Draft Work Plan for

Federal Fiscal Year

2003

Phase I

June 2002

Prepared by:

Exxon Valdez Oil Spill Trustee Council
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Draft Work Plan

Fiscal Year 2003: Phase I

June 15, 2002

Prepared by: Exxon Valdez Oil Spill Trustee Council

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PLEASE COMMENT

You can help the Trustee Council by reviewing this draft work plan and letting them know your priorities for Fiscal Year 2003. Your comments must be received prior to Council action on the work plan, which is scheduled for August 6, 2002:

Mail:

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ATTENTION Draft Work Plan for FY 2003: Phase I

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Collect calls will be accepted from fishers and boaters who

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Public Hearing:

Public comment will be taken at 9:30 a.m. on August 6, 2002

during the Trustee Council's meeting.

Access to the public hearing will be available via

teleconference to all communities and villages in the oil spill region. Contact Cherri Womac at the telephone numbers

above if you would like to participate.

Draft Work Plan Fiscal Year 2003: Phase I

June 2002

Table of Contents

<u>.</u>	age
Letter to Reviewers	. 1
The Work Plan Process	. 3
Funding Caps	. 4
Preliminary Recommendations	. 5
Description of Projects and Recommendations	. 7
Spreadsheet A (Costs) Oil Spill: Lingering Injury Oil Spill: Recovery Monitoring Oil Spill: Ecosystem Recovery & Function GEM Cross-Habitat Linkage: Synthesis GEM Cross-Habitat Linkage: Community Involvement GEM: Watershed Habitat GEM: Intertidal/Subtidal Habitat GEM: Alaska Coastal Current Habitat GEM: Offshore Habitat Data Management & Information Transfer Science Management Public Information/Administration	A-1 A-1 A-2 A-2 A-2 A-2 A-3 A-3
Spreadsheet B (Descriptions)	B-1

Dear Reviewer,

Each year the Exxon Valdez Oil Spill Trustee Council funds activities to restore the resources and services injured by the 1989 Exxon Valdez oil spill. Public input is an essential part of the Council's decision-making process. This draft work plan has been prepared to solicit your comments on activities proposed for funding in Fiscal Year 2003 (FY 03). Comments may be submitted up until August 6, 2002 when the Council is scheduled to make its decision on this phase of the FY 03 work plan. Public comment will also be taken during the Council meeting (the public comment period is scheduled for 9:30 a.m. on August 6).

FY 03 will be the first year of GEM implementation (GEM is the Gulf of Alaska Ecosystem Monitoring and Research Program, the Trustee Council's effort to ensure the long-term health and conservation of the resources injured by the spill). However, proposals to implement GEM have not yet been solicited and are not included in this draft work plan. In a departure from previous years, the FY 03 work plan has two phases. Phase I, which is presented in this draft document, includes ongoing projects on lingering oil-related injury and ongoing GEM transition projects, as well as a few new proposals to conduct innovative work on lingering oil effects and perform GEM-related synthesis. GEM implementation proposals, and additional GEM-related synthesis proposals, will be invited in a Phase II invitation to be issued in mid-July 2002.

The two-phased approach for the FY 03 work plan was necessary to accommodate the schedule for external scientific review of the GEM Program Document. Review of the GEM Program Document, which describes the long-term monitoring and research program, was completed by the National Research Council of the National Academy of Sciences in May 2002. We are currently in the process of revising the document to respond to the review comments, and will be asking the Trustee Council to approve a revised document in early July. Issuance of the Phase II invitation will follow Trustee Council approval of the GEM Program Document. The current revision of the GEM Program Document can be viewed on our web page at www.oilspill.state.ak.us

In Phase I, eleven proposals related to lingering oil effects are recommended for funding. All but two of these proposals would continue work begun in earlier years. The two new proposals would further explore the potential effects of remaining intertidal oil deposits on the food web, focusing on sea otters and harlequin ducks which have not recovered from the effects of the oil spill (Project /620) and on sublethal impacts on mollusk physiology and how this might affect the rate of their recovery (Project /587). The sum recommended for the work on lingering oil is roughly \$1.2 million.

Nineteen proposals related to GEM are recommended for funding. These proposals are all considered "GEM transition" projects, as they would synthesize data sets, develop innovative monitoring strategies, or test tools that are expected to be useful under GEM. Projects to actually conduct long-term monitoring will be addressed through the Phase II invitation and are not part of this draft work plan. The four new proposals in the GEM transition category would develop a draft community involvement and community-based monitoring plan (Project /575), provide a small amount of interim funding to prevent loss of a year in a time-series of data on freshwater runoff in the Ninilchik River (Project /596), create a GIS map of water quality monitoring sites (Project /607), and synthesize stable isotope ratio data collected under earlier EVOS projects (Project /625). The sum recommended for GEM-related work is roughly \$1.7 million.

One additional proposal, which funds overall operation of the Trustee Council's programs (administrative operations and public information), is also recommended for funding in Phase I. The cost of Project /100 is roughly \$1.1 million.

A final comment concerns an activity that is not funded through the work plan, but which helps to complete the picture of the Trustee Council's restoration effort. The Council's program to protect habitats important to the recovery of injured resources and services continues to achieve its goals, with purchase agreements and conservation easements now having been negotiated for 643,675 acres of land. The Council's ongoing commitment to habitat is reflected in its March 1999 decision to earmark \$25 million for long-term habitat protection beginning October 1, 2003.

I am interested in your thoughts and ideas in regard to this draft work plan, as well as on the Trustee Council's restoration efforts in general. Comments on this work plan will be most useful if they are received by July 26. However, comments will be provided to the Council up until August 6, when the Council is scheduled to make its decision on the FY 03 Phase I work plan. See the "Please Comment" section opposite the table of contents for how to submit comments.

Sincerely,

Molly McCammon Executive Director

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Each year the Exxon Valdez Oil Spill Trustee Council funds proposals to restore the resources and services injured by the oil spill. For fiscal year 2003 (October 1, 2002 through September 30, 2003), the work plan is being developed in two phases:

Phase I, which is the subject of this draft work plan, consists of proposals to (a) continue FY 02 projects on lingering oil-related injury and conduct new, innovative work on lingering oil effects and (b) continue FY 02 GEM transition projects and conduct new GEM-related synthesis projects. (GEM is the Gulf of Alaska Ecosystem Monitoring and Research Program, the Trustee Council's long-term commitment to gathering information about the physical and biological components that make up the Gulf of Alaska marine ecosystem.) Phase I also includes the science and data management, public information, and administrative components of the Trustee Council's program.

Phase II will consist of proposals to begin implementation of GEM. An invitation soliciting proposals for Phase II will be issued in mid-July 2002.

The Trustee Council has not yet decided which Phase I projects to fund. They will make their decision on August 6, 2002, using comments from the public and the Public Advisory Group, evaluations of independent scientific reviewers and legal advisors, and recommendations from the Executive Director. Milestones in development of the FY 03 work plan are described in Table 1.

Table 1. Milestones for FY 03 Work Plan

广		
-	Feb. 15, 2002	Phase I Invitation issued.
	April 15, 2002	33 proposals requesting \$4.3 million received.
	May 11-12, 2002	Chief Scientist and core reviewers met to discuss the scientific and technical merits of proposals.
1	June 5, 2002	Executive Director discussed proposals with Trustee
1	•	agencies and Public Advisory Group representatives and
		formed preliminary recommendations.
-	June 15, 2002	Phase I Draft Work Plan available.
	June 20, 2002	Public Advisory Group meets to advise Trustee Council on
		Phase 1 Draft Work Plan.
1	July 15, 2002*	Phase II Invitation issued.
	Aug. 6, 2002	Trustee Council meets to decide on Phase I Work Plan.
	Sept. 4, 2002*	Phase II proposals due.
	Oct. 28, 2002*	Phase II Draft Work Plan available.
1	Nov. 25, 2002*	Trustee Council meets to decide on Phase II Work Plan.
	*tentative date	
1		

-3-

As part of its decision to establish a long-term research and monitoring program, the Trustee Council adopted a long-term investment strategy which includes annual funding caps for FY 03 and all future years. The caps include all research, monitoring, and general restoration projects as well as the science and data management, public information, and administrative costs of the program.

As illustrated in Table 2, for FY 03 the Trustee Council has adopted a cap of \$6 million. The public information/administrative component of the program is expected to cost roughly \$1.1 million in FY 03, leaving roughly \$4.9 million for research, monitoring and general restoration projects (both Phases I and II).

The cap for FY 04 has also been set at \$6 million. In FY 05 and beyond, the cap will be determined by investment earnings. The Trustee Council's investment strategy provides for spending at a level not to exceed 4.5 percent of the average market value of the investment fund over the prior three to five years.

Table 2. Work Plan Funding					
Prior Yea	ar Authorizations: Research, Monitoring & General				
Restorat	ion Projects Only				
FY 96	\$18.2 million				
FY 97	\$16.2 million				
FY 98	\$14.0 million				
FY 99	\$11.6 million				
FY 00	\$ 8.4 million				
FY 01	\$ 5.9 million				
	aps: Research, Monitoring & General Restoration Data & Science Management, Public Information istration \$ 6.0 million \$ 6.0 million \$ 5.6 million (estimate)				
FY 06	\$ 5.7 million (estimate)				

Preliminary Recommendations

This section summarizes the Executive Director's preliminary recommendations for FY 03 Phase I. These recommendations are made for public review and may be revised before they are provided to the Trustee Council in early August.

In response to the *FY 03 Phase I Invitation*, the Trustee Council received 33 proposals totaling \$4,291,900. The Executive Director's preliminary recommendation of which proposals to fund is summarized in Table 3.

Table 3. Summary of Executive Director's Preliminary Recommendation

Category	Explanation	No. Proj.	FY 03 Cost
Fund	Project has high technical merit with significant contribution toward achieving the Trustee Council's program objectives. Project recommended for Council approval.	7	\$1,826,800
Fund Contingent	Same as above except that certain issues need to be resolved before funding is approved. Project recommended for Trustee Council approval if these issues can be resolved.	20	\$1,621,900
Defer Decision	A decision on whether or not to fund project in FY 03 cannot be made without more information. In many cases, needed information will not be available until after this summer's field season. For such projects, a recommendation will be made to the Trustee Council in November or December 2002.	4	\$616,700
	Total:	31	\$4,065,400
Do Not Fund	Project not recommended for funding in FY 03. In some cases, it is recommended that a project be reconsidered in the future. In other cases, the project is not legally permissible, has technical problems, or would not significantly contribute to the Trustee Council's program objectives.	2	\$0

The sum of the projects in the *fund, fund contingent,* and *defer decision* categories is \$4,065,400. This amount is within the \$6 million cap adopted by the Trustee Council and leaves roughly \$2 million for funding under the FY 03 Phase II work plan.

Prior to Council action on the FY 03 Phase I work plan, it is possible that some projects in the *fund contingent* category will not be funded because their issues will not be resolved, and some projects in the *defer* category will not prove feasible or appropriate when additional information is evaluated. In addition, further review may

result in some projects currently recommended for funding not being recommended in August, or not being approved by the Council.

Of the projects in the *fund, fund contingent,* and *defer decision* categories, most are continuing efforts also funded by the Trustee Council in FY 02. As illustrated in Table 4, a few new projects are also being recommended for funding. The FY 03 Phase II work plan will likely consist almost entirely of new projects.

Table 4. Summary of Executive Director's Preliminary Recommendation: New and Continuing Projects (Fund, Fund Contingent, and Defer)

	Number of Projects Recommended for Funding	Total Cost of Projects Recommended for Funding
New Projects	6	\$637,500
Continuing Projects	25	\$3,427,900

Description of Projects and Recommendations

A project-by-project list of the Executive Director's preliminary recommendations follows.

<u>Spreadsheet A</u> is a summary spreadsheet which shows FY 03 and FY 04 costs of projects recommended as *fund, fund contingent,* or *defer decision*. Spreadsheet A is arranged by cluster (see below).

NOTE: A "\$0" in the spreadsheet means that no funding is recommended. A blank space means that the estimated funding level is not yet known or that a recommendation on funding has not been made.

Spreadsheet B describes each project received by the Trustee Council and contains the text of the Chief Scientist's and the Executive Director's preliminary recommendations. It also indicates who proposed each project, which Trustee agency would be responsible for project management, and whether the project is continuing (i.e., was also funded by the Council in FY 02) or new. Spreadsheet B is arranged in numerical order.

Description of Clusters

In Spreadsheet A, projects are organized in the following clusters of like projects. Cluster assignments are based on the underlying objective of each project or the type of activity the project would perform. These clusters are simply an organizational device to assist in presentation of the work plan.

Oil Spill: Lingering Injury projects study the effects of oiling on injured species and whether oil is continuing to affect species recovery.

Oil Spill: Recovery Monitoring projects monitor the status of injured populations.

Oil Spill: Ecosystem Recovery & Function projects take a broader view of recovery by considering oil effects as well as other possible influences (e.g., climate change, food supply, etc.).

GEM Cross-Habitat Linkage: Synthesis projects build on and update the current understanding of the northern Gulf of Alaska. They bring together existing data from various disciplines, times, and regions to evaluate different aspects of GEM's central hypothesis and key questions.

GEM Cross-Habitat Linkage: Community Involvement projects involve communities and stakeholders in monitoring, data analysis and issue prioritization and

communicate research results to the public through workshops and seminars.

GEM: Watershed Habitat projects focus on long-term monitoring of marine-related productivity in watersheds to evaluate the effects of human activities and natural forces.

GEM: Intertidal/Subtidal Habitat projects focus on identifying how human activities and natural events can change the community structure of the intertidal and subtidal areas.

GEM: Alaska Coastal Current Habitat projects focus on developing collaboration between physical and biological scientists to decide how best to detect changes in annual and seasonal production and transfer of energy to higher trophic levels.

GEM: Offshore Habitat projects focus on the effect of the Alaska gyre on the natural variability in seasonal and annual productivity along the continental shelf and the Alaska Coastal Current.

Data Management & Information Transfer projects improve the Trustee Council's data management system or increase access to data.

Science Management projects provide for independent scientific review of proposals and results and for project management functions of the Trustee agencies.

Public Information/Administration projects inform the public of restoration activities and support operations of the Trustee Council and the Public Advisory Group.

		FY 03	, <u>, , , , , , , , , , , , , , , , , , </u>	Preliminary Red	commendation
Proj. No.	Project Title	Request	FY 03	FY 04	
Oil Spiil: Lir	ngering Injury	\$666.6	\$457.2	\$52.7	
03190	Linkage Map for Pink Salmon Genome	\$80.3	\$25.0	\$0.0	Fund contingent
03290	Hydrocarbon Database	\$22.7	\$22.7	\$22.7	Fund contingent
03476	Effects of Oiled Incubation on Salmon Reproduction	\$37.4	\$37.4	\$0.0	Fund contingent
03585	Lingering Oil: Bioavailability & Effects	\$52.1	\$52.1	\$0.0	Fund contingent
03594	Toxicity Testing: Alaska Green Urchin	\$134.1	\$0.0	\$0.0	Do not fund
03620	Lingering Oil: Exposure Pathways/Population Status	\$340.0	\$320.0	\$30.0	Fund contingent
Oil Spill: Recovery Monitoring		\$413.2	\$359.7	\$0.0	
03012-BAA	Killer Whale Monitoring	\$17.8	\$17.8		Fund contingent
03462	Herring Disease	\$78.5	\$25.0	\$0.0	Fund contingent
03558	Harbor Seals: Monitoring Technologies	\$281.6	\$281.6	\$0.0	Defer
03574-BAA	Bivalve Recovery on Treated Beaches	\$35.3	\$35.3	\$0.0	Fund
Oil Spill: Ed	cosystem Recovery & Function	\$399.2	\$360.2	\$0.0	
03423	Nearshore Vertebrate Predators: Population Change	\$216.2	\$215.2	\$0.0	Fund part contingent; defer part
03587-BAA	Cellular Processes of Recovery	\$183.0	\$145.0	\$0.0	Defer
GEM Cross	-Habitat Linkage: Synthesis	\$313.0	\$249.8	\$184.8	
03600	EVOS Synthesis, 1989-2001	\$212.0	\$212.0	\$184.8	Fund contingent
03607-BAA	GIS Map of Water Quality Monitoring Sites	\$12.8	\$12.8	\$0.0	Defer
03625-BAA	Isotope Ecology Synthesis	\$32.6	\$25.0	\$0.0	Fund contingent

			Preliminary Recommendation			
Proj. No.	Project Title	Request	FY 03	FY 04		
03631-BAA	Top-Down Process Synthesis	\$55.6	\$0.0	\$0.0	Do not fund	
GEM Cross	-Habitat Linkage: Community Involvement	\$511.2	\$511.2	\$0.0		
03052	Tribal Natural Resource Stewardship	\$177.3	\$177.3		Defer	
03210	PWS/LCI Youth Area Watch	\$96.8	\$96.8		Fund contingent	
03561	Community-Based Forage Fish Sampling	\$17.8	\$17.8	\$0.0	Fund	
03575-BAA	Community Involvement/Monitoring Plan	\$107.5	\$107.5	\$0.0	Fund part/Fund part contingent	
03610	Kodiak Island Youth Area Watch	\$61.8	\$61.8		Fund	
03636-BAA	Commercial Fishing Management Applications	\$50.0	\$50.0	\$0.0	Fund contingent	
GEM: Watershed Habitat		\$106.3	\$108.0	\$26.6		
03596	Flow Data: Kenai Peninsula Salmon Stream	\$15.5	\$27.2	\$0.0	Fund contingent	
03649	Reconstructing Sockeye Populations	\$90.8	\$80.8	\$26.6	Fund contingent	
GEM: Inter	tidal/Subtidal Habitat	\$99.0	\$94.0	\$0.0		
03584	Airborne Remote Sensing Tools	\$44.0	\$39.0	\$0.0	Fund contingent	
03656	Nearshore Analysis: Archaeology & Isotopes	\$55.0	\$55.0	\$0.0	Fund contingent	
GEM: Alas	ka Coastal Current Habitat	\$50.6	\$50.6	\$32.1		
03340	Long-Term Oceanographic Monitoring (GAK1)	\$50.6	\$50.6	\$32.1	Fund contingent	
GEM: Offsl	hore Habitat	\$20.9	\$17.8	\$0.0		
03614	Ships of Opportunity: Temp./Salinity/Fluorescence	\$20.9	\$17.8	\$0.0	Fund contingent	

Data Manaç 03455	gement & Information Transfer GEM Data System		\$318.5	\$318.5		<u> </u>
03455	·					
	ADUO		\$218.2	\$218.2	Fund	
03550	ARLIS		\$100.3	\$100.3	Fund	
Science Ma	anagement		\$254.7	\$399.7		
03250	Project Management	···-		\$145.0	Fund contingent	
03630	Science Management		\$254.7	\$254.7	Fund	
Public Info	rmation/Administration	· · · · · · · · · · · · · · · · · · ·	\$1,138.7	\$1,138.7		
03100	Public Info. & Admin.	-	\$1,138.7	\$1,138.7	Fund	
		Total:	\$4,291.9	\$4,065.4	\$296.2	

How to Read Spreadsheet B – Description of Projects and Recommendations

Proposer	The individual, organization, or Trustee agency that submitted the project proposal.
Lead Agency	The Trustee agency (DOI, NOAA, USFS, ADEC, ADFG, or ADNR) to which the project will be assigned for project management purposes.
New or Cont'd	Whether or not the project is the continuation of a project funded by the Trustee Council in FY 02. Also, what year FY 03 is in the Council's funding of the project, followed by the total number of years Council funding is expected to be sought (e.g., 3rd year of a 3-year project).
FY 03 Request	The amount of funding requested by the project proposer for fiscal year 2003 (October 1, 2002 - September 30, 2003).
FY 03 Recom.	The Executive Director's preliminary recommendation of the amount of funding that should be approved for the project for FY 03.
FY 04 Request	For multi-year projects, the amount of funding requested by the project proposer for fiscal year 2004 (October 1, 2003 - September 30, 2004).
FY 04 Recom.	For multi-year projects, the estimated project cost for FY 04, based on the Executive Director's preliminary recommendation for FY 03.
Abstract	A brief summary of the project.
Chief Sci. Rec.	The text of the Chief Scientist's recommendation on the project's technical merit. As in past years, the Chief Scientist's Recommendation is that of Dr. Robert Spies. Beginning with the FY 03 Phase II work plan, the scientific recommendation on GEM projects will be developed by a Scientific and Technical Advisory Committee (STAC). Dr. Spies will continue to develop the scientific recommendation on lingering oil projects.
Exec. Dir. Rec.	The text of the Executive Director's preliminary recommendation on project funding for FY 03.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03012-BAA	Photographic Monitoring of Resident Killer Whales	C. Matkin/North Gulf Oceanic Society	NOAA	Cont'd 11th yr.	\$17.8	\$17.8	\$18.2	
pod of killer cooperative various foul yearly basis	Project Abstract t will support monitoring of the resident AB r whales and other resident pods as part of a e program with the Alaska SeaLife Center an ndations. Monitoring has occurred on a s since 1984; this long-term data set was valuating the oil spill effects on killer whales.		rtant killer who ic-level, sent integrity of the sare also and or tourism, and one of dollars in the Gulf coverall the coverall the sared to be in. The AB pod disintegration of this continuing data	alle Fund Fy inel manusc ne niche pa beyond reduced per sources of for conti William the AB pill in od has on now a about	utive Director's 7 03 only conti ripts funded in artitioning). A has not yet be I from earlier y of funds avail inued monitori Sound and Ke	ngent on co prior years decision on en made. I rears to refle able to the p ng of killer v	mpletion of (mating sysfunding in Funding in Fect the additioning in Fect the additioning)	items and Y 04 and Y 03 is onal estigator
03052	Tribal Natural Resource Stewardship and Meaningful Tribal Involvement in GEM	P. Brown- Schwalenberg/CRRC	ADFG	Cont'd 9th yr.	\$177.3	\$177.3	\$192.6	
	Project Abstract	Chief Scientist's Recom	mendation	Exec	utive Director'	s Preliminar	y Recomme	ndation

In FY 03, this project will focus on four objectives: (a) establishing Core Action Plans for the Tribal Natural Resource Management Plans being developed in FY 02, programs. This proposal cannot be fully evaluated (b) identifying priority regional and community-specific research and monitoring issues and concerns and fitting Plans scheduled for completion in FY 02 from this them to community-based research and monitoring activities, especially those related to GEM, (c) conducting a "Wisdomkeeper Series" for discussing and relationship to GEM, and community commitment to avoid duplication with Project 03575, Designing a sharing research and monitoring issues with selected biologists, scientists, elders, and traditional knowledge experts, and (d) developing pilot community-based research and monitoring projects for potential implementation in FY 04. Communities involved in the project are Tatitlek, Chenega Bay, Port Graham, Nanwalek, Cordova/Eyak, Seward/Qutekcak, Seldovia, Valdez, Kodiak Island Region/Ouzinkie, and the Alaska Peninsula Region/Chignik Lake.

The Trustee Council has committed to community involvement in both the GEM and ongoing oil spill until the Tribal Natural Resource Management project have been reviewed by the Trustee Council. These need to be reviewed for their content. implementation of the plans. Defer funding pending receipt of these plans.

Defer decision on funding this project pending a review of FY 02 results (completion of Tribal Natural Resource Management Plans; tribal participation in technical workshops/training sessions; communication of EVOS results to villages). If funded, the Detailed Project Description and budget need to be revised to more directly build on the work performed in FY 02 and to Community Involvement/Community Based Monitoring Plan for GEM. The overall goal of this project--community involvement and development of local stewardship capacity--is a priority of the Trustee Council and an essential component of GEM.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03100	Public Information and Administration	All Trustee Council Agencies	ALL	Cont'd	\$1,138.7	\$1,138.7		
	Project Abstract	Chief Scientist's Recor	mmendation	Execu	tive Director's	s Preliminar	v Recomme	ndation
This project provides overall support for public involvement and administration of the restoration program, including GEM. It includes funding for the Trustee Council staff working at the direction of the Executive Director, public involvement efforts including the active participation of the Public Advisory Committee (PAC), and management of the EVOS Investment Fund.		Proposal not reviewed.		Executive Director's Preliminary Recommendation Fund, but continue budget review (the amount in the recommended column above is a placeholder). This project provides overall support for administration as implementation of the Trustee Council's programs.			r). This ition and	
03190	Construction of a Linkage Map for the Pink Salmon Genome	F. Allendorf/Univ. Montana	ADFG	Cont'd 8th yr. 8 yr. project	\$80.3	\$25.0	\$0.0	\$0.0

Project Abstract

This is the final year of a project based upon experiments conducted at the Alaska SeaLife Center that use a linkage map that was constructed to test for effects of regions of the genome on traits that are important to the recovery of pink salmon (e.g., growth and survival). In summer 2001, 259 sexually mature adults were collected in Resurrection Bay from the 1999 cohort produced from wild pink salmon collected from Likes Creek. In FY 03, the analysis of the genotypes in the returning adults will be completed to test for genetic differences in marine survival and other life history traits (e.g., body, size, egg number, and egg size).

Chief Scientist's Recommendation

This is the final year of a long-term project that has done a good job overcoming unexpected technical challenges. The genome map will be a benefit to a variety of future studies of pink salmon, and will be useful for future pink salmon management in Southcentral Alaska. Based on the proposal, it appears that much of the data analysis is completed, and it seems appropriate to provide the principal investigator with funding to complete the identified manuscripts. Fund manuscript preparation hatchery/wild fish interactions. For example, are only, at a reduced level.

Executive Director's Preliminary Recommendation

Fund contingent on submittal and approval of a revised Detailed Project Description and budget that reduce the project's scope to preparation of manuscripts/final report only (the amount in the recommended column above is a placeholder). This project is important for understanding the genetic traits of pink salmon that affect growth and survival. In addition, the work being done under this project will contribute to answering questions important to fisheries management about hatchery fish changing the gene pool in a way that makes wild fish maladapted to their environment? Are enough hatchery fish getting into streams to affect productivity of wild fish? How adapted are wild fish to particular streams?

Proj.No.	Project Title	Proposer	Agency	Cont'd	Request	Recom.	FY 04 FY 04 Request Recom.
03210	Youth Area Watch	R. DeLorenzo/Chugach School District	ADFG	Cont'd 8th yr.	\$96.8	\$96.8	\$85.6

Project Abstract

This project links students in the oil spill impacted area with research and monitoring projects funded by the Trustee Council. The project involves students in the restoration process and provides these individuals the skills to participate in restoration now and in the future. Youth conduct research identified and delegated by principal investigators who have indicated interest in working with students. Youth Area Watch fosters long-term commitment to the goals set out in the restoration plan and is a positive community investment in that process. Participating communities in FY 03 will be Tatitlek, Chenega Bay, Cordova, Nanwalek, Port Graham, Seldovia, Seward, Valdez, and Whittier.

Chief Scientist's Recommendation

This project is a success story for community involvement in EVOS research, through the participation of young people in the public school system. The proposers recognize EVOS projects will be changing with implementation of GEM and are willing to adapt. The proposers also have done Chenega Bay, Cordova, Nanwalek, Port Graham, an excellent job of obtaining supplemental funding and reducing reliance on EVOS funding. However, participate. the proposal provides insufficient information to judge progress. It could be strengthened with greater attention to the results of prior efforts, such as Youth Area Watch students choosing to pursue higher education in science. In addition, the annual reports are not a useful gauge of program accomplishments and progress, so accountability is lacking. By contrast, the Kodiak Youth Area Watch annual reports (Project /610) provide specific information on accomplishments, problems encountered and solutions. Fund contingent on receipt of a revised annual report (01210) that indicates that satisfactory progress is being made.

Executive Director's Preliminary Recommendation

Fund contingent on submittal and review of (a) a revised FY 01 annual report (01210) that addresses the Chief Scientist's concerns and (b) a satisfactory annual report for FY 02 (02210). Youth Area Watch involves local youth in restoration projects. In FY 03, youth in Seldovia, Seward, Tatitlek, Valdez, and Whittier will

03250

Project Management

Project Abstract

Project management supports those Trustee agencies that administer and/or implement EVOS projects on behalf of the Trustee Council. Tasks performed by project managers include coordinating activities between principal investigators and the Trustee Council Office, reviewing project expenditure activity, assisting in the development of project proposals, and tracking project reports.

All Trustee Council Agencies

ALL

Cont'd

\$145.0

Chief Scientist's Recommendation

Proposal not reviewed.

Executive Director's Preliminary Recommendation Fund at roughly \$145,000 contingent on submittal and review of individual agency project management budgets (the amount in the recommended column above is a placeholder). Project management helps provide accountability for the work plan process.

Proj.No.	Project Title	Proposer	Agency	New or Cont'd	Request	Recom.	FY 04 Request	FY 04 Recom.
03290	Hydrocarbon Database and Interpretation Service	J. Short, B. Nelson/NOAA	NOAA	Cont'd 12th yr.	\$22.7	\$22.7	\$22.7	\$22.7

Project Abstract

This ongoing project provides data and sample archiving. This is a small project, but critical to tracking services for all samples collected for hydrocarbon analysis in support of Trustee Council projects. These data represent samples collected since the oil spill in 1989 to the present and include environmental and laboratory National Resource Damage Assessment and restoration data. Additionally, this project provides interpretive services for hydrocarbon analysis, public releases of the hydrocarbon and pristane databases, and storage and maintenance of the hydrocarbon sample archives.

Chief Scientist's Recommendation

remaining oil and its fate. Studies that will focus on whether the remaining intertidal subsurface oil in require the support of this service project. As the amount of oil from the spill subsides, the identity of the hydrocarbon sources is a question that assumes greater importance. This project makes source identification determinations based on the chemical analyses that are stored in the database. The technical approach is sound, as has been demonstrated by more than ten years of successes. The approach and products from this study have appeared in many peer reviewed publications. Fund.

Executive Director's Preliminary Recommendation

Fund contingent on submittal of overdue reports (00195, 01195, 01499) and manuscript (00598). This project provides the ongoing analysis and interpretation Prince William Sound is contaminating the food web of hydrocarbon data for other Trustee Council funded studies.

03340 Toward Long-Term Oceanographic Monitoring of the Gulf of Alaska **Ecosystem**

Project Abstract

Interannual variations in temperature and salinity on the northern Gulf of Alaska shelf reflect environmental changes that affect this marine ecosystem. Quantifying and understanding this variability require long time series such as the 32-year record at hydrographic station GAK1 near Seward. This project continues this time series, quantifies the synoptic, seasonal, and interannual variability, and seeks to understand the reasons for this variability. It will also begin to examine interannual variations in near-surface stratification and the timing of the spring bloom on the inner Gulf of Alaska shelf. The data will be used to predict the baroclinic component of the mass and freshwater transport variability in the Alaska Coastal Current in the northern gulf.

T. Weingartner/ UAF

ADFG

Cont'd 6th yr.

\$50.6

\$50.6

\$32.1

\$32.1

Chief Scientist's Recommendation

This excellent project provides new insights into physical forcing/control of primary production and mass transport. The synthesis efforts are allowing new insights into proxy measures that might be applied to the 35-year historical record to understand long-term ecosystem variability. This is an excellent investment in a long-term data set that will pay future dividends in fish and wildlife management. Fund.

Executive Director's Preliminary Recommendation

Fund, including proposed upgrade of mooring (addition of another temperature/conductivity recorder with fluorometer and transmissometer) contingent on (a) receipt of a description of the deployment procedure intended to insure against loss of data and (b) submittal of the manuscript promised in FY 02 analyzing the relationship between atmospheric pressure, precipitation, and density structure of the Alaska Coastal Current. This project provides for continued Trustee Council support of hydrographic station GAK1 and the accompanying retrospective analyses of the station's data record. GAK1 provides a long-term data set that allows characterization of the Alaska Coastal Current, which is essential to understanding climatological forcing of productivity and will be important for GEM.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03423	Patterns and Processes of Population Change in Selected Nearshore Vertebrate Predators	J. Bodkin, B. Ballachey/USGS-BRD, D. Esler/Simon Fraser Univ.	DOI	Cont'd 5th yr 5 yr. project	\$216.2	\$215.2	\$0.0	\$0.0
	Project Abstract	Chief Scientist's Reco	ommendation	<u>Exe</u> cu	tive Director's	s Preliminar	<u>/ Recomme</u>	ndation
	s and harlequin ducks have not fully recovere				otter compo			

from the oil spill, based on population-level demographic outstanding contributions to the EVOS Nearshore differences between oiled and unoiled areas. Further, in Vertebrate Predator (NVP) program (Project oiled areas, both species show elevated cytochrome P4501A, almost certainly reflecting continued exposure to oil. This project is exploring links between oil exposure and the lack of population recovery, with the intent of understanding constraints to full recovery of these species and the nearshore environment generally. The results also serve to monitor the progress of recovery of the species and the system. To date, the work has consisted of field components for both species, and a captive component for harlequin ducks. Proposed activities for FY 03 include (a) the third and final year of harlequin duck field studies quantifying oil exposure and survival of females during winter and (b) closeout of all project components and preparation of the final report.

99025). Sea otters and harlequin ducks have shown ongoing injury. The experimental work with harlequins to derive dose-response results is especially valuable (although procedurally as proposed. Defer decision on additional year of harlequin field work/data collection pending review of preliminary FY 02 data.

slight budget reduction; defer decision on funding harlequin duck component (\$187,400) pending review of FY 02 preliminary results, including clarification of work performed in FY 02 and what additional work needs to be done in FY 03 to meet project objectives. This project is an important extension of the Nearshore challenging). Fund closeout of sea otter component Vertebrate Predator project (Project 99025) work on two still-injured species, sea otters and harlequin ducks. The FY 03 funding request includes closeout activities (final data analysis and report writing) for both the sea otter and harlequin duck components.

	•			
03455	GEM Data System	Restoration Office	ALL	Cont'd
	•			2nd yr.

Project Abstract

This project supports the data management and information transfer system for GEM. Data collection, quality control and documentation, archiving, transfer, delivery, and presentation are critical components of GEM. Project funding will allow the GEM Data Systems Manager to provide the leadership and expertise necessary for this essential part of the GEM program, and hire support staff to make initial aspects of the program operational.

Chief Scientist's Recommendation Data management will be a critical component of GEM.

Executive Director's Preliminary Recommendation Fund. This project provides funding for the GEM Data Systems Manager and related data system costs. Data collection, quality control and documentation, archiving, transfer, delivery, and presentation are critical components of GEM.

\$218.2

\$218.2

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.	
03462	Effect of Disease on Pacific Herring Population Recovery in Prince William Sound	G. Marty/Univ. of California, Davis	ADFG	Cont'd 5th yr. 5 yr. project	\$78.5	\$25.0	\$0.0	\$0.0	
	Project Abstract	Chief Scientist's Recomm	endation	Execut	tive Director's Preliminary Recommendation				

In spring 2001, prevalence of Ichthyophonus hoferi (38 percent) in the Pacific herring population of Prince William Sound was more than 50 percent greater than in importance, in addition to being a key component of project's scope to (a) evaluating the role of any year studied (1989-2000). I. hoferi causes severe, disseminated, chronic disease in Pacific herring that is best diagnosed using histopathology. Before 2001, I. hoferi was not associated with unexpected declines in population biomass, but during the last century increases in I. hoferi prevalence in Atlantic herring have been associated with several disease outbreaks. To understand the significance of the 2001 I. hoferi outbreak, this project will analyze samples already collected in fall 2001 and spring 2002 as part of Project 02462.

Unier Scientist's Recommendation Herring remain one of the key non-recovered species and are of substantial commercial the pelagic ecosystem. This project should help unravel part of the picture of their demise in the mid-1990s. However, manifestation of disease and potential population impacts are determined by other environmental factors (e.g., food availability, manuscript using the data on disease as a component in a population model of herring in Prince William Sound is a much higher priority and additional histopathological analyses proposed. After many years of funding, it is appropriate to focus on integrating what has been learned about the role of disease in herring population dynamics. Funding should be contingent on receipt of a revised proposal with objectives limited to: (a) evaluating the role of Ichthyophonus in affecting population dynamics of herring in Prince William Sound and (b) producing a publishable manuscript on the subject. Fund at a reduced level.

Executive Director's Preliminary Recommendation Fund contingent on submittal and approval of a revised Detailed Project Description and budget that reduce the Ichthyophonus in affecting population dynamics of herring in Prince William Sound and (b) producing a publishable manuscript on the subject (the amount in the recommended column above is a placeholder). This project, which has received several years of water temperature, predation, etc.). Publication of a funding support from the Trustee Council, has been studying whether disease continues to limit recovery of the Prince William Sound herring population. As recommended by the Chief Scientist, it is appropriate at more relevant to restoration program goals than the this stage of the study to focus on integrating what has been learned about the role of disease in herring population dynamics.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03476	Effects of Oiled Incubation Substrate on Pink Salmon Reproduction	R. Heintz/NOAA	NOAA	Cont'd 5th yr. 5 yr. project	\$37.4	\$37.4	\$0.0	\$0.0

Project Abstract

Populations are maintained through successful reproduction; this study is designed to determine if exposure to oil impairs pink salmon reproduction. This experiment began in the fall of 1998 when pink salmon eggs were incubated in oil contaminated water. Fish that survived exposure were marked and released in the spring of 1999. They reached maturity at sea and returned to spawn in the fall of 2000. Return rates confirmed previous observations of reduced marine survival among exposed fish, but evaluations of offspring (F1) survival rates did not indicate any reproductive impact. The F1 were incubated in clean water until spring 2001 when they were marked and released. They will mature and return to the hatchery in the fall of 2002 and their reproductive ability will be evaluated by generating an F2 generation. A diminished ability to produce the F2 generation represents a genetic effect of oil transmitted to unexposed generations. Such an effect was demonstrated for similarly treated pink salmon in 1997, but corroborating data do not exist. This project is designed to retest that experiment; if diminished reproductive ability is corroborated, it would demonstrate a significant and unanticipated effect of oil pollution.

Chief Scientist's Recommendation

This is an important project because it rigorously tests the hypothesis that pink salmon have herritable damage expressed as reduced survival. The Trustee Council should complete this project, as it has been fundamental for understanding the damage to pink salmon from the oil spill. The FY 03 work will complete a two-generation experiment started in 1998 with exposure of salmon eggs to oil. Fund.

Executive Director's Preliminary Recommendation

Fund closeout of this project contingent on submittal of overdue reports (99347, 01476). This project is validating the effects of oil contamination on pink salmon, thus contributing to our understanding of the injury and recovery status of this injured species.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03550	Alaska Resources Library and Information Services (ARLIS)	All Trustee Council Agencies	ALL	Cont'd	\$100.3	\$100.3		
	Project Abstract	Chief Scientist's Recom	mendation	<u>Exe</u>	cutive Director's	Preliminar	<u>y Recomme</u>	ndation

This project represents the Trustee Council's contribution to the Alaska Resources Library and Information Services (ARLIS). ARLIS serves as a central access point for information generated through the Trustee Council restoration process and the GEM program. In addition, ARLIS acts as the public repository for reports and other materials generated from and related to the cleanup, damage assessment and restoration efforts following the oil spill. ARLIS supports the research efforts and information needs of the Restoration Office, principal investigators, natural resources professionals, and the general public.

The oil spill collection at ARLIS (Alaska Resources Library and Information Services) is a legacy of the with oil spill information. Defining how ARLIS might be reduced as the transition to GEM is completed. library needs will likely be oriented more toward electronic formats and processes and away from paper documents, with an emphasis on web-based services. The funds currently going toward Project 03550 might be more effectively spent in the future on a service or services more tailored to the specific research and data needs of GEM. Fund for FY 03 only.

Fund continuation of one librarian at the Alaska Resources Library and Information Services (ARLIS). spill and an important means of providing the public Trustee Council contributions in FY 04 and beyond may support GEM needs to be better addressed. GEM's ARLIS provides an important service for documents and other materials produced through the damage assessment and restoration processes. The Council's original funding commitment to ARLIS was through FY 01 only; how ARLIS might relate to the GEM program in FY 04 and beyond is not clear at this time.

03558

Harbor Seal Recovery: Application of New Technologies for Monitoring Health

S. Atkinson/UAF

ADFG

Cont'd 3rd vr.

3 yr. project

\$281.6 \$281.6 \$0.0

\$0.0

Project Abstract

This study is a continuation of the study to assess the potential for new technologies to monitor the endocrine and immune systems for the health of harbor seals. During year one, baseline samples were collected from both permanently captive and rehabilitation seals at the Alaska SeaLife Center. Analysis of thyroxine (T4), triiodothyronine (T3), and cortisol (metabolic and gluconeogenic hormones), and measurement of immunoglobulins (IgG, IgM, and IgA) and organochlorine contaminants are currently being assessed. Cell lines to quantify immunoglobulins have been initiated, and baseline hormones have been established. FY 03 will compare the profiles of free-ranging seals and those failing to thrive in their environment in an effort to restore this species.

Chief Scientist's Recommendation

This is an excellent proposal investigating contaminant effects on reproductive biology of harbor seals. However, the decision on funding should be deferred until the project's progress in antibody development can be assessed and budgetary issues (especially related to Alaska SeaLife Center bench fees) are clarified.

Executive Director's Preliminary Recommendation

Defer decision on funding this project pending (a) further information from the principal investigator on the status of antibody development, which is a key aspect of the project and (b) resolution of budget issues, including updated information on availability of federal funds for research on harbor seals at the Alaska SeaLife Center and further information on bench fee request. FY 03 was to be this project's closeout year (data analysis and final report writing only) but additional sample collection--and the corresponding bench fees for housing the research animals at the Alaska SeaLife Center--is also proposed. This project is employing new technologies at the Alaska SeaLife Center to assess and monitor the health of harbor seals. [Note: The amount in the recommended column above includes \$164,600 for Alaska SeaLife Center bench fees; this amount is a placeholder.]

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03561	Evaluating the Feasibility of Developing a Community-Based Forage Fish Sampling Project for GEM	D. Roseneau/USFWS	DOI	Cont'd 2nd yr. 2 yr. proje	\$17.8	\$17.8	\$0.0	\$0.0
evaluating th community-t The work in	Project Abstract will close out Project 02561, which is se feasibility of developing a based forage fish sampling project for GEM. FY 03 will consist of compiling and formation collected during FY 02, and writing	Chief Scientist's Recommon The concept of this projectconsampling of predator fish to more (forage fish)is scientifically society economically viable. It addresses of community involvement with contribute to several aspects of monitoring. This project will profor the Kachemak Bay-lower Contribute William Sound. Fund.	nmunity-based nitor their prey and and es GEM's object potential to long-term duce a useful p	Fund comr long- tive build: Pred contr lan comr and there shou is no relev strate	recutive Director's tecutive Director's closeout of this punities to explorate from forage fish residual constant of the constant of the particular cant to forage fish egies that might beging a community.	project, whice involving a monitoring sofully begur ixperiment, anding the feapling progrant part of Gane Council's data that me to develope	ch is visiting local resider studies. This under APE Project 991 easibility of ams in gene EM transition interest in ight be gath techniques a d in regard in state of the sta	spill-area ats in s effort EX (Alaska 63). It will eral, and on. It this project ered and
03574-BAA	Assessment of Bivalve Recovery on Treated Mixed-Soft Beaches in Prince William Sound	D. Lees/Littoral Eco.& Environ. Services	NOAA	Cont'd 2nd yr. 2 yr. proje	\$35.3 ect	\$35.3	\$0.0	\$0.0
assemblage high-pressur damaged in This project injury to thes conclusions considerable areas of the these beach ability to sup	Project Abstract 1989 through 1997 suggest that bivalve is on beaches in Prince William Sound with the hot-water washing remain severely terms of species composition and function, will assess the generality of this apparent is assemblages. A finding that our are accurate will indicate that a proportion of mixed-soft beaches in treated sound remains extremely disturbed and that les are functionally impaired in terms of their oport foraging by damaged nearshore redators such as sea otters and harlequin	t	r of funding for his work has lo tion Plan, but n	this Func ing initia of Adm conti	Recutive Director's I closeout of this I ted under the Nationistration's HAZI Inuing effects of s I portant bivalves, I eralized over a lar	oroject, which ional Ocea MAT progra horeline cle thus allowir	ch will extennic and Atm m to docum anup on pong g the result	d sampling ospheric ent pulations

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03575-BAA	Designing a Community Involvement/Community-Based Monitoring Plan for GEM	M. Sigman/Center for Alaskan Coastal Studies, et al	NOAA	New 1st yr. 1 yr. project	\$107.5	\$107.5	\$0.0	\$0.0
community monitoring process community- conceptual assessmen and indicate Resource C Manageme planning process identifying r and local and	Project Abstract will design and produce a draft GEM involvement and community-based plan to address the needs of diverse is in the region. This initiative will be informed be history review of working models of based monitoring efforts relevant to the GEM foundation, (b) a regional capacity to identify potential partnerships, (c) issues ors as identified by Chugach Regional Commission's Tribal Natural Resource int Planning Process and other community occesses. Recommendations will include new approaches to melding Western science and traditional knowledge and pilot based monitoring projects.	Commission's Tribal Natural Resol Management Plans, and identify n link western science and local ecoknowledge. These deliverables wi important aspect of the GEM prog some problems (lack of detail and of the proposal), this is a good pro-	a case-study undertake a ntify issues a Resource ource ew approach logical Il address a v ram. Despite clarity in por	Fund, with (development of possible satisfactor monitoring planning; Council's in the second	authorization au	on of funds ework documents; \$56,700 in of Phase essesment, his project a strong and int/community from the efforts formunity from the efforts owardship) bent of a region posed to depacity and (en limited to community)	for Phase II ment and de) contingent I (communit literature readdresses the meaningful ity monitorin funded in envolvement out with (a) a conwide comevelopment of b) a broade tribes only; groups and	evelopment on y view, and ne Trustee role for g in GEM. arlier years Fraditional different munity of specific r focus this project add Homer
03584	Evaluation of Airborne Remote Sensing Tools for GEM Monitoring	E. Brown/UAF, J. Churnside/NOA	4 ADFG	Cont'd 2nd yr. 2 yr. project	\$44.0	\$39.0	\$0.0	\$0.0
	Project Abstract	Chief Scientist's Recomm	nendation	<u>Execut</u>	ive Director'	<u>s Prelimina</u>	y Recomme	endation
FY 02. The remote ser of the data of (a) a pul maximum of Sea Surfacting the birds, mam structure, a and mamn	year-two completion of a project initiated in e main objective is an evaluation of airborne nsing tools for GEM ecological interpretation collected. The instrument package consists sed lidar to map subsurface features to a of 50 m, (b) an infrared radiometer to map be Temperature (SST) day, (c) two three-chip to systems to map ocean color (chlorophyll), nmals, surface fish schools, and ocean fronta and (d) an infrared digital video to map birds mals at night. Shipboard and buoy data will be alidation and interpretation of remotely sensed	I	y innovative d is therefore serves suppo nt phase, as	remote se more GEM, cor ort highly inn the question, monitor fo	ensing instru ntingent on a ovative proje which is ho	mentation a a slightly recect is working w to effective oundance u	as a monitor luced budge ng on a chal rely and effic nder the GE	et. This lenging ciently M program.

data.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	Request	Recom.	FY 04 Request	Recom.
03585	Lingering Oil: Bioavailability and Effects to Prey and Predators	J. Rice, J. Short/NOAA; J. Bodkin, B. Ballachey/USGS; D. Esler/Simon Fraser Univ.	NOAA & DOI	Cont'd 2nd yr. 2 yr. project	\$52.1	\$52.1	\$0.0	\$0.0

Project Abstract

About 20 acres of contaminated beach were found in 2001 surveys of western Prince William Sound conducted under Project 01543. In these areas, sea otters and harlequin ducks have not recovered, raising concerns that continued oil exposure may be affecting their survival. Biochemical assays and mortality patterns apparently still exposed to lingering oil. This is a are consistent with continuing oil exposures, but prior to this study, linkages between oil persistence and impacts at higher trophic levels had not been attempted. In this study, shoreline contamination, exposure and effects were examined simultaneously by choosing a common set of sites at which to assess oil persistence and biological impacts on sea otters and harlequin ducks. Fieldwork was conducted in FY 02, and closeout activities, including data analyses and writing of reports and publications, will be done in FY 03. During field operations, prey living in oil patches were encountered in larger numbers than anticipated. These have been sampled (primarily clams) and archived. Additional closeout funds have been requested to analyze these samples. The National Oceanic and Atmospheric Administration's Auke Bay Lab has been leading the studies of oil bioavailability and impacts to prey species; Department of Interior-U.S. Geological Survey has been directing the studies on sea otters and harlequin ducks.

Chief Scientist's Recommendation

This is a very good to excellent proposal that addresses the potential effects of remaining intertidal oil deposits (mainly subsurface) on the food web, including clams and intertidal fish, sea ducks (harlequin ducks) and sea otters, which are closeout of the two-year project to document oil remaining in the intertidal and how it may be available to higher trophic levels. Additional funds to analyze oil-exposed bivalves are warranted, as this may establish an exposure pathway to higher trophic levels. The project is related to Project 03620, but the latter project focuses more closely on relating foraging area to exposure. Fund.

Executive Director's Preliminary Recommendation

Fund closeout of this project, including funds for additional analyses (chemical analyses as well as analyses of archived samples from oil-exposed bivalves) contingent on (a) clarification of travel budget and (b) submittal of overdue reports (00195, 00454, 01195, 01599) and manuscript (00598). This project, which integrates studies of sea otters and harlequin ducks with continued assessment of oil persistence, is the product of a workshop convened in 2001 to review results from Project 01543/Evaluation of Oil Remaining in the Intertidal and to identify information gaps. The project's objective is to determine if the signs of continued oil exposure in sea otters and harlequin ducks are linked to the oil remaining in intertidal sediments.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	Request	FY 03 Recom.	FY 04 Request	Recom.
03587-BAA	Understanding the Cellular Processes of Recovery and Its Utility in Oil-Spill Restoration Efforts	C. Downs/EnVirtue Biotechnologies, Inc.	NOAA	New 1st yr. 1 yr. project	\$183.0	\$145.0	\$0.0	\$0.0
	Project Abstract	Chief Scientist's De	aammandation	Even	tivo Diroctori	o Droliminos	. Docommo	ndetion

Project Abstract

This project will elucidate the cellular and genomic mechanisms that affect the rate of recovery in bivalve species impacted by the oil spill. The project will (a) determine the adverse affects of a long-term oil-spill exposure on specific processes of cellular physiology and genomic integrity that could potentially impede or slow the rates of recovery in populations of Protothaca staminea and (b) determine the link between cellular-physiological condition with PAH-body burden in these two species of bivalves by characterizing these parameters in populations from sites that exhibit different levels of oil contamination. Completion of this work may provide a foundation to address questions critical to the issue of variable rates of recovery in both invertebrate and vertebrate species in oil-impacted areas. It will provide new and powerful tools to improve monitoring methodologies, as well as potentially providing valuable information for restoration efforts.

Chief Scientist's Recommendation

This project will apply a battery of biomarkers to determine the sublethal impact of residual oil to mollusk physiology. Some interesting data is presented in the proposal. However, there is no proof of principal for the effects postulated, the proposal lacks a strong justification from the existing biomarker literature, and it is not entirely clear how experienced the investigators are in this proposal, however, the investigators should be encouraged to address these weaknesses in a revised proposal. Defer pending submittal and review of a revised Detailed Project Description that addresses the peer reviewers' concerns.

Executive Director's Preliminary Recommendation

Defer decision on funding this project pending submittal and review of (a) a revised Detailed Project Description that addresses the Chief Scientist's concerns (proof of principal, reference to existing biomarker literature, and principal investigators' experience) and (b) a revised budget that clarifies (and probably reduces) contractual and travel costs (the amount in the recommended column above is a placeholder). This project is area. In light of the preliminary data submitted in the designed to determine the sublethal impact of residual oil to mollusk physiology and how exposure to residual oil might be slowing recovery of mollusks.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03594	Development of an Alaska Standard Species for Marine Toxicity Testing - The Alaska Green Urchin	R. Perkins/UAF	ADFG	New 1st yr. 1yr. project	\$134.1	\$0.0	\$0.0	\$0.0
testing pr species. or recomi Agency a cold-wate species is species is and this p of the res crude oil dispersar developir Tests of the	Project Abstract ect will develop a standard marine toxicity rocedure using cold water and an Alaska None of the standard test procedures required mended by the Environmental Protection and other environmental regulators use er test animals. Use of typical warm-water or make decisions about Alaska conditions and as unsatisfactory from a scientific standpoint, practice also interferes with public acceptance sults. Decisions requiring toxicity testing include components and cleanup chemicals, such as not sand beach cleaners. This project proposes and the Alaska green urchin as a test species. The indicators of toxicity.	The core tasks in this produce and extensively pul colleagues at the Universithe 1980s. The project a restoration. Do not fund.	blished by Dinnel and sity of Washington du	peen Do not to I his recommunity	utive Director's fund based on nendation.	•	•	<u>ndation</u>

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.	
03596	Securing Flow Data for a Lower Kenai Peninsula Salmon Stream	J. Cooper/Cook Inlet Keeper	ADFG	New 1st yr. 1 yr. project	\$15.5	\$27.2	\$0.0	\$0.0	

Project Abstract

Since August 1998, Cook Inlet Keeper and the Homer Soil and Water Conservation District have been collecting discharge and water quality data from four important salmon streams on the lower Kenai Peninsula: runoff in the Ninilchik River--that is expected to be Ninilchik River, Anchor River, Deep Creek, and Stariski Creek. With the loss of funding, the U.S. Geological Survey (USGS) no longer can maintain the Ninilchik River gauge. Keeper, Homer Soil and Water Conservation District, Ninilchik Traditional Council and others depend on this gauge for the flow data needed to achieve a complete picture of water quality in these watersheds. This project will provide funds for Keeper to contract with USGS to maintain the gauge for one year, during which time long-term funding will be secured.

Chief Scientist's Recommendation

This is a very cost-effective proposal for "bridge funding." Funding in FY 03 will prevent loss of a year in a time-series of physical data--freshwater useful in understanding differences in natural forcing. Fund, lower priority.

Executive Director's Preliminary Recommendation

Fund FY 03 only contingent on (a) clarification of funding to continue gauge's operation May-September 2002 and of matching funds available for gauge's FY 03 (October 2002-September 2003) operation and (b) a revised Detailed Project Description and budget that reflect the recommended funding amount (additional funds for additional data downloading in FY 03). This project will provide interim funding (FY 03 only) for maintenance of the Ninilchik River stream-flow gauge while a permanent, long-term funding source is sought. Cook Inlet Keeper relies on this gauge in monitoring the water quality of the Ninilchik River, which the Alaska Department of Environmental Conservation has rated as at high risk from nonpoint source pollution and as having a high need for data collection. Water quality is a key element in understanding the watershed and nearshore environments of the spill-impacted region and the overall health and productivity of such resources as salmon, herring, and sea otters which were seriously impacted by the oil spill.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03600	Synthesis of the Ecological Findings from the EVOS Damage Assessment and Restoration Programs, 1989-2001	R. Spies/EVOS Chief Scientist, et al	ADNR	Cont'd 2nd yr. 3 yr. project	\$212.0	\$212.0	\$184.8	\$184.8
	Project Abstract	Chief Scientist's Recomm	endation		cutive Director's	s Preliminar	v Recomme	ndation
post-spill st restoration and natural of Alaska e integrated s major secti the ecosyst responds ir how our un and what fu valuable m product of	t is synthesizing the results from 12 years of addy in the EVOS damage assessment and programs in the context of anthropogenic factors causing change in the northern Gulf acosystem. The result of the work will be an synthesis book. The book will consist of three ons: (a) the basic structure and function of tem, (b) how it changes over time and how it in disturbances, and (c) the effect of the spill: derstanding of the ecosystem has matured ature path will help us better understand this arine ecosystem. The book will be a major the EVOS restoration program and help set tion for GEM.		Chief Scientis	and independiscus Detailer for the multime board) learne followi two pu legacy	contingent on sa endent review. Sion or need to ed Project Desc book; more infinedia presentati i. This project with the different more that ing the oil spill. Imposes: (a) infort in a scientifical in provide a four	Several issumed be address ription (e.g. ormation or on; possible will integrate an a decade Such a synthe publicy rigorous y	es may nee ed in a revis, more detail the propose use of an e what has be shown it worth of sthesis will fuic about the yet readable	d further ed led outline ed ditorial een science lfill at least EVOS
03607-BAA	Geographic Information Systems (GIS) Map of Water Quality Monitoring Sites Across the Gulf of Alaska	M. Gracz/Cook Inlet Keeper	NOAA	New 1st yr. 1 yr. projec	\$12.8 t	\$12.8	\$0.0	\$0.0
compreher map and d Alaska. The linked to Manageme and STOR easily updates well as public. The as a lasting Gulf of Alamonitoring	Project Abstract It will synthesize existing data to create a resive Geographic Information Systems (GIS) atabase of monitoring sites across the Gulf of his map will be published in hardcopy and will of CIIMMS (Cook Inlet Information ent and Monitoring System, Project 01391) ET, through which the map and data can be ated and made available to monitoring entities policy makers, scientists, and the general is map and the accompanying data will serve to tool for the restoration and protection of the ska's resources by coordinating diverse efforts and establishing a framework into mation about current and future monitoring	ongoing, previously funded project unified database for the reporting of data collected by citizen-based monitoring programs" (Project 02 GEM objectives is not possible to it is not clear what parameters are	ompelling cas y a database nct from the at for develop and manage water quality 668). The lind evaluate bed included in	se for Defer addition monitor	decision on function on a information oring sites would reters are included quality measures differs from the Council under y and Habitat Dase would be used the Gulf of Aland	ding this pro on (a) which doed in the pro- rements"), (the databa or Project 02 atabase and sed in GEM nap of water	pject pending the water qualed (i.e., what roposer's debt) how the pose funded by 1668/Interaction (c) how the planning. T	g receipt of lity finition of roposed y the cive Water e proposed nis project

programs can be entered.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 FY 04 Request Recom.
03610	Kodiak Archipelago Youth Area Watch	T. Schneider/Kodiak Island Borough School District	ADFG	Cont'd 4th yr.	\$61.8	\$61.8	\$61.8

Project Abstract

This project will engage students in projects with goals aligned with the general restoration efforts of the Trustee success, including influencing the curriculum of the Council. Students and site coordinators will conduct interviews with local experts and document traditional ecological knowledge, publishing it in a Kodiak School District oral history magazine. Participation of Youth Area Watch adults and students in the annual Academy of Elders/Science Camp will be strongly encouraged. Such participation will serve as another avenue for more tribal members to learn about restoration efforts. scientific monitoring techniques, and occupations related to such work. The value and implications of traditional ecological knowledge will be strongly emphasized throughout the implementation of the project.

Chief Scientist's Recommendation

This ongoing project has shown solid evidence of Kodiak School District, and has attracted additional funding from other sources. This popular and successful program is achieving its objectives. Fund.

Executive Director's Preliminary Recommendation

Fund. This project, which involves local youth in restoration projects, addresses the Trustee Council's commitment to community involvement in GEM. In FY 03, students in Akhiok, Old Harbor, Port Lions, Quzinki. Chiniak, and Kodiak City will participate.

03614

Monitoring Program for Near-Surface Temperature, Salinity, and Fluorescence in the Northern Pacific Ocean

Project Abstract

This project will use a thermosalinograph and fluorometer, to be installed on a crude oil tanker, to acquire continuous, long-term measurements of the near-surface temperature, salinity, and fluorescence fields along the tanker route between Valdez, Alaska and Long Beach, California.

S. Okkonen/UAF

ADFG

Cont'd 2nd yr.

\$20.9

\$17.8

\$0.0

\$0.0

2 yr. project

Chief Scientist's Recommendation

This is a continuation of an innovative and costeffective project that provides data to assess the spill against the background of climate-driven variability. The potential for the proposal to provide data from a key area of Prince William Sound and and mammals is excellent. Fund contingent on resolution of administrative/budget questions.

Executive Director's Preliminary Recommendation

Fund closeout of this project (data analysis and preparation of final report/manuscript) contingent on long-term recovery of resources impacted by the oil submittal and approval of a slightly reduced budget. In FY 02, this project installed a thermosalinograph and fluorometer on a crude oil tanker traveling between Valdez and Long Beach. Vessels of opportunity such the adjacent ocean relevant to long-term evaluation as this are a cost-effective method that may be useful to and interpretation of population trends for birds, fish GEM, and the data collected by this project on ocean conditions in Alaskan waters will be extremely useful to GEM.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03620	Lingering Oil and Predators: Pathways of Exposure and Population Status	S. Rice, J. Short, M. Lindeberg/NOAA; J. Bodkin, B. Ballachey/DOI	NOAA	New 1st yr. 2 yr. project	\$340.0	\$320.0	\$30.0	\$30.0
	Project Abstract	Chief Scientist's Recommendation		Execu	tive Director's	s Preliminar	v Recomme	ndation

Lingering oil and continued effects to sea otters and sea ducks are the most surprising and best documented long term impacts of the oil spill. Strong evidence is accumulating which implicates lingering oil as a factor constraining recovery of the nearshore ecosystem in western Prince William Sound. Acute and chronic contamination of sediments and prey species were well documented during the years following the spill. Twelve years later, elevated biomarker levels in sea otters and sea ducks have indicated continued exposures to hydrocarbons. Evidence implicating a route of exposure to date has been largely circumstantial. However, in 2001 and 2002, extensive sampling was undertaken to document the distribution, abundance, and bioavailability external contact -- is also a question. Fund of lingering oil along those shorelines most heavily impacted by the spill. This has paved the way for identifying specific areas where sea otters and sea ducks could be currently foraging and exposed to lingering oil. This project is an outgrowth of the earlier studies and will focus on the direct pathways of lingering oil to sea otter and sea duck populations in two heavily impacted bays in the western sound.

Chief Scientist's Recommendation

This is an important project for understanding the lingering effects of the oil spill in some of the most heavily oiled localities from 1989. It is a very good to excellent proposal that addresses the potential effects of remaining intertidal oil deposits (mainly subsurface) on the food web, including sea ducks (harlequins) and sea otters, which have not recovered from the effects of the spill and are apparently still exposed to lingering oil. There is some concern about the experimental design, particularly being able to relate the location of foraging activities to the contamination of the forage base. The means of contamination--eating versus contingent on preparation of a slightly revised proposal prepared in consultation with the peer review team, and approval of the revised proposal.

Executive Director's Preliminary Recommendation

Fund contingent on (a) submittal and approval of a revised Detailed Project Description that addresses the Chief Scientist's concerns about the proposed experimental design; corresponding budget revisions may also be warranted (the amount in the recommended column above is a placeholder), (b) clarification of travel budget, and (b) submittal of the principal investigators' overdue reports (00195, 00454, 01195, 01599) and manuscript (00598) from prior years. This project follows on Project 02585, which is integrating studies of sea otters and harlequin ducks with findings of the lingering oil survey conducted Summer 2001 (Project 01543). This project will address additional objectives related to the potential effects of remaining intertidal oil deposits-specifically in regard to the food web--on sea otters and harlequin ducks, both of which have not recovered from the oil spill and are apparently still exposed to lingering oil.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03625-BAA	Prince William Sound Isotope Ecology Ecology Synthesis	T. Kline/PWSSC	NOAA	New 1st yr. 1 yr. project	\$32.6	\$25.0	\$20.4	\$0.0

Project Abstract

This project will provide a 'big picture' synthesis of the present structure of the pelagic ecosystem of Prince William Sound through preparation of a scientific paper with tentative title: "A stable isotope based trophic structure of the pelagic community of Prince William Sound, Alaska". The documentation of a 'before picture' reduced level. will be of extremely high value because the recently documentated regional change in species composition is likely to alter pelagic trophic structure during GEM.

Chief Scientist's Recommendation

product, and the principal investigator is certainly the most knowledgeable individual to prepare this synthesis, the proposal is costly without a compelling presentation of the content. Fund at a

Executive Director's Preliminary Recommendation

While the proposed synthesis could be a worthwhile Fund contingent on submittal and approval of a revised Detailed Project Description and budget that (a) reduce the project's scope to FY 03 only and (b) reduce the budget to conform to the Trustee Council's budget instructions regarding manuscript preparation. This project will prepare a synthesis manuscript on the pelagic ecosystem of Prince William Sound, using stable isotope ratio data from biota samples collected and analyzed by the principal investigator under previous EVOS projects (Project 98320/Sound Ecosystem Assessment; Project 01393/Prince William Sound Food Webs: Structure and Change).

03630 Scientific Management under GEM

Project Abstract

This project will fund the Science and Technical Advisory Committee (STAC), its subcommittees, and related support activities including the Trustee Council's Annual Workshop and peer review of proposals and project reports. The STAC, which consists of seven members appointed by the Trustee Council, provides the primary scientific advice to the Council's Executive Director on GEM and how proposed and funded monitoring and research projects meet the mission and goals of the GEM program and address key questions and hypotheses. Subcommittees--which in FY 03 will be organized around lingering oil effects, data management, and the GEM habitat types (watersheds, nearshore, Alaska Coastal Current, and offshore)--will recommend to the STAC testable hypotheses, items for invitation, and potential peer reviewers as well as possibly conduct peer review on proposals and project results.

Restoration Office Chief Scientist's Recommendation

Proposal will not be reviewed by Chief Scientist.

ALL

Cont'd

Executive Director's Preliminary Recommendation

\$254.7

\$254.7

Fund but continue budget review; additional funds may be necessary for additional GEM planning activities and for some Scientific and Technical Advisory Committee (STAC) and subcommittee meetings that are not yet scheduled. This project is designed to ensure that the GEM program is implemented with a high degree of scientific integrity through establishment of an advisory committee of independent experts (the STAC), whose work will be supported by subcommittees composed of scientists, resource managers, and community members. The project will also support continued independent peer review of project proposals and reports, as well as the dissemination of research results at an annual meeting at which Council-funded scientists will present their findings to their peers and the public.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	Request	Recom.	Request	Recom.
03631-BAA	Top-Down Process Synthesis	T. Kline/PWSSC	NOAA	New 1st yr. 2 yr. project	\$55.6	\$0.0	\$29.5	\$0.0

Project Abstract

This project will synthesize information that suggests ontogenetic increases of the trophic position of the walleye Pollock such that they contribute to top-down processes when >600mm in length, using stable isotope analysis of archived samples and data. Pollock feed at multiple trophic levels depending on their size, with larger pollock cannibalizing smaller pollock, especially those that are age-0. Preliminary analysis suggested that pollock of this size range have a high potential for cannibalism. Pollock of this size range are presently being removed from Prince William Sound since the discovery of a mostly undisturbed population during the SEA project (Sound Ecosystem Assessment, Project /320.) The proposed documentation of a 'before picture' will be of extremely high value for GEM, because fishing pressure may effectively remove the larger size class pollock from the sound as has happened in the Bering Sea.

Chief Scientist's Recommendation

This proposal from qualified investigators does not present a convincing case that confounding factors can be adequately controlled to resolve the questions it poses. The potential contribution to restoration objectives is thus likely to be limited. Do not fund.

Executive Director's Preliminary Recommendation Do not fund based on Chief Scientist's recommendation. This project would use stable isotope

analysis to examine the trophic position of walleye pollock under different conditions. The reviewers expressed concern about the experimental design of the project and whether unambiguous results could be obtained using the methods proposed.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	Recom.
03636-BAA	Management Applications: Commercial Fishing	K. Adams, R. Mullins/Cordova	NOAA	Cont'd 2nd yr. 2 yr. project	\$50.0	\$50.0	\$0.0	\$0.0

Project Abstract

This project is intended to build a bridge between the scientific community, which is describing and attempting and users, related to EVOS, is quite clear. If the to predict variation in biological production, and the commercial fishing community, which is attempting to find management applications for this new information. In addition, the project seeks to provide community presence to participate in development of GEM.

Chief Scientist's Recommendation

The need for a "bridge project" between science project can identify useful applications from EVOS-based science it will be money well spent. One important criterion of success will be the ability to formulate credible and scientifically well supported proposals to the Alaska Board of Fisheries. The project is off to a strong start in FY 02 with two successful meetings with well-documented outcomes and setting up an office Aquaculture Corporation, Valdez Fisheries in Cordova. Prospects for serving the needs of improved if an advisor who is knowledgeable in the academic and professional side of natural resource management and/or oceanography could be engaged. Fund contingent on receipt of revised proposal that identifies an appropriate science advisor.

Executive Director's Preliminary Recommendation

Fund FY 03 only contingent on identifying a project advisor who is knowledgeable in the academic and professional side of natural resource management and/or oceanography. In FY 02 this project formed a Prince William Sound Fisheries Research Applications and Planning Group to provide a forum for developing fisheries management applications for all interested parties (Cordova District Fishermen United, Alaska Department of Fish and Game, Prince William Sound Development Association, commercial fishers, and those who depend on resources damaged by the oil others). The objectives of this group in FY 03 are to: (a) spill are very good. Prospects for success would be identify a fisheries relevant subset of EVOS projects, (b) develop criteria and guidelines for making information gathered by GEM relevant for fisheries management and shore-based communities, and (c) develop a plan showing the cycle of movement from basic science to management application. At the end of FY 03, the success of the project will be evaluated and a decision made on whether to continue the project into future years. As recommended by the Chief Scientist, one measure of success will be the project's ability to formulate credible and scientifically well supported proposals to the Alaska Board of Fisheries. The EVOS program can benefit from the commercial fishing community's perspective on restoration results and interaction with fishers on how to incorporate the results into fisheries management practices. In addition, the project could form a foundation for working with Prince William Sound fishers as GEM develops.

Proj.No.	Project Title	Proposer	Lead Agency	New or Cont'd	FY 03 Request	FY 03 Recom.	FY 04 Request	FY 04 Recom.
03649	Reconstructing Sockeye Populations in the Gulf of Alaska over the Last Several Thousand Years	B. Finney/UAF	ADFG	Cont'd 2nd yr. 3 yr. project	\$90.8	\$80.8	\$26.6	\$26.6
	Project Abstract	Chief Scientist's	<u>Execut</u>	tive Director's	<u>Preliminan</u>	y Recomme	ndation	
This prois	ot in research resting aboness in sections	"" -:	! 0 F00					

This project is reconstructing changes in sockeye salmon abundance over the last 5,000 years using the 15N record left by salmon carcasses in the sediments of spawning lakes in Prince William Sound, the Kenai Fjords, the Kenai River watershed, and on Kodiak Island. The research question is: What is the normal variability in sockeye salmon populations in the Gulf of Alaska and how does it relate to climatic changes in the Gulf of Alaska region? The results will provide a valuable background for future monitoring studies within GEM and for fisheries managers working to preserve and restore natural salmon runs.

This outstanding project is revealing a 3,500 year record of sockeye salmon abundances in the northern Gulf of Alaska. Previous work with other investigators has established the correlation of salmon abundance with PDO (Pacific decadal oscillation) variations on the decadal scale. The importance of this work is that it describes a much longer record of PDO variation than the European historical record compiled during the 20th century. The project is being executed with the highest scientific standards. Fund, including the proposed addition of three other Kenai Peninsula lakes.

Fund, including new objectives related to core collection from Hidden Lake, Skilak Lake, and a control lake on the Kenai Peninsula, contingent on submittal and approval of a slightly reduced budget. This project is conducting a retrospective study of sockeye abundance in certain lakes in the spill region and developing hypotheses about how changes in the atmosphere/ocean system affect salmon populations.

03656

Retrospective Analysis of Nearshore Marine Communities Based on Analysis of Archaeological Material and Isotopes

Project Abstract

This project will investigate long-term (6,300 year) patterns of productivity and relative species abundances in nearshore, intertidal communities via retrospective analyses. These analyses will focus on excavated midden remains of very rich, well-dated archaeological sites along the Katmai National Park and Preserve coast. Changes in nearshore marine communities will be assessed through examination of relative species abundances, size-frequency analysis, and other indicators of habitat changes. Isotopic analysis of shells add needed expertise to the project team. Fund at will provide an assessment of long-term productivity patterns in the nearshore marine environment as related to major periods of climate change.

G. Irvine/USGS, J. Schaaf/NPS, D. DOI Mann/UAF, J. Southon/Univ. Calif.

Chief Scientist's Recommendation

Cont'd

2nd yr.

2 yr. project

This pilot project has the potential to produce innovative data of great interest and relevance to understanding natural variation in ocean systems and the human use of resources over long time frames. The originality of this work is very high, although there is a risk that the coarse temporal resolution of the method will prevent precise conclusions. The increased funding (over the level originally expected for FY 03) is justified in order to level requested.

Executive Director's Preliminary Recommendation

\$55.0

\$0.0

\$0.0

\$55.0

Fund closeout of this project contingent on submittal of overdue report (99459). A portion of the increase (\$15,900) in funding over the expected amount is due to a delay in the stable isotope analyses scheduled for FY 02; an equivalent amount of funds will be lapsed back to the Trustee Council at the end of FY 02. This project is designed to improve understanding of long-term change in nearshore marine communities and investigate the relationship between productivity and climate.



Exxon Valdez Oil Spill Trustee Council 441 W. 5th Ave., Suite 500 Anchorage, AK 99501-2340