutainers, etc.)	1.5
Repair supplies for skiffs, net, etc.	1.0
6 satellite tags @ $4.2/unit (from Wildlife Computers)	25.2
Misc. field and meeting supplies (waterproof notebooks, bindings, marine charts, batteries, etc.)	0.5
Computer supplies and software for graphics, GIS, and other analyses	1.0
Commodities Total	$32.2

FY 99

Project Number: 99064
Project Title: Monitoring. Habitat Use and Trophic Interactions of Harbor Seals in Prince William Sound
Agency: ADF&G

FORM 3B
Contractual & Commodities DETAIL

Prepared: 7 July 1998

FY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases:	Number	Unit	Proposed
Description	of Units	Price	FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage:	Number	Inventory
Description	of Units	Agency
Equipment used by project, purchased with oil spill funds		
Leitz binoculars	1	ADF&G
HP LIID Printer	1	ADF&G
Compaq 286 Computer	1	ADF&G
Zodiac Raft	1	ADF&G
Equipment used by project, but purchased with non-oil spill funds		
20 ft Boston whaler	1	ADF&G
17 ft Boston whaler	1	ADF&G
Seal nets	1	ADF&G
2 486 computers + Plotter	1	ADF&G
Printer	2	ADF&G
Color printer	1	ADF&G

FY 99

Project Number: 99064
Project Title: Monitoring. Habitat Use and Trophic Interactions of Harbor Seals in Prince William Sound
Agency: ADF&G

FORM 3B
Equipment
DETAIL

Prepared: 7 July 1998

Approved TC 8-13-98

Monitoring of Oiled Mussel Beds in Prince William Sound

Project Number:	99090
Restoration Category:	Monitoring
Proposer:	P. Harris, C. Brodersen/NOAA
Lead Trustee Agency:	NOAA
Cooperating Agencies:	None
Alaska SeaLife Center:	No
New or Continued:	New
Duration:	1st yr. 2 yr. project
Cost FY 99:	$150.0
Cost FY 2000:	
Cost FY 01:	$0.0
Cost FY 02:	$0.0
Geographic Area:	Prince William Sound
Injured Resource/Service:	Mussels, intertidal communities, subsistence

ABSTRACT

This project will monitor mussel densities and hydrocarbon concentrations in mussels and sediments in 28 mussel beds in Prince William Sound. Twelve of these beds were restored in 1994; mussel hydrocarbon concentrations decreased significantly and replaced sediments remained clean through 1995. 1996 samples, however, indicated recontamination of the replaced sediments and the potential for recontamination of mussels in some restored beds. To compare the efficacy of restoration efforts to long-term natural recovery, we propose to monitor an additional 16 beds that were untreated and remained oiled when they were last sampled (1995). To complete the design, two unoiled reference beds will also be re-sampled.

INTRODUCTION

Many blue mussel (*Mytilus trossulus*) beds impacted by the *Exxon Valdez* oil spill (EVOS) were not cleaned by the EVOS Interagency Shoreline Cleanup Committee to minimize damage to the beds. Natural processes did not quickly reduce the substantial amounts of *Exxon Valdez* oil (EVO) remaining in mussels and sediments underlying mussel beds. In 1992, the Auke Bay Laboratory and National Park Service (Restoration Project R103) documented 50 mussel beds in Prince William Sound (PWS) and 9 on the Kenai and Alaska Peninsulas with underlying sediment concentrations greater than 1700 μg/g total petroleum hydrocarbons (TPH) wet weight; 25 of the beds in PWS had concentrations in excess of 10,000 μg/g TPH. The highest oil concentrations found in animals or sediments in 1991 and 1992 by any researchers in the *Exxon Valdez* spill area were in mussel beds and underlying sediments in PWS. Persistent high concentrations of hydrocarbons in mussels were identified as a possible source of impacts in several consumer species and could also impact human subsistence users.

Attempts to manipulate mussel beds to reduce hydrocarbon levels in 1992 and 1993 (projects R103-1 and 93036) were minimally intrusive and minimally effective. Small scale removal of strips of mussels to increase water circulation through the beds and thereby reduce hydrocarbon levels was effective only in the sediments of the strips themselves. Transplanting small patches of oiled mussels to nearby clean sediments reduced hydrocarbons in those mussels, but mussel mortality was high. (Babcock et al. in prep.). Overall hydrocarbon concentrations in the five manipulated beds remained high in 1993 (Babcock et al.1996).

The scale of restoration was increased therefore in 1994 (project 94090) at the request of Chenega Bay residents. We manually removed oiled mussels, replaced oiled sediments underlying the mussels with clean sediments, and replaced mussels onto the clean sediments in 12 of the most impacted mussel beds. Hydrocarbon levels in the clean replaced sediments remained low from late summer 1994 through early summer 1995, and total polyaromatic hydrocarbons (TPAH) in mussels were greatly reduced by 1995. However, in 1996 when restored beds were last sampled, TPH concentrations in sediments directly under the mussels ranged from 340 to 9000 µg/g, indicating recontamination in 6 of the 12 beds. Mussel densities showed overall decline in most restored beds from the fall of 1994 to summer 1995. Declines were also observed in reference beds and therefore were not necessarily linked to restoration (Babcock et al. in prep.).

In most untreated beds, hydrocarbon concentrations in mussels and underlying sediments declined at variable rates. Environmental differences between sites as well as differences in the distribution and amount of subsurface oil affected the rate of decrease. In 1995, 16 sampled mussel beds in PWS remained oiled; TPH in sediments ranged up to 20,000 µg/g wet weight and TPAH in mussels ranged up to 4.5 µg/g dry weight. Dates of return to pre-spill concentrations in sediments in those beds, estimated by regression analysis of 1992-1995 data, ranged from 1996 to 2003. (Pre-spill concentrations are defined as 50 ug/g TPH wet weight in sediments and 0.09 µg/g TPAH dry weight in mussels, based on minimum detection limits of analytical instruments and historical data from unoiled sites). The 16 untreated beds have not been sampled since 1995; 3 of them were still visibly oiled in the spring of 1997.

Further sampling is needed to measure hydrocarbon concentrations and estimate mussel densities to 1) evaluate the effectiveness of restoration techniques, 2) evaluate natural recovery rates with respect to expected rates of recovery predicted by regression analysis, 3) examine the degree and pattern of weathering of oil in both restored and untreated beds, and 4) assess mussel bed health. The final report should provide a comprehensive picture of recovery in both restored and naturally recovering mussel beds.

NEED FOR THE PROJECT

A. Statement of Problem

Mussels remain an important food source in PWS intertidal communities, particularly for some predators (e.g. harlequin ducks, sea otters, and black oystercatchers) whose recovery is not yet certain. Additionally, mussel beds provide habitat for many other invertebrate species. Continued monitoring of hydrocarbons in mussel beds is warranted until this contaminated habitat has fully recovered. Human subsistence users need to know whether mussels and other species trophically linked to the beds are oil free. Untreated mussel beds have not been sampled since 1995, so their hydrocarbon levels are unknown. The patterns of concentration decline from 1991 to 1995, and observations of visible oiling in some mussel beds in early 1997, indicate that many beds have not returned to pre-spill concentrations. Sediment recontamination in half of the restored beds necessitates further monitoring of these beds.

B. Rationale/ Link to Restoration

Human subsistence harvesters and researchers studying mussel predators need to know if petroleum hydrocarbons still persist in mussel beds. Although the areal extent of contaminated mussel beds is small in proportion to the total area of beds in PWS, the oiled beds are the worst remaining known source of *Exxon Valdez* Oil (EVO) contamination. Monitoring the gradual return to pre-spill conditions of these beds is basic to all other *Exxon Valdez* Oil Spill (EVOS) studies.

The long term effectiveness of natural recovery and restoration techniques should be assessed to provide guidance in the event of other spills. Oiled beaches remain a problem for PWS residents, prompting this study and other chemical restoration activities.

C. Location

The mussel beds to be evaluated are in the oil-impacted areas of PWS (Knight Island, Disk Island, Eleanor Island, Chenega Island, Latouche Island, Squirrel Island, and Applegate Island) and two not impacted areas, Olsen Bay in eastern PWS and Drier Bay on Knight Island. Residents of Chenega Bay use the beaches near several of the oiled mussel beds.

COMMUNITY INVOLVEMENT AND TRADITIONAL ECOLOGICAL KNOWLEDGE

The results will be reported in non-technical terms to the Chenega Bay Village Council in writing, and if the Council so requests, at a public meeting in Chenega Bay as well. Students from the Youth Area Watch Program, especially those from Chenega Bay will be invited to participate in sampling.

PROJECT DESIGN

A. Objectives

1. Measure hydrocarbon concentrations in mussels and underlying sediments, and mussel densities, in beds that were restored in 1994 to evaluate degree of recontamination and to assess mussel bed health. Similar measures will be taken in uncleaned control beds for comparison.

2. Measure the hydrocarbon concentrations in mussels and underlying sediments and mussel densities in untreated mussel beds that remained contaminated with EVO in 1995. Similar measures will be taken in uncleaned control beds for comparison.

B. Methods

Our working hypotheses are 1) that the beds restored in 1994 have remained clean and intact and 2) that sediment and tissue hydrocarbon concentrations in untreated oiled PWS mussel beds have returned to pre-spill levels. Data to be collected are TPH (sediments) and TPAH (mussels) concentrations and mussel densities (mussels/m^2).

Objective 1

Site Selection

Sites to be sampled include those restored in 1994 and adjacent uncleaned beds that represent natural restoration.

Restored Mussel Beds Proposed for sampling in 1999

Beach Segment*	Geographic Name	Notes
CH10B-2A	Chenega Island	originally sampled as 2 beds, now as 1 with 3 zones
CH10B-2B	Chenega Island	
CH10B-2C	Chenega Island	
CH10B-2D	Chenega Island	uncleaned reference bed
DI067A-1	Disk Island	
DI067A-2AL	Disk Island	
DI067A-2AR	Disk Island	

DI067A-2B	Disk Island	
DI067A-2C	Disk Island	uncleaned reference bed
EL011A-B	Eleanor Island	
EL011A-C	Eleanor Island	
EL011A-D	Eleanor Island	uncleaned reference bed
KN113B-2	Herring Bay	sample 2 depths and up slope area
SL001D-2	Squirrel Island	

* nomenclature follows the interagency Shoreline Cleanup Assessment Team (SCAT) shoreline assessment segment designations. Where we sampled multiple oiled mussel beds within one segment, they are designated with a number following the segment number.

Sampling

Within each of these beds, triplicate pooled samples of mussels and of sediments will be collected at 8 random spots and placed in hydrocarbon-free glass jars. Approximately 20 mussels, will be collected by hand; the sediments will be collected with a hydrocarbon-free spoon. In 1992, intensive sampling indicated 3 distinct zones of oiling at CH010B-2A (Harris et al. 1996). These zones were obscured when the bed was cleaned, at least to a depth of 12 cm, but the recontamination pattern shown in 1996 samples indicates the re-formation of zones. Therefore, at CH010B-2A the initial zones will be re-sampled, so that triplicate pooled samples will be collected from each zone. At most cleaned beds and at the 3 uncleaned reference beds, sediments will be sampled at 3 depths: surface (0-2 cm), deep (4-6 cm), and below replaced sediment depth (>12 cm) to enable us to determine if oil below the replaced layer has recontaminated surficial sediments. Sediments will be sampled at only two depths, surface and deep, at the Herring Bay restored bed (KN113B-2) because oiled sediments were removed down to bedrock. In that bed, the recontamination source in 1996 appeared to be oiled sediments up slope of the restored area so the up slope area will be re-sampled.

All samples will be immediately cooled, and frozen within 6 h. Samples will be given a unique number in the field to facilitate sample tracking through chemical and data analysis and inclusion in a restoration hydrocarbon data base. Mussel densities will be estimated by counting mussels in 2 of the 4 frames within a 0.25 m x 0.25 m sampling quadrat in at least 8 subsites along the transect and will be expressed as mussels/m^2.

Chemical Analysis

Sediment samples will be analyzed by ultraviolet fluorescence as adapted from Krahn et al.(1991) and used successfully at Auke Bay Laboratory since 1992. Concentrations will be reported in µg total hydrocarbons /g wet weight of sediment (TPH). All mussel samples and selected sediments will be analyzed by gas chromatography/mass spectroscopy (GC/MS) for quantitative measurements of individual polynuclear aromatic hydrocarbons (PAH) (Larsen et al., 1992); concentrations will be reported in µg total PAH / g dry weight of mussel or sediment (TPAH). Perylene, which is produced naturally, will not be included in TPAH. At least one sediment sample from each bed will be analyzed by GC/MS to examine the degree and pattern of weathering of EVO if TPH levels in that bed are above pre-spill levels (50 µg/g).

Data Analysis

Hydrocarbon data will be tested for normality and log transformed if necessary to carry out ANOVA to examine differences between sites (1999 data) and sampling times at each site (using 1992-1999 data). A longer time series will be possible for some sites where hydrocarbon samples have been collected since the mid 1970's. Assuming triplicate sampling as proposed, statistical power will be 80% (alpha =0.05) to detect a change or difference of 60% at two sites or two sampling times at the same station (Kinetic Laboratories, 1993). Weathering of EVO will be examined using first-order kinetic loss rate modeling (Short and Heintz 1997) and by change in percent phenanthrenes (Babcock et al. in prep) in mussels and sediments analyzed by GC/MS.

Objective 2

Site Selection:

The 14 oiled mussel beds selected for sampling still contained > 0.09 µg/g TPAH in mussel tissues and/or > 200 µg/g TPH in underlying sediments in 1995. KN004-2 was not sampled in 1995, but was selected because TPAH in mussels was 0.6 µg/g in 1994. Olsen Bay and Barnes Cove, two unoiled reference beds monitored since 1991, will be also be sampled.

Unrestored Mussels Beds Proposed for Sampling in 1999:

Beach Segment*	Geographic Name	Notes
AE005A-2	Applegate Island	
CH009A-3	Chenega Island	
DI067A-6	Disk Island	sampling 2 sediment depths
EL013A	Eleanor Island	sampling of 2 zones, 2 sediment depths
EL015A-3	Eleanor Island	
EV036A	Evans Island	
KN004-2	Bay of Isles	
KN119A	Herring Bay	
KN133A-1	Herring Bay	sampling of 3 zones, 2 sediment depths
KN136A-1	Bay of Isles	
KN136A-3	Bay of Isles	sampling 2 sediment depths
KN505A	Herring Point	
KN575A	Barnes Cove	unoiled reference
LA015E-2	Latouche Island	sampling 2 sediment depths
MA002C	Foul Bay	
OLSEN	Olsen Bay	unoiled reference

Three additional small untreated beds will be sampled, but because these will be sampled similarly to the restored beds they are included under objective 1.

Sampling:

In the untreated beds, mussel and sediment sampling will follow methods developed by this project in previous years (Babcock et al. 1996). In most of the above beds, a transect, generally 30 m long and parallel to the water line (as topography allows), will be established through the

middle of a mussel bed. Triplicate pooled samples of 20-25 mussels each will be collected approximately every 3 m along the transect and within 1 m above and below the transect and placed in 3 HC-free jars. Three pooled subsamples of surficial sediment (0-2 cm deep) under the mussels will be collected with a HC-free stainless steel spoon into each of three HC-free glass jars. A sample of sediments 4-6 cm below the surface will be taken in 5 beds where samples at that depth have been collected since 1992 to see if initial patterns of oiling related to depth still persist (see table above).

Two beds, KN133A and EL013B, had zones of significantly different concentrations of oil in 1992 (Harris et al., 1996). These beds will be re-sampled by the zones observed in 1992 (rather than by transect) to see if the initial within-bed oiling pattern persists as concentrations have declined. In each zone, three pooled replicate samples of sediments at depths 0-2 cm, 3 pooled replicate sediment samples at depths 4-6 cm, and three replicate samples of mussels will be collected. Sample handing, chemical analysis, and data analysis will follow the procedures discussed under objective 1.

Summary of Sampling and Analytical Methods

Sample Type	Objective 1 Restored Beds	Objective 2 Unrestored Beds	Totals
UV Sediment	141	78	219
GC/MS Sediment*	6	14	20
GC/MS Tissue	48	51	99
TOTAL	189	126	315

* Sediments to be analyzed by GC/MS are subsamples of UV sediment samples and therefore do not affect sample totals for each objective. The maximum number of sediments to be analyzed by GC/MS is 19. Sediments will not be analyzed by GC/MS if TPH concentrations are not above pre-spill levels in a bed.

C. Cooperating Agencies, Contracts, and Other Agency Assistance

No other agencies are involved, and the only contracts involved will be contract labor for sample processing for chemical analyses if Auke Bay Laboratory employees are not available when the work is done.

SCHEDULE

A. Measurable Project Tasks for FY 98 (October 1, 1998 - September 30, 1999)

March - May (2 months)	Arrange logistics, sampling and analytical supplies
May - June (10 flying days)	Collect samples from PWS sites
June - October	Hydrocarbon analyses

B. Project Milestones and Endpoints

Data analysis and reporting for samples collected in summer of 1999 will be completed in winter 2000, with the submission of an Annual Report in April of 2000. A proposal for funding the completion of hydrocarbon analysis, data analysis, attendance at the annual EVOS workshop, and preparation of an annual report will be submitted for FY 2000.

C. Completion Date

If our working hypotheses are shown true (significant amounts of oil are *not* found in PWS mussel beds), our objectives will have been met in April of 2000. If the hypotheses prove false, and significant amounts of oil *are* found, another round of sampling will be proposed for a future year, probably 2002.

PUBLICATIONS AND REPORTS

FY99: none
FY00: final report and 2 manuscripts; Effectiveness of Manual Restoration of Oiled Mussel beds, Natural Recovery of Mussel beds Impacted by EVO

PROFESSIONAL CONFERENCES

FY99: EVOS Symposium
FY00: EVOS workshop

NORMAL AGENCY MANAGEMENT

NOAA/NMFS has statutory stewardship for most living marine resources; however, if the oil spill had not occurred, NOAA would not be conducting this project. NOAA/NMFS proposes to make a significant contribution (as stated in the proposed budget) to the operation of this project, making it truly cooperative.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

Logistics of sampling will be tied as closely as practical to the sampling efforts of the Pristane Monitoring project and the sampling associated with the hydrocarbon monitoring of the Chenega Cleanup project if they continue into 1999. The potential for overlap is great since the same personnel will be involved. Data and results will be shared with other projects, especially those involving mussel predators (Nearshore Vertebrate Predators 99025, Alaska Predator Ecosystem Experiment (99163), and Differentiation/Interchange of Harlequins. Students from the Youth Area Watch (99210) will be invited to participate in sampling.

PROPOSED PRINCIPAL INVESTIGATORS

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Revision -8-98
Approved TC 8-13-98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FY 1998	Proposed FY 1999
Personnel		$96.5
Travel		$15.2
Contractual		$11.3
Commodities		$11.7
Equipment		$0.0
Subtotal	$0.0	$134.7
General Administration		$15.3
Project Total	$0.0	$150.0
Full-time Equivalents (FTE)		1.5
Other Resources		$79.5

Dollar amounts are shown in thousands of dollars.

LONG RANGE FUNDING REQUIREMENTS				
Estimated FY 2000	Estimated FY 2001	Estimated FY 2002	Estimated FY 2003	
$58.0				

Comments:

NOAA's Contribution:
Habitat Program Manager, S. Rice 1 mo. @1 1.3k; chief chemist , J.W. Short 1 mo @8.4k; Co- PI Biologist C. Brodersen 1 mo @ 6.2K,; Co-PI, P Harris 2 mo @4.9k/mo; statistical advisor and editor, Mark Carls, 1 mo. @ 7k

NOAA also contributed the cost of analysis of 1996 sediment samples from restored beds 7K for total NOAA contribution of 49.5K.

1999

Project Number: 99090
Project Title: Mussel Bed Monitoring
Agency: NMFS, Auke Bay Laboratory

FORM 3A
TRUSTEE
AGENCY
SUMMARY

Prepared:7/6/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FY 1999
Harris	Zoologist	GS-9/6	5.0	4.9		24.5
Brodersen	Fisheries Research Biologist	GS-11/7	3.0	6.2		18.6
						0.0
Chem Lab personnel for analyses:						0.0
Holland		GS-11/6	2.0	6.0		12.0
Larsen		GS-11/6	2.0	6.0		12.0
Lunasin		GS-9/6	6.0	4.9		29.4
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		18.0	28.0	0.0	
					Personnel Total	$96.5

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FY 1999
2 trips for 2 perosons Juneau to Cordova	0.4	4	18	0.2	5.2
					0.0
aircraft charter, @$1K/day	1.0	9			9.0
					0.0
travel costs 1999 EVOS symposium, 1 person	0.4	1	3	0.2	1.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$15.2

1999

Project Number: 99090
Project Title: Mussel Bed Monitoring
Agency: NMFS, Auke Bay Laboratory

FORM 3B
Personnel
& Travel
DETAIL

Prepared:7/6/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed
Description	FY 1999
contract labor in chem lab for analyses, and field work 4.5 mo. 2.5k/mo	11.3
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$11.3

Commodities Costs:	Proposed
Description	FY 1999
HC-clean sample jars	0.9
Chem Lab supplies for analyses (solvents , glassware, gasses)	10.8
Commodities Total	$11.7

1999

Project Number: 99090
Project Title: Mussel Bed Monitoring
Agency: NMFS, Auke Bay Laboratory

FORM 3B
Contractual & Commodities DETAIL

Prepared:7/6/98

1998 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FY 1999
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency
computer, printer	4	NOAA
GC/MS	1	NOAA
HPLC	1	NOAA
GPS	1	NOAA
UVF radio	1	NOAA
camera	1	NOAA
freezer	1	NOAA

1999

Project Number: 99090
Project Title: Mussel Bed Monitoring
Agency: NMFS, Auke Bay Laboratory

FORM 3B
Equipment
DETAIL

Prepared:7/6/98

99100

Revision 7-23-98
Approved TC 8-13-9

Science Management, Public Involvement and Administration

Project Number:	99100
Restoration Category:	Science Management, Public Involvement and Administration
Proposer:	Restoration Office
Lead Trustee Agency:	All Trustee Agencies
Alaska SeaLife Center:	n/a
Duration:	Ongoing
Cost FY 96:	$3,439,600
Cost FY 97:	$2,940,500
Cost FY 98:	$2,796,300
Cost FY 99:	$2,495,700
Cost FY 00:	TBD
Cost FY 01:	TBD
Cost FY 02:	TBD
Geographic Area:	n/a
Injured Resource/Service:	Multiple resources and services

ABSTRACT

Project 99100 provides overall support for science management, public involvement and administration of the restoration program through the Restoration Office. This includes funding support for the Trustee Council staff working at the direction of the Executive Director, management of the scientific peer review process, public involvement efforts including the active participation of the 17-member Public Advisory Group (PAG), and support for Trustee agency participation in the restoration program process as part of the Restoration Work Force.

INTRODUCTION

The Trustee Council, established under the terms of a court approved civil settlement in 1991, is comprised of six members: the Commissioner of the Department of Environmental Conservation, the Commissioner of the Department of Fish and Game; the Attorney General of the State of Alaska; the Secretary of the Department of the Interior; the Secretary of the Department of Agriculture; and the Director of the National Oceanic and Atmospheric Administration. In order to manage the settlement funds as directed by the Trustee Council, the Science Management, Public Involvement and Administration project (99100) provides for overall implementation of the restoration program.

This project makes extensive use of existing Trustee Council agency structures to keep administrative costs to a minimum. The proposed Project 99100 budget continues to make reductions in administrative and management costs as the overall work plan is reduced as directed by the Trustee Council. As proposed in FFY 99, the budget of $2,495,700 has been reduced approximately $300,000 below the FFY 98 budget and is consistent with the projected target of $2,500,000.

Components of the 99100 Science Management, Public Involvement and Administration project include:

Alaska Resources Library and Information Services — The Alaska Resources Library and Information Services (ARLIS) serves as a central access point for information generated through the Trustee Council restoration process and as a public repository for reports and other materials generated as a result of the cleanup, damage assessment and restoration efforts following the *Exxon Valdez* oil spill. Staff librarians respond to inquiries from local, state, national, and international patrons, including but not limited to students (preschool to graduate level), educators, scientists, government agency personnel, state and federal legislators, conservationists, commercial and sport fishing interests, recreationists, spill area community residents, the business community, the media, the legal profession, and other libraries.

In FFY 99, the two librarian staff positions formerly located at the Oil Spill Public Information Center (OSPIC) now work with a coalition of libraries including federal, state, university and local government collections that comprise ARLIS. A portion of the former OSPIC functions have been retained by the Restoration Office and absorbed by existing staff (e.g., the Administrative Record will be maintained by the Restoration Office). Also, the Microcomputer Technician position in OSPIC is retained in the Restoration Office to manage the Local Area Network (LAN) and continue work on the Restoration Office web page/database as well as other information service projects.

Chief Scientist and Peer Review Process — The Trustee Council and the Trustee Council-supported principal investigators need access to the best possible scientific knowledge and understanding concerning injured resources and services. This information has been provided continuously by the Chief Scientist and expert peer reviewers since the injury assessment process started in 1989. The Chief Scientist is independently contracted to assist the Executive Director and the Trustee Council. The Chief Scientist draws upon a variety of qualified individuals with expertise in specific fields who provide

individual reviews of project proposals as well as peer review of final project reports.

Operations — The Operations component includes funding for the Executive Director and the Restoration Office staff to provide basic restoration program planning/implementation; intergovernmental and interagency coordination; public information; and overall program management functions of the Trustee Council. The Restoration Office staff works on behalf of all six Trustees collectively rather than for any one particular agency. In response to guidance from the PAG, the Operations budget includes funding for public involvement and outreach efforts including a topical radio broadcast and newspaper article series on restoration projects. This component includes funding for an annual external audit; public meetings and workshops; Trustee Council meetings and transcription services; travel expenses to support participation in various meetings; teleconferences; Public Notice advertising expenses; preparation of annual work plan documents (i.e., annual *Invitation*, Draft Work Plan, final Work Plan); the *Restoration Update* newsletters; the Restoration Notebook series; other publications; and postage for mass mailings. The Operations component also provides funding for staff to maintain the Trustee Council's financial records including the preparation of monthly, quarterly and annual financial status reports. The Science Coordinator, who works in the Restoration Office and reports directly to the Executive Director, works closely with the Chief Scientist in facilitating the scientific review and evaluation process. This budget also includes funding for the lease and operating costs for offices in Anchorage (645 G Street) and a small Juneau office (in the Federal Office Building).

Public Advisory Group — The Public Advisory Group (PAG) consists of 17 members, plus two *ex-officio* members from the Alaska State Legislature. The PAG includes representatives of major interest groups (e.g., tourism/recreation, commercial fishing, Native land owners, forest products, subsistence, local government, science/academia) and five members representing the public-at-large. The PAG helps provide meaningful public involvement including guidance and input to the Trustee Council on such items as the annual work plans, budgets, and overall implementation of the *Restoration Plan*. The Project 99100 budget includes expenses for the PAG, including travel expenses to participate in various meetings. The FY 99 budget proposed reflects continuation-level of funding for the PAG.

Agency Liaisons/Restoration Work Force — The FY 99 budget for the Restoration Work Force includes funding for Trustee agency liaisons as well as travel costs for Trustees to attend Council meetings. This funding supports staff designated by the Trustees (liaisons) who represent the Trustee Council members in matters related to implementation of the restoration program and also assist with the management of individual restoration projects.

NEED FOR THE PROJECT

The project provides the essential management and administration necessary to efficiently implement the restoration program.

A. Statement of the Problem

Implementation of the restoration program as directed by the Trustee Council and guided by the *Restoration Plan* requires overall scientific management, meaningful public involvement and program

administration.

B. Rationale/Link to Restoration

Project 99100 provides essential support to implement the restoration program as directed by the Trustee Council and guided by the *Restoration Plan.*

C. Location

The Trustee Council maintains the Restoration Office in Anchorage (645 G Street, Anchorage, 99501) and a small office in Juneau (709 West 9th Street, Juneau, Alaska, 99801).

COMMUNITY INVOLVEMENT AND TRADITIONAL ECOLOGICAL KNOWLEDGE

Project 99100 supports various aspects of community involvement. This includes public information efforts to assist the general public and spill community residents to learn about and more effectively participate in the restoration program process. The FFY 99 budget also reflects support for some costs (rent, phone-fax, copying) associated with the work of the Community Involvement Coordinator (see project /052) who works out of the Restoration Office.

PROJECT DESIGN

A. Objectives

The fundamental objective of the Science Management, Public Involvement and Administration and project is to implement a comprehensive, balanced restoration program consistent with the *Restoration Plan* and Trustee Council actions.

Specific objectives for FFY 99 include:

1. Implement the authorized FFY 99 Work Plan.

2. Provide access to local, state, national, and international users of restoration program information through the Alaska Resources Library and Information Service (ARLIS).

3. Continue to compile, manage, synthesize, and disseminate information about the Trustee Council results and findings from the restoration program, including: (1) production of the *Restoration Update* newsletter six times per year; and (2) publication of the "Restoration Notebook" series that profiles restoration program knowledge regarding specific injured resources (e.g., harbor seals, Pacific herring).

4. Continue oversight and management of the science program, including the peer review and project evaluation process, under the direction of the Chief Scientist and the Science Coordinator.

5. Sponsor the 10th Anniversary Symposium in March 1999, bringing together scientists, agency staff, Trustee Council staff, academia, and members of the general public to review the status of the restoration program through the adaptive management process.

6. Further refine recovery objectives for injured resources as warranted on the basis of restoration project results and findings.

7. Continue habitat evaluations, appraisals and negotiations with willing sellers under both the Large Parcel and Small Parcel Habitat Protection Programs as applicable.

8. Conduct regular meetings of the Public Advisory Group (PAG) as a means of obtaining public input into the Trustee Council process.

9. Work with the Community Involvement Coordinator and Community Facilitators to inform and involve spill area residents about restoration program activities and findings.

10. Develop the FFY 00 Work Plan, including publication of the initial *Invitation for Project Proposals* and preparation of a Draft Work Plan for public comment.

11. Continue oversight and management of on-going Work Plan restoration projects and expenditures, including the production of quarterly reports that track the status of projects authorized by the Trustee Council.

12. Complete a fifth independent audit.

13. Continue to improve management/inventory of equipment purchased with settlement funds.

B. Methods

All Trustee Council operations are governed by the state and federal laws and regulations that apply to the respective agencies that comprise the Trustee Council.

C. Cooperating Agencies, Contracts and Other Agency Assistance

Multiple agencies are involved in the implementation of Project 99100. The Alaska Department of Fish and Game is the administering agency for most of the Operations functions, although the National Oceanic and Atmospheric Administration receives funding to pay for lease costs for the Juneau office. The Alaska Department of Natural Resources administers the contract for the Chief Scientist/peer review process. The U.S. Department of the Interior receives a small amount of funding for work in support of the Public Advisory Group as a well as funding for participation of a federal budget officer and a contribution to support the operations of ARLIS. All Trustee agencies receive funding for liaison support.

A variety of contracts will be administered under Project 99100, including the Chief Scientist/peer

review contract and the annual external audit. A number of small contracts will also be administered under Project 99100 for support services such as equipment maintenance and publication of documents.

SCHEDULE

The Trustee Council operates on the federal fiscal year (October 1 - September 30).

A. Measurable Project Tasks for FY 99 (October 1, 1998 - September 30, 1999)

Measurable project tasks include holding the 10th Anniversary Symposium and successful development of the FFY 00 Work Plan (including publication of the initial *Invitation*, followed by a *Draft Work Plan* for public comment and then a final Work Plan following Trustee Council action). Other measurable tasks include holding meetings of the Trustee Council and the Public Advisory Group, meetings of the Restoration Work Force, preparation of quarterly financial reports, quarterly project status reports, habitat program status reports, completion of a fifth independent audit, publication of the *Restoration Update* newsletter and the annual restoration program status report.

B. Milestones and Endpoints

Implement FFY 99 Projects/Contracts/BAAs/RSAs:	October-September
10th Anniversary Symposium:	mid-March
Publish annual *Invitation*:	mid-February
Receipt of FFY 00 Project Proposals:	mid-April
Scientific/Technical/Policy/Legal Review of Proposals:	mid-April through mid-August
Publish FFY 00 *Draft Work Plan*:	mid-June
Trustee Council action on FY 99 Work Plan:	mid-August
Executive Director authorizations to proceed:	mid-August (and thereafter)

C. Completion Date

Project 99100 will be complete at the end of federal fiscal year 1999.

PUBLICATIONS AND REPORTS

See above (Measurable Project Tasks).

PROFESSIONAL CONFERENCES

The Project 99100 budget reflects funding for Trustee Council staff to attend national conferences. This includes funding for the Science Coordinator to attend the annual meeting of the American Ornithological Union to confer with experts in seabird ecology and restoration, Restoration Office staff participation in the annual meeting of the Society for Environmental Journalists to provide information concerning the restoration program and travel funds to attend the International Oil Spill Conference.

NORMAL AGENCY MANAGEMENT

Funding in the Project 99100 budget supports the science management, public involvement and administrative functions that are required to implement the *Restoration Plan*. The Restoration Office and the functions included within the Project 99100 budget are budgeted for the sole purpose of supporting restoration program activities and may not be used for other agency purposes.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

At the direction of the Trustee Council, the Executive Director implements Project 99100 to provide overall coordination and integration of the restoration program. As part of the adaptive management process, the Trustee Council sponsors the annual restoration conference that brings together scientists, federal and state resource agency staff, and members of the public to review the status of injured resources and services and refine restoration strategies. In addition, all project proposals are peer reviewed with regard to their coordination and integration aspects. Other coordination efforts include working with the agency liaisons and the Restoration Work Force to implement the restoration program.

EXPLANATION OF CHANGES IN CONTINUING PROJECTS

The most significant changes between FFY 98-Project 98100 and FFY 99-Project 99100 concern continued reductions in funding in parallel with the overall work plan. Significant reductions have been made in contractual funding as well as personal services within the Restoration Office component.

PROPOSED PRINCIPAL INVESTIGATOR

Not applicable to this project.

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	PROPOSED FFY 1999 TRUSTEE AGENCIES TOTALS					
			ADEC	ADF&G	ADNR	USFS	DOI	NOAA
			$61.2	$1,594.3	$555.1	$54.4	$148.4	$82.3
Personnel	$1,338.9	$1,244.4						
Travel	$177.5	$139.7						
Contractual	$993.2	$842.4						
Commodities	$27.0	$27.0						
Equipment	$10.0	$10.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$2,546.6	$2,263.5	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$249.7	$232.2						
Project Total	$2,796.3	$2,495.7	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	17.4	16.9						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

The Project 99100 budget is approximately $300,000 below FFY 98, consistent with the projected target of $2,500,000 for FFY 99. The proposed FFY 99 budget reflects a further reduction of expenses associated with core administrative functions in the Restoration Office while the science management and public involvement components (I.e., Chief Scientist-peer review, ARLIS, PAG and Agency Liaison budget elements) have been maintained at a continuation level for FFY 99.

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management
Agency: Multiple

FORM 2A
MULTI-TRUSTEE AGENCY SUMMARY

PREPARED: 7/24/98

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	PROPOSED FFY 1999 TRUSTEE AGENCIES TOTALS					
			ADEC	ADF&G	ADNR	USFS	DOI	NOAA
			$0.0	$147.7	$0.0	$0.0	$47.9	$0.0
Personnel	$127.2	$128.4						
Travel	$0.0	$0.0						
Contractual	$48.0	$44.8						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$175.2	$173.2	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$22.5	$22.4						
Project Total	$197.7	$195.6	$129.4	$126.4	TBD	TBD	TBD	
Full-time Equivalents (FTE)	2.0	2.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

In FFY 99, two librarian positions will be stationed at ARLIS. The Restoration Office will also fund those partial costs of ARLIS operations associated with continued support of the restoration program mission including personnel costs and a contribution toward lease payment/rent and costs for subscriptions, acquisitions, etc. In FFY 00 and 01, the number of librarian positions at ARLIS will be reduced to one FTE.

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: Multiple

SUMMARY

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	LONG RANGE FUNDING REQUIREMENTS					
Personnel	$127.2	$128.4						
Travel	$0.0	$0.0						
Contractual	$0.0	$0.0						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0						
Subtotal	$127.2	$128.4	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$19.1	$19.3						
Project Total	$146.3	$147.7	$81.4	$81.4	TBD	TBD	TBD	
Full-time Equivalents (FTE)	2.0	2.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

The FFY 99 ARLIS budget reflects a continuation level of funding. In FFY 00, it is anticipated that the ARLIS budget will be reduced to support for one librarian plus a contribution toward other costs (lease, acquisitions/subscriptions).

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: AK Dept. of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1999
Holba	Librarian III	19F	12.0	5.9		70.8
Ballard	Librarian II	17B/C	12.0	4.8		57.6
	Subtotal		24.0	10.7	0.0	
					Personnel Total	$128.4

Travel Costs:		Ticket	Round	Total	Daily	Proposed
Description		Price	Trips	Days	Per Diem	FFY 1999
					Travel Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: AK Dept. of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed
Description	FFY 1999
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed
Description	FFY 1999
Commodities Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: AK Dept. of Fish and Game

FORM 3B
Contractual & Commodities
DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: AK Dept. of Fish and Game

FORM 3B
Equipment
DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	LONG RANGE FUNDING REQUIREMENTS					
Personnel	$0.0	$0.0						
Travel	$0.0	$0.0						
Contractual	$48.0	$44.8						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0						
Subtotal	$48.0	$44.8	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$3.4	$3.1						
Project Total	$51.4	$47.9	$48.0	$45.0	TBD	TBD	TBD	
Full-time Equivalents (FTE)		0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: Dept. of the Interior

FORM 3A
TRUSTEE
AGENCY
SUMMARY

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1999
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1999
				Travel Total	$0.0

1999

Project Number: 98100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: Dept. of the Interior

FORM 3B
Personnel
& Travel
DETAIL

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed
Description	FFY 1999
Building Lease (contribution to ARLIS)	22.4
Subscriptions, acquisitions, other expenses (contribution to ARLIS)	22.4
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$44.8

Commodities Costs:	Proposed
Description	FFY 1999
Commodities Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: Dept. of the Interior

FORM 3B
Contractual & Commodities DETAIL

DRAFT

New Equipment Purchases:	Number of Units	Unit Price	Proposed FFY 1999
Description			
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage:	Number of Units	Inventory Agency
Description		

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - ARLIS
Agency: Dept. of the Interior

FORM 3B
Equipment
DETAIL

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999						
Personnel	$0.0	$0.0						
Travel	$0.0	$0.0						
Contractual	$380.0	$380.0						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$380.0	$380.0	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$20.1	$20.1						
Project Total	$400.1	$400.1	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	0.0	0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

In FFY 99, funding for the Chief Scientist peer review contract reflects a continuation level of funding from FFY 98.

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Chief Scientist and Peer Reviewers
Agency: AK Dept. of Natural Resources

FORM 3A
TRUSTEE
AGENCY
SUMMARY

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 1999
Name	Position Description					
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 1999
Description					
				Travel Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Chief Scientist and Peer Reviewers
Agency: AK Dept. of Natural Resources

FORM 3B
Personnel
& Travel
DETAIL

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
Contract to provide scientific support to the Trustee Council, including the services of the Chief Scientist and for Peer Reviews. A contract is currently in place with annual options for renewal. The contractor is paid monthly based upon services rendered monthly, throughout the entire fiscal year.	380.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$380.0

Commodities Costs:	Proposed FFY 1999
Description	
Commodities Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Chief Scientist and Peer Reviewers
Agency: AK Dept. of Natural Resources

FORM 3B
Contractual & Commodities DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Chief Scientist and Peer Reviewers
Agency: AK Dept. of Natural Resources

FORM 3B
Equipment
DETAIL

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	PROPOSED FFY 1999 TRUSTEE AGENCIES TOTALS					
			ADEC	ADF&G	ADNR	USFS	DOI	NOAA
			$0.0	$1,279.6	$99.4		$40.0	$12.8
Personnel	$890.4	$804.6						
Travel	$79.1	$46.3						
Contractual	$558.1	$410.5						
Commodities	$18.0	$18.0						
Equipment	$10.0	$10.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$1,555.6	$1,289.4	Estimated	Estimated	Estimated	Estimated	Estimated	
General Administration	$158.4	$142.4	FFY 2000	FFY 2001	FFY 2002	FFY 2003	FFY 2004	
Project Total	$1,714.0	$1,431.8	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	11.3	10.8						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

FFY 99 personal services budget reflects state health care costs and other employee costs as administered through ADF&G.

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: Multiple

SUMMARY

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	FFY 1998	FFY 1999						
Personnel	$765.6	$683.4						
Travel	$79.1	$46.3						
Contractual	$542.1	$398.5						
Commodities	$18.0	$18.0						
Equipment	$10.0	$10.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$1,414.8	$1,156.2	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$138.6	$123.4						
Project Total	$1,553.4	$1,279.6	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	10.0	9.5						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

Total FFY 99 staffing for Restoration Office operations reduced by 0.5 FTE in FFY 99. A portion of the Administrative Assistant II (T Yockey) position in the Anchorage Restoration Office to be funded through ADF&G General Administration funds in the amount of 44.4.

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: AK. Dept. of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 1999
Name	Position Description					
McCammon	Executive Director		12.0	10.2		122.4
Cramer	Director of Administration		12.0	8.3		99.6
Senner	Science Coordinator		12.0	8.4		100.8
Myers	Director of Operations		6.0	8.5		51.0
Schubert	Project Coordinator		12.0	7.3		87.6
Hunt	Communciations Coordinator		12.0	5.6		67.2
Williams	Executive Secretary		12.0	5.3		63.6
Yockey	Administrative Assistant II *		12.0	4.3		7.2
Lawrence	Microcomputer Technician II		12.0	4.1		49.2
Banks	Receptionist		12.0	2.4		28.8
Overtime					6.0	6.0
* Note: A portion of this position supported with GA funds.	Subtotal		114.0	64.4	6.0	
					Personnel Total	$683.4

Travel Costs:	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 1999
Description					
In-State Travel					
Anchorage to Juneau (3 staff/1 transcriber for 2 TC meetings)	0.4	10	20	0.2	8.0
Anchorage to Juneau (administrative travel)	0.4	14	30	0.2	11.6
Anchorage to spill area community (3 staff/1 transcriber for TC mtg)	0.2	4	8	0.2	2.4
Community Meetings/Restoration Reserve Planning Meetings					0.0
PAG Field Trip (restoration office staff participation)	0.3	4	16	0.2	4.4
Other community involvement/public meetings	0.2	6	12	0.2	3.6
Car rental (daily rate of $40.00)			14		0.6
Out-of-State Travel					
Anchorage - Washington D.C.	1.4	6	15	0.2	11.4
Professional conferences (SEJ, Intern'l Oil Spill Conf, AOU)	0.6	3	10	0.2	3.8
Car Rental (daily rate of $40.00)			12		0.5
				Travel Total	$46.3

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: AK. Dept. of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed
Description	FFY 1999
Video project	0.0
1998 Audit Engagement	60.0
Phone and fax	33.0
Postage (metered mail 10.0, bulk mail 7.0)	16.0
Courier service	3.5
Building Lease/Parking - 645 G Street (lease $87.6, parking $7.3)	94.9
Off-site storage space (@ $120/month)	1.4
Annual Restoration Status Report (note: incremental cost of 10th Anniversary Symposium shown in 99470 budget)	19.0
Newsletter (6 issues: printing at $1400 each + bulkmail prep $250 each)	9.9
Annual Invitation	5.5
Final Work Plan	1.8
Draft Work Plan	8.4
Restoration Notebook Series (8 editions with 400 copies each)	2.5
Restoration Reserve Planning	0.0
Equipment Maintenance Agreements (copiers, fax machines, postage meter in Anchorage and Juneau)	16.0
Local Area Network/Web Server support contract (out source)	20.0
Public Notice (TC meetings 4.5, annual Invitation 2.0, other meetings 1.5)	8.0
ADA Compliance (special access to meetings)	2.5
Transcription Services	5.0
Teleconferencing	8.0
Staff training	5.5
Aircraft Charters within the Spill Area	4.0
Annual Restoration Workshop (note: base cost of annual science conference)	18.0
Other technical review sessions/workshops	4.0
Other printing and publications	4.0
Meeting space rental (out of building)	1.0
56KB Line /DIS-WAN Access (ATU connect charges/dail-up 0.9, WAN/e-mail 4.2)	5.1
Coastal Currents radio broadcasts/news column contract (through March 1999)	30.0
Traveling restoration exhibit display and transportation	6.5
10th Anniversary Scientific Symposium Planning - SeaGrant consulting, steering committee costs (see 10th Anniversary budget)	0.0
NRDA reports - bringing draft reports to final form	5.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$398.5

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Commodities Costs:	Proposed FFY 1999
Description	
Office Supplies	11.0
Local Area Network Software and Upgrades	5.0
Data Processing Supplies	2.0
Commodities Total	$18.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: AK. Dept. of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Local Area Network and web server replacement and repair	5	2.0	10.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$10.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: AK. Dept. of Fish and Game

FORM 3B
Equipment
DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	LONG RANGE FUNDING REQUIREMENTS					
Personnel	$90.0	$86.4						
Travel	$0.0	$0.0						
Contractual	$0.0	$0.0						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0						
Subtotal	$90.0	$86.4	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$13.5	$13.0						
Project Total	$103.5	$99.4						
Full-time Equivalents (FTE)	1.0	1.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: AK Dept. of Natural Resources

FORM 3A
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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1999
Christman	Natural Resources Manager II		12.0	7.2		86.4
* remainder of position costs under Archeology Project	Subtotal		12.0	7.2	0.0	
					Personnel Total	$86.4

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1999
				Travel Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: AK Dept. of Natural Resources

FORM 3B
Personnel
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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FFY 1999
Description	
Commodities Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: AK Dept. of Natural Resources

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Contractual & Commodities DETAIL

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: AK Dept. of Natural Resources

FORM 3B
Equipment
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DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999						
Personnel	$34.8	$34.8						
Travel	$0.0	$0.0						
Contractual	$0.0	$0.0						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$34.8	$34.8	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$5.2	$5.2						
Project Total	$40.0	$40.0						
Full-time Equivalents (FTE)	0.3	0.3						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: Dept. of the Interior

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SUMMARY

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 1999
Name	Position Description					
Baldauf	Federal Budget Officer		4.0	8.7		34.8
	Subtotal		4.0	8.7		
					Personnel Total	$34.8

Travel Costs:	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 1999
Description					
				Travel Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: Dept. of the Interior

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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FFY 1999
Description	
Commodities Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: Dept. of the Interior

FORM 3B
Contractual & Commodities DETAIL

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: Dept. of the Interior

FORM 3B
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DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	LONG RANGE FUNDING REQUIREMENTS					
			Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
Personnel	$0.0	$0.0						
Travel	$0.0	$0.0						
Contractual	$16.0	$12.0						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0						
Subtotal	$16.0	$12.0						
General Administration	$1.1	$0.8						
Project Total	$17.1	$12.8						
Full-time Equivalents (FTE)	0.0	0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

For payment of lease expenses in the Federal Office Building in Juneau (Executive Director's Office). FFY 99 budget figures based on costs as projected by NOAA.

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: National Oceanic & Atmospheric Administration

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1999
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:		Ticket	Round	Total	Daily	Proposed
Description		Price	Trips	Days	Per Diem	FFY 1999
					Travel Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: National Oceanic & Atmospheric Administration

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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
Juneau Federal Building	12.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$12.0

Commodities Costs:	Proposed FFY 1999
Description	
Commodities Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: National Oceanic & Atmospheric Administration

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New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Operations
Agency: National Oceanic & Atmospheric Administration

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Equipment
DETAIL

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	PROPOSED FFY 1999 TRUSTEE AGENCIES TOTALS					
			ADEC	ADF&G	ADNR	USFS	DOI	NOAA
				$111.3			$6.9	
Personnel	$60.0	$57.6						
Travel	$47.4	$44.4						
Contractual	$7.1	$7.1						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$114.5	$109.1	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$9.5	$9.1						
Project Total	$124.0	$118.2	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	1.1	1.1						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: Multiple

SUMMARY

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999						
Personnel	$54.0	$51.6						
Travel	$47.4	$44.4						
Contractual	$7.1	$7.1						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$108.5	$103.1	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$8.6	$8.2						
Project Total	$117.1	$111.3	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	1.0	1.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

Budget based on 4 regular meetings of the Public Advisory Group plus a field trip. FFY 99 expenses for PAG operations for phone costs, printing and copying are included in the Operations budget component.

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: AK Dept. of Fish and Game

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TRUSTEE
AGENCY
SUMMARY

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1999
Womac	Administrative Assistant II		12.0	4.3		51.6
	Subtotal		12.0	4.3	0.0	
					Personnel Total	$51.6

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1999
Member travel from various locations					
Regular meetings (3 one day meetings/1 two day meeting)					21.4
Special meetings/reviews (FY 98 Work Plan, Restoration Workshop)					3.0
Field trip in PWS					20.0
Note: PAG meeting average cost is approximately $5,100 per meeting for travel and per diem expenses. For a 2 day meeting, add $1,000 in per diem costs.					
				Travel Total	$44.4

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: AK Dept. of Fish and Game

FORM 3B
Personnel
& Travel
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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed
Description	FFY 1999
Postage and courier	1.5
Teleconferencing	1.2
Public Notice/Announcements for PAG meetings (approx $600 per meeting)	2.4
ADA Compliance	1.0
Other meeting costs	1.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$7.1

Commodities Costs:	Proposed
Description	FFY 1999
Commodities Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: AK Dept. of Fish and Game

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Contractual & Commodities DETAIL

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: AK Dept. of Fish and Game

FORM 3B
Equipment
DETAIL

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999						
Personnel	$6.0	$6.0						
Travel	$0.0	$0.0						
Contractual	$0.0	$0.0						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$6.0	$6.0	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$0.9	$0.9						
Project Total	$6.9	$6.9	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	0.1	0.1						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: Dept. of the Interior

FORM 3A
TRUSTEE
AGENCY
SUMMARY

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 1999
Name	Position Description					
Mutter	Regional Environmental Assistant		1.0	6.0		6.0
	Subtotal		1.0	6.0	0.0	
					Personnel Total	$6.0

Travel Costs:		Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 1999
Description						
					Travel Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: Dept. of the Interior

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Personnel
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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FFY 1999
Description	
Commodities Total	$0.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: Dept. of the Interior

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

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Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Public Advisory Group
Agency: Dept. of the Interior

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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	PROPOSED FFY 1999 TRUSTEE AGENCIES TOTALS					
			ADEC	ADF&G	ADNR	USFS	DOI	NOAA
			$61.2	$55.7	$55.6	$54.4	$53.6	$69.5
Personnel	$261.3	$253.8						
Travel	$51.0	$49.0						
Contractual	$0.0	$0.0						
Commodities	$9.0	$9.0						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$321.3	$311.8	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$39.2	$38.2						
Project Total	$360.5	$350.0	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	3.0	3.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

FFY 99 budget reflects continuation level of funding for agency liaisons at six months per agency.

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force

SUMMARY

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1999	Proposed FFY 1999	LONG RANGE FUNDING REQUIREMENTS					
Personnel	$43.2	$43.2						
Travel	$10.0	$10.0						
Contractual	$0.0	$0.0						
Commodities	$1.5	$1.5						
Equipment	$0.0	$0.0						
Subtotal	$54.7	$54.7	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$6.5	$6.5						
Project Total	$61.2	$61.2	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	0.5	0.5						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Environmental Conservation

FORM 3A
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SUMMARY

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1999
TBD	6 Month Liaison		6.0	7.2		43.2
	Subtotal		6.0	7.2	0.0	
					Personnel Total	$43.2

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1999
Trustee Travel					5.0
Liaison travel					5.0
				Travel Total	$10.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Environmental Conservation

FORM 3B
Personnel
& Travel
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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed
Description	FFY 1999
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed
Description	FFY 1999
Office supplies/other liaison costs	1.5
Commodities Total	$1.5

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Environmental Conservation

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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Environmental Conservation

FORM 3B
Equipment
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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	LONG RANGE FUNDING REQUIREMENTS					
Personnel	$40.2	$40.2						
Travel	$8.0	$8.0						
Contractual	$0.0	$0.0						
Commodities	$1.5	$1.5						
Equipment	$0.0	$0.0						
Subtotal	$49.7	$49.7	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$6.0	$6.0						
Project Total	$55.7	$55.7	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	0.5	0.5						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Fish and Game

FORM 3A
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AGENCY
SUMMARY

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 1999
Name	Position Description					
Slater	Liaison		6.0	6.7		40.2
	Subtotal		6.0	6.7	0.0	
					Personnel Total	$40.2

Travel Costs:	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 1999
Description					
Trustee Travel					5.0
Liaison travel					3.0
				Travel Total	$8.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Fish and Game

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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FFY 1999
Description	
Office supplies/other liaison costs	1.5
Commodities Total	$1.5

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Fish and Game

FORM 3B
Contractual & Commodities
DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 98100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Fish and Game

FORM 3B
Equipment
DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999
Personnel	$43.2	$44.4
Travel	$3.0	$3.0
Contractual	$0.0	$0.0
Commodities	$1.5	$1.5
Equipment	$0.0	$0.0
Subtotal	$47.7	$48.9
General Administration	$6.5	$6.7
Project Total	$54.2	$55.6
Full-time Equivalents (FTE)	0.5	0.5

LONG RANGE FUNDING REQUIREMENTS

Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
TBD	TBD	TBD	TBD	TBD	

Dollar amounts are shown in thousands of dollars.

Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Natural Resources

FORM 3A
TRUSTEE
AGENCY
SUMMARY

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1999
Fries	6 Month Liaison		6.0	7.4		44.4
	Subtotal		6.0	7.4	0.0	
					Personnel Total	$44.4

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1999
Liaison travel					3.0
				Travel Total	$3.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Natural Resources

FORM 3B
Personnel
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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FFY 1999
Description	
Office supplies/other liaison costs	1.5
Commodities Total	$1.5

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Natural Resources

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New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: AK Dept. of Natural Resources

FORM 3B
Equipment
DETAIL

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999						
Personnel	$51.6	$39.0						
Travel	$10.0	$8.0						
Contractual	$0.0	$0.0						
Commodities	$1.5	$1.5						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$63.1	$48.5	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$7.7	$5.9						
Project Total	$70.8	$54.4	TBD	TBD	TBD	TBD	TBD	
Full-time Equivalents (FTE)	0.5	0.5						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: Dept. of Agriculture, Forest Service

FORM 3A
TRUSTEE
AGENCY
SUMMARY

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 1999
Name	Position Description					
Holbrook	6 Month Liaison		6.0	6.5		39.0
	Subtotal		6.0	6.5	0.0	
					Personnel Total	$39.0

Travel Costs:	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 1999
Description					
Trustee Travel					5.0
Liaison travel					3.0
				Travel Total	$8.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: Dept. of Agriculture, Forest Service

FORM 3B
Personnel
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DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FFY 1999
Description	
Office supplies/other liaison costs	1.5
Commodities Total	$1.5

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: Dept. of Agriculture, Forest Service

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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: Dept. of Agriculture, Forest Service

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Equipment
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Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999	LONG RANGE FUNDING REQUIREMENTS					
Personnel	$35.1	$36.6						
Travel	$10.0	$10.0						
Contractual	$0.0	$0.0						
Commodities	$1.5	$1.5						
Equipment	$0.0	$0.0						
Subtotal	$46.6	$48.1	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$5.3	$5.5						
Project Total	$51.9	$53.6						
Full-time Equivalents (FTE)	0.5	0.5						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: Dept. of the Interior

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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1999
Berg	Liaison - FWS		5.0	6.2		31.0
Rice	Liaison - NPS		1.0	5.6		5.6
	Subtotal		6.0	11.8	0.0	
					Personnel Total	$36.6

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1999
Trustee travel					5.0
Liaison travel					5.0
				Travel Total	$10.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: Dept. of the Interior

FORM 3B
Personnel
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DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FFY 1999
Description	
Office supplies/other liaison costs	1.5
Commodities Total	$1.5

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: Dept. of the Interior

FORM 3B
Contractual & Commodities DETAIL

DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases:	Number of Units	Unit Price	Proposed FFY 1999
Description			
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage:	Number of Units	Inventory Agency
Description		

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: Dept. of the Interior

FORM 3B
Equipment
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DRAFT

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1998 - September 30, 1999

Budget Category:	Authorized FFY 1998	Proposed FFY 1999						
Personnel	$48.0	$50.4						
Travel	$10.0	$10.0						
Contractual	$0.0	$0.0						
Commodities	$1.5	$1.5						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$59.5	$61.9	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	Estimated FFY 2003	Estimated FFY 2004	
General Administration	$7.2	$7.6						
Project Total	$66.7	$69.5						
Full-time Equivalents (FTE)	0.5	0.5						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: National Oceanic & Atmospheric Administration

FORM 3A
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SUMMARY

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 1999
Name	Position Description					
						0.0
Wright	6 Month Liaison		6.0	8.4		50.4
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		6.0	8.4	0.0	
					Personnel Total	$50.4

Travel Costs:	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 1999
Description					
					0.0
Trustee Travel					5.0
Liaison travel					5.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$10.0

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: National Oceanic & Atmospheric Administration

FORM 3B
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DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

Contractual Costs:	Proposed FFY 1999
Description	
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$0.0

Commodities Costs:	Proposed FFY 1999
Description	
Office supplies/other liaison costs	1.5
Commodities Total	$1.5

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: National Oceanic & Atmospheric Administration

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Contractual & Commodities DETAIL

DRAFT

Printed: 7/24/98

DRAFT FFY 99 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1998 - September 30, 1999

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1999
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1999

Project Number: 99100
Project Title: Administration, Public Information and Scientific Management - Restoration Work Force
Agency: National Oceanic & Atmospheric Administration

FORM 3B
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