11.15.08

Exxon Valdez Oil Spill Trustee Council

December 10, 2004

11.15.08

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, Alaska 99501-2340 • 907/278-8012 • fax 907/276-7178

AGENDA
EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
MEETING
December 10, 2004 10:00 a.m.
441 West 5th Avenue, Suite 500, Anchorage

DRAFT

Trustee Council Members:

GREGG RENKES
Attorney General
State of Alaska

JAMES BALSIGER
Administrator, Alaska Region
National Marine Fisheries Service

KURT FREDRIKSSON
Acting Commissioner
Alaska Department of
Environmental Conservation

DRUE PEARCE
Senior Advisor to the Secretary
for Alaskan Affairs
U.S. Department of the Interior

KEVIN DUFFY
Commissioner
Alaska Department of Fish
and Game

JOE MEADE
Forest Supervisor
U.S. Department of Agriculture
Forest Service

Meeting in Anchorage, Trustee Council Office, 441 West 5th Avenue, Suite 500
_____ State Chair

1. Call to Order – 10:00 a.m.
   - Approval of Agenda*
   - Approval of Meeting Notes*
     August 23, 2004 Trustee Council

2. Public comment – 10:05 a.m.

3. Executive Director's report
   - Liaison hours survey – Paula Banks
   - Investment Working Committee – Gail Phillips
   - January Science Symposium – Richard Dworsky, Paula
   - Integral Consulting – Craig Tillery
   - Data Management – Rob Bochenek

- Workshops – Richard
  - STAC – Oct 7, 2004, Jan 27, and May 18, 2005
  - Nearshore – Nov 1-2, 2004 and Jan 27, 2005
  - Lingering Oil – Nov 8-9, 2004
  - Watersheds – Jan 12, 2004, Mar and Apr 2005
  - Injured species – Jan 27, Apr and Sept 2005
  - Modeling
- Membership on Working Groups - Richard
- 2005 Trustee Council Meeting Schedule – Gail
- Update on the Science Plan revisions – Richard
- Discussion of the GEM Science Plan book (published by UAA Alaska Sea Grant) – Phil Mundy

4. Miscellaneous Action Items
   - Closeout funding for Konar project* – Phil
   - Allocation correction to Hoover-Miller project* – Paula
   - Reimbursable Service Agreement, ADEC's travel funds for FY 05 to ADF&G* – Paula
   - Administrative Budget Amendments* – Paula
   - Policies and Procedures Changes*
     - STAC SOP Operating Procedures Review* – Richard
     - Changes regarding reporting due dates* – Phil
   - DNR Small Parcel extension* – Carol Fries

5. Presentation: A Synthesis of the Ecological findings from the EVOS Damage Assessment and Restoration Programs, 1989-2001 – Introduced by Phil, presentation by Jeep Rice, Bob Spies on line to answer questions

6. Council Work Priorities* - Kurt Fredriksson

7. FY 06 Invitation*
   - Funding availability for FY 06 projects – Phil

8. Executive Session

9. Update on additional funding for lingering oil projects – Craig

10. Reconsideration of previously recommended but not funded FY 05 projects – Phil

Adjourn

* Indicates action items

Exxon Valdez Oil Spill Trustee Council

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TRUSTEE COUNCIL MEETING NOTES
Anchorage, Alaska
August 23, 2004

DRAFT DRAFT

By Drue Pearce
Trustee Council Member

Trustee Council Members Present:

Joe Meade, USFS
•Drue Pearce, DOI
James Balsiger, NMFS
Kevin Duffy, ADF&G
Ernesta Ballard, ADEC
Gregg Renkes, ADOL**

• Chair
** Craig Tillery alternate for Gregg Renkes during parts of the meeting

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Meeting convened at 9:00 a.m., August 23, 2004 in Anchorage at the EVOS Conference Room.

1. Approval of the Agenda

APPROVED MOTION: Approved the August 23, 2004 agenda as modified: the Trustees will go into Executive Session following Executive Director's report (Attachment A)

Motion by Duffy, second by Meade

2. Approval of the Meeting Notes

APPROVED MOTION: Approved the May 19, 2004 meeting notes (Attachment B)

Motion by Duffy, second by Ballard

Public comment period began at 9:05 a.m.

Public comment was received from one individual in Cordova.

Public comment period closed at 9:08 a.m.

3. Executive Director's Report

4. Executive Session

APPROVED MOTION: Approved motion to move to executive session to discuss legal matters and personnel issues.

Motion by Duffy, second by Tillery

EXECUTIVE SESSION
Off the record: 9:30
On the record: 12:50

APPROVED MOTION: Approved motion to move from executive session to public session.

Motion by Duffy, second by Tillery

5. Weingartner 040340 increase funding

APPROVED MOTION: Motion to approve an increase of $6,267 for Project 040340, Long-term Monitoring of the Alaska Coastal Current.

Motion by Ballard, second by Duffy

6. Kodiak Island Borough Waste Management Plan

FAILED MOTION: Motion to approve extension of Kodiak Island Borough Waste Management Plan for one additional year.

Motion by Duffy, second by Renkes

The Trustee Council recommends that the Kodiak Island Borough submit a new proposal next year for FY 06.

7. American Fisheries Society

APPROVED MOTION: Motion to approve providing funds from FY 2004 and FY 2005 of $5,000 each year to help support the American Fisheries Society's national scientific meeting in Anchorage, September 11-15, 2005.

Motion by Balsiger, second by Duffy

8. 040772 Sediment Quality Survey

APPROVED MOTION: Motion to approve the transfer of funds $8,000 from ADOL to NOAA for Project 040772, Sediment Quality Survey of Heavily-oiled Beaches in Prince William Sound.

Motion by Duffy, second by Ballard

9. ADNR reimbursement to The Nature Conservancy for expenses

APPROVED MOTION: Motion to approve additional funding for Project 040126 for ADNR to cover additional grant costs of $12,400 incurred by The Nature Conservancy on small parcels Knol, Nakada, McGee and Thompson and an extension to December 31, 2004 to complete the transaction.

Motion by Ballard, second by Meade

10. Public Advisory Committee nominee selection for appointment by US DOI Office of the Secretary

APPROVED MOTION: Approved moving to item 12 on the agenda, approval of Public Advisory Committee appointees.

Motion by Duffy, second by Balsiger

APPROVED MOTION: Motion to approve the following nominees for the Public Advisory Committee as outlined in the Executive Director's August 20, 2004 memo:
Aquaculture/Mariculture, Gary Fandrei
Commercial Fishing, Tori Baker and Robert Kopchak
Commercial Tourism, Ron Peck
Conservation/Environmental, Pat Lavin and Martin Robards
Local Government, Ed Zeine
Marine Transportation, Ed Page
Recreational Users, Randy Hagenstein and Stacy Studebaker
Native Land Owners, Larry Evanoff

Tribal Government, Pat Norman
Subsistence, Andy Teuber
Sport Hunting and Fishing, Chuck Meacham
Science/Technical, Brenda Norcross, John Gerster and Mead Treadwell
Regional Monitoring, Lisa Ka'aihue
Public at Large, Bob Patterson and Jason Brune

Motion by Ballard, second by Duffy

11. Operations budget 050100

APPROVED MOTION: Motion to approve the Operations budget 050100 for FY 2005 including $5,000 for support of American Fisheries Society national science meeting in Anchorage and the Trustees recognize that even though the budget assumes certain salary increases they are not endorsing associated personnel actions. [Reduced AFS support from $10,000 to $5,000 as indicated in a previous motion (meeting notes item 7).]

Motion by Ballard, second by Balsiger

12. Project Management budget 050250

APPROVED MOTION: Motion to approve Project Management budget 050250.

Motion by Ballard, second by Meade

13. Data Management budget 050455

APPROVED MOTION: Motion to approve Data Management budget 050455.

Motion by Meade, second by Ballard

14. Alaska Resources Library and Information Services (ARLIS) budget 050550

APPROVED MOTION: Motion to approve ARLIS budget 050550 as proposed.

Motion by Duffy, second by Meade

15. Science Management budget 050630

APPROVED MOTION: Motion to approve Science Management budget 050630 excluding $32,000 in support of the Alaska Ocean Observing System (AOOS).

Motion by Ballard, second by Duffy

16. NOS Grant budget 050630A

APPROVED MOTION: Motion to approve NOS Grant budget 050630A.

Motion by Ballard, second by Meade

17. FY 2005 Work Plan

APPROVED MOTION: Motion to approve funding the following projects for FY 2005:
Alaska Coastal Currents, Matkin
Community Involvement, Baird
Lingering Oil, Irons, Rosenberg and Short
Management Applications, Otis and Willette
Modeling, Adams and Moffitt
Nearshore, Bodkin, Hoover-Miller and Saupe

Motion by Balsiger, second by Duffy

APPROVED MOTION: Motion to approve a request for the Science Director to review the selection of projects approved for FY 2005 funding and bring an evaluation to the December Trustee Council meeting.

Motion by Balsiger, second by Ballard

Meeting adjourned at 4:30 p.m. Motion by Ballard, second by Duffy

August 23rd, 2004 Trustee Council Meeting Notes
By Gail Phillips, Executive Director

Trustee Pearce called the meeting to order at 9:00am. All Trustees were present or represented. On line participants included Ken Adams of Cordova, Ross Mullins of Cordova, Chuck Meacham of Juneau, Maria Lisowski of Anchorage, Nancy Bird of Cordova, Tracy Mitchell of Kodiak and Marilyn Sigman.

EXECUTIVE DIRECTOR'S REPORT

First item of business was the Exec Director's report: Chuck Meacham reported on the July 21st PAC meeting and presented the PAC recommendations on the annual work plan. Carrie Holba reported on the ARLIS library move into the new facility at the University. The library is scheduled to reopen on September 7th and the Grand Opening is scheduled for October 8th.

Gail next discussed the draft calendar for next year. The proposed calendar is included in the Trustee's meeting packet. Of particular importance are the proposed dates for next year's Trustee Council meetings which include:

January 24-26, 2005	Annual Symposium
February 4, 2005	Approval of Draft Invitation
August 10, 2005	Approval of Final Work Plan and Budget
December 2, 2005	Project Contingencies

Gail introduced the new Science Coordinator, Dr. Richard Dworsky, to the Trustees.

APPROVAL OF AGENDA AND PREVIOUS MEETING NOTES

Upon the arrival of Trustee Renkes, the Council approved the agenda with the change to go into Executive Session early in the meeting and they also approved the meeting notes for the May 19, 2004 joint meeting with the PAC.

EXECUTIVE SESSION

The Trustee Council moved to go into an Executive Session to discuss legal and personnel issues at 9:30am and reconvened the Council meeting at 12:50pm. Craig Tillery sat in for Trustee Renkes.

ITEMS OF BUSINESS

The Council approved additional funding for the Weingartner project.

Council rejected a request from the Kodiak Borough to grant another extension for their waste management project and urged the Borough to resubmit a proposal in the next work plan.

Council approved $10,000 in funds for the American Fisheries Conference; $5,000 for 2004 and $5,000 for 2005. The 2005 conference will be held in Anchorage.

Council approved the transfer of $8,000 from DOL to NOAA for Project 040772.

Council approved reimbursing TNC for expenses incurred in the acquisition of three small parcels previously approved by the Trustees.

Council moved to modify the agenda to take up the approval of the new PAC nominees next and this was approved.

Council approved the following nominees to the PAC:

Gary Fandrei	**Aquaculture/Mariculture**
Tori Baker	**Commercial Fishing**
Robert Kopchak	**Commercial Fishing**
Ron Peck	**Commercial Tourism**
Pat Lavin	**Conservation/Environmental**
Martin Robards	**Conservation/Environmental**
Ed Zeine	**Local Government**
Ed Page	**Marine Transportation**
Randy Hagenstein	**Recreational Users**
Stacy Studebaker	**Recreational Users**
Larry Evanoff	**Native Land Owners**
Pat Norman	**Tribal Government**
Andy Teuber	**Subsistence**
Chuck Meacham	**Sports Hunting and Fishing**
Brenda Norcross	**Science/Technical**
John Gerster	**Science/Technical**
Mead Treadwell	**Science/Technical**
Lisa Ka'aihue	**Regional Monitoring**
Bob Patterson	**Public at Large**
Jason Brune	**Public at Large**

All approval nominees will be send a letter of congratulations and a letter of appreciation will go to those who submitted their name but were not selected.

<u>BUDGETS</u>

Council approved the <u>Operations (#100)</u> budget with the understanding that this is a budget and not a personnel action and that any necessary steps for personnel actions be conducted appropriately.

Council approved the <u>Project Management (#250)</u> budget. Discussion included staff in the agencies that do not have any projects. Both NFS and DEC put out a great deal of money, time and effort on EVOS's behalf and receive not reimbursement. Council requested that Gail prepare a policy statement to be presented to the Trustees in their December meeting regarding this inequity. Paula will survey all the departments to see how much time and staff they spend on EVOS plus EVOS travel and we will include this in a proposal for future funding as an addition to the 250 budget next year.

Also requested were RSA's with the Department of Justice and Department of Law to help support the legal work of EVOS and the Trustee Council. Need to also include the Office of General Counsel in the National Forest Service in these RSA's.

We need to separate out the legal advisory costs vs. the agency staff costs for the time they are involved in EVOS business. Gail will bring back a suggested proposal for some sort of compensation for these activities during the December meeting and the Council will address the issue of an amendment to the 250 Budget at that time.

Council approved the Data Management (#455) budget as submitted.

Council approved the ARLIS (#550) budget as proposed.

The final budget addressed by the Council was the Science Management (#630) budget. Dr. Mundy briefed the Council on this budget, on the objectives of the budget (which are different than in the past) and on the workshops planned in this budget. This budget was approved with the exception of not funding $32,000 for AOOS.

Council approved the NOS (#630A) budget as submitted.

DRAFT WORK PLAN

Council declined a detailed presentation from Dr. Mundy, primarily because the staff had done an excellent job of getting the information out to all Council members and their staffs ahead of time and they have had the time to review the draft proposal.

Trustee Duffy spoke to the State priorities which focused more on restoration and lingering oil. He further elaborated all the various meetings and recommendations that the Trustees had received previously regarding the Plan. He spoke on behalf of the State on the balance of interest between the long term monitoring of the GEM program and not losing sight and focus on restoration and lingering oil related issues. He felt that the Council was already prepared to make the decision on what projects merited funding at this time. He further stated that the Trustees today had instructed their agency staff to meet and review all the information they had received and to bring back a consensus set of recommendations for the Council to consider by funding category. The agency staff presented the Council with their consensus recommendations and that became the starting point for discussion of which projects the Council wished to fund.

Before Trustee Balsiger presented his motion with the list of projects that the agency staff had recommended for funding, he wanted the following put on record: The work plan offered by the EVOS staff and vetted through all the various entities (STAC, PAC, ED, etc.) had the benefit of knowing how all the projects would work together to achieve an over-all goal. With the modification being proposed by the Council today, the Science Director and the rest of the science group have not been able to anticipate what the set of projects are or how they would all fit together. Mr. Balsiger felt that the Trustees would need to have an evaluation of the package they were about to present brought back to them during the December meeting with recommendations for addressing any problems or circumstances where perhaps damage was done to the Work Plan. He stated further that the Council would not necessarily fund anything else but at least they would have a report on what impact their new list of projects would have on the overall status of the Work Plan.

Trustee Ballard stated that she was also impressed with the focus in the Science Budget to go ahead with the Science Plan review. She felt that the critique of today's approved Work Plan and the Science Plan review should go together.

Trustee Balsiger moved the following projects for the Work Plan, broken down into categories:

Alaska Coastal Currents: Matkin
Community Involvement: Baird
Lingering Oil: Irons, Rosenberg, Short
Management Applications: Otis, Willette
Modeling: Adams, Moffitt
Nearshore: Bodkin, Hoover-Miller, Saupe

He stated that this collection of proposals funds something in each of the areas, with the exception of synthesis and watersheds, and that it is a good collection that will allow the Trustees to move forward, embracing parts of the GEM model and including those high priority programs that have to look at the other restoration activities.

The Council approved the above shown list of projects as the 2005 Work Plan.

Trustee Balsiger moved to ask Dr. Mundy to evaluate the Work Plan just approved by the Council in the context of developing the Science Plan and bring his evaluation back to the Trustees during their December meeting.

SCIENCE PLAN

The Trustees questioned Dr. Mundy regarding his schedule for the work on revising the Science Plan. Dr. Mundy responded that his schedule was to have a draft revision ready for the Trustee Council within the year and to make sure the Trustees had it for consideration before action is taken on the FY 06 Work Plan. This will be roughly a year long project to rewrite the Science Plan.

Trustee Renkes urged Dr. Mundy to use the revision work on the Science Plan as a tool to engage the Trustees as well as the science community during the transition course of the next year. He has concerns about what the transition is and where we are headed with respect to restoration activities. He has concerns about how all the activities fit together and what is actually occurring under the settlement. He wants to make sure that restoration is a key component in the revised Science Plan. The Science Plan will help smooth through the process of making sure the research being done is relevant for the short-term needs.

Dr. Mundy responded that the EVOS staff is trying to provide information so over the next two years we will be able to understand the status of the injured resources and to obtain whatever information might be necessary within the next two-year time frame. He continued that in addition, should the decision be made to do a long term monitoring program, staff wants to be prepared to launch that because it has been a five-year effort to get to the point where we are now.

Trustee Renkes stated that he thinks the Science Plan could be a great opportunity to increase the level and understanding about what is being done in the near term and how that transitions into the long term goals that we have. The Science Plan provides the glue for this and helps smooth the transition.

Trustee Meade followed with the importance of the next two year's worth of short term research that leads into the long term plan. He felt it was necessary to recognize the importance of both. He urged the Science Director to engage the Trustee Council early and often through themselves or through their staff as he begins to move forward in the evaluation and revitalization of the Science Plan.

The meeting was adjorned at 4:30pm.

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Data Management Architecture

Abstract

The following document lays out the foundation for a system which manages digital information of a heterogeneous nature. The system provides a service for those collecting and producing data to archive and access that information and to produce standardized metadata concerning that information. The system will also provide portals for users to discover and access information in addition to providing a service for the aggregation of data for advanced visualization, analysis, and synthesis. The vision of this effort revolves around the idea that this system is to provide a much needed service which meets the data management needs of the various parties contributing information and data. This document is broken into four distinct parts which further elaborate on the development effort described above. These more in depth descriptive sections include application architecture, metadata, data processing model, and technology.

I. Application Architecture

This section concerns itself with the overall architecture of the system which includes the technology model and various interfaces and functionality of those interfaces. Relational Database Management System (RDBMS) structures will be dealt with in the data processing section. The following lists the current architectural caveats of the system.

a. Centralized Web Service Model

The most successful attempt at managing, analyzing, and archiving disparate data sets will utilize the technological and business model employed in the web service. Examples of the success of this model can be seen in today's most utilized web services such as EBay, Ofoto, and Google. Hardware costs have been drastically reduced as of late, and purchasing the computational muscle and storage to power a centralized data management solution is absolutely feasible. Centralization also lends itself to standardization of metadata and protocols. It is envisioned that all information, data, and metadata resources will be stored and archived in a centralized data store. These information/data resources will include metadata, data sets, reports, documents, and data products in addition to other digital resources.

b. Management Interface

Agencies, parties, and individuals contributing information to the system will be provided with a web accessible management interface for the submittal of data, information, and metadata. This interface will be customizable and tailored to the needs of the contributing entity. There will be mandatory requirements which provide the basic metadata information as required by the Federal Geographic Data Committee (FGDC) metadata specification and additional metadata information that documents datasets in ways in which

they can be correctly interpreted in addition to being synthesized and aggregated with other datasets. Exact metadata specs will be outlined in section III.

c. Discovery/Browse/Visualize Interface

The interface will allow users to access, visualize, query, synthesize, and download data, documents, and the various other digital resources stored on the data store. Need I say more?

d. Security

Security will play a vital role in the system. Every piece of information will be associated with access rights which will include read/write/delete and can be associated with groups. Entities submitting information can limit access to that information to a specific list of users in addition to any other combination of privileges or rights.

e. Robust Archive

One of the most important aspects of the system is its ability to act as a robust archive for data and metadata. Requiring specific metadata and storing the dataset locally, ensures that the information will not be lost or that it will not fall into obscurity

II. Metadata

EML has been chosen as a structure for the storage and transfer of metadata describing biological, ecological, and physical parameters. It is a metadata specification which is a compilation of pre-existing metadata specifications which include protocols such as FGDC, Z39.50, and Dublin Core. EML has been chosen as a structure for the storage and transfer of metadata describing GEM datasets. EML provides distinct markup language entity/attribute tags for metadata information deemed pertinent to the GEM Data Management metadata documentation effort. This metadata documentation effort is driven by two caveats: Advanced Data Discovery and Data Synthesis/Trend Analysis. EML is an extension of XML and can be parsed/manipulated with the various utilities and programming packages used with XML. The EML specification can be downloaded at http://knb.ecoinformatics.org/software/eml/.

Data Discovery – Proper documentation of data is critical to providing pathways for the discovery of that data by users. It is vital that users have multiple pathways for locating potential data resources which satisfy their queries. Providing individual fields for metadata descriptors which describe detailed dataset information (i.e. abstracts, measurements, methods, data types, file structures, primary foreign key relations, units, etc…), instead of lumping these pieces of information into single text fields, will greatly increase the success of data discovery and enhance interfaces to the data.

Data Synthesis/Trend Analysis - Though data is primarily collected to prove or disprove a hypothesis put forward by a researcher, this data can serve an additional higher level purpose when combined with other data. Through the isolation of analogous data set fields, multiple data sets can be formatted to a common structure and aggregated together into a data amalgamation. This amalgamation provides a higher level data set for the synthesis of information and advanced analysis of physical and biological changes on a large temporal and geographic scope. In order to expedite this amalgamation, metadata describing datasets must exist in ways for computer systems to parse the metadata and perform the required operations for the reformatting and aggregation of fields contained within the datasets. EML, which provides a distinct recording mechanism for these fields, will suffice as a metadata container that isolates all the descriptors for this automated formatting/aggregation process.

Metadata will be initially stored in EML until sufficient EML documents are produced to model a metadata storage system using entity relational (Relational Database) methods. Metadata will be stored in a database and transferred via the EML format.

III. Data Processing Model

Three distinct phases are planned for the acquisition and processing of data sets in order to produce the various manifestations of the data that will be useful for users. The data processing model concerns itself only with the data and its corresponding metadata contained in the system. Other digital information (reports, maps, etc…), although useful for contextual information, will not play a part in this process.

a. Phase one - Data and Metadata Harvest
This phase involves the harvesting of both data and metadata from researchers and agencies. Correctly documenting the data with descriptive metadata will ensure that the data can be found and understood. Metadata will be stored in a relational database with a pointer to a corresponding file on a network drive to the data as originally received from the researcher.

b. Stage two – Autonomous Reformatting of Data and Aggregation
This stage involves an analysis of the metadata for measurements contained in the data which have *semantic equivalence*, measurements of the same type that may not be in the same units or data type. Data, with *semantic equivalence*, will be extracted from the various file formats and then transformed into a homogenous data type and unit structure to be stored in a relational database. This process of Extraction, Transformation, and Loading (ETL) will be facilitated by a Data Transformation Service interfacing with the metadata database describing the datasets. Temporal and geographic

information will also be extracted, transformed and loaded into the relational structure.

c. **Stage three – Creation of OLAP Analysis Structures.**
Once information has been homogenized into a common data and unit type, Online Analytical Processing (OLAP) structures will be generated to expedite statistical analysis and data mining. These OLAP structures will be stored in a relational database using the non-normalized star schema. Visualization and analysis needs of the users will dictate the exact structure of these star schemas. More can be read about star schemas and OLAP structure at www.ciobriefings.com/whitepapers/StarSchema.asp .

IV. Technology

a. **Commitment to Open Source products**
GEM Data Management is committed to developing solutions for the management of data which use technologies that are open source. Utilizing open source technology ensures that our data management tools can be used by and distributed to other research and management entities for free or at a very low cost.

b. **Open Geospatial Consortium Standards**
The Open Geospatial Consortium (OGC) is a non profit organization which has created standards and protocols for various open source and industrial GIS products. These standards have created a common template for visualization and storage of GIS data. Both ESRI and Mapserver have committed to OGC and there are currently packages for GIS information to be marshaled between these two products via OGC. More about OGC can be downloaded at www.opengeospatial.org.

c. **PostgreSQL backend**
PostgreSQL has been chosen as the most suitable host for the backend RDBMS. PostgreSQL meets the requirements for scalability, functionality, and geospatially enabled data structures which will be vital to the success of the system. The database supports advanced indexing services (b-tree, hash, and r-tree) in addition to being object oriented. The management interface is analogous to Oracle in that it also uses PL/SQL for writing scripts and stored procedures. The database interfaces readily with Mapserver and OGC compliant GIS visualization systems. PostgreSQL is also tuned to handle star type OLAP schemas. More can be read about PostgreSQL at www.postgres.org.

FY 2005-2007 Draft Science Plan

The FY 2005-2007 Draft Science Plan was published to the EVOS web site on November 17 for review and comments. The comment deadline is December 3, 2004. The web address is: http://www.evostc.state.ak.us/pdf/gem/Master_FY_2005_2007_Science_Plan.pdf

A link to the Draft Science Plan and its availability was emailed to the Trustee Council meeting notification list. The list is maintained by the EVOS staff and contains the names of interested members of the public as well as the Trustee Council, Public Advisory Committee, Science and Technical Advisory Committee, state and federal liaisons, Principal Investigators, national and international scientists.

REVIEW DRAFT NOVEMBER 17, 2004

Close of Comments: December 3, 2004

Science Plan

Gulf of Alaska Ecosystem Monitoring and Research Program

Exxon Valdez Oil Spill Trustee Council Restoration Program

Fiscal years 2005-2007

Last updated: November 2004

Exxon Valdez Oil Spill Trustee Council
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The following information is from the FY 05 Work Plan. Additional information in a cover memo will be distributed at the Dec 10 meeting.

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, Alaska 99501-2340 • 907/278-8012 • fax 907/276-7178

December 10, 2004

TO: *Exxon Valdez* Oil Spill Trustee Council

FROM: Gail Phillips, Executive Director

CC: Phil Mundy, Science Director

RE: Funds available for projects in FY 2006 ($1.8M) and 2007 ($2.3M)

Funds for projects in FY 2006 and 2007 are estimated to be $1.8 million and $2.3 million respectively. These are minimum estimates that assume the Trustee Council adheres to the established funding cap and that take into account full current obligations and maximum projected operating expenses. The estimates are minimums because obligated funds are not usually completely spent, and because operating expenses may be reduced. The FY 2006 estimate includes $1.2M in funds that were available under the cap but not spent. Should the Council choose to spend some of these "carry forward" funds in the current fiscal year, the amount available under the cap for projects in FY 2006 would be reduced accordingly. Details on the estimates are in the chart below.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Cap amount	5.0	5.0	5.0	4.6	4.6
Spent/obligated	4.4	4.8	4.6	2.2	0.3
Not spent/obligated	0.6	0.2	0.4	2.4	4.3
Carry forward		0.6	0.8	1.2	0.0
Total funds				3.6	4.3
Projected operating				1.8	2.0
			Balance		
Funds for projects				1.8	2.3

Figures are in millions rounded to nearest hundred thousand. Expenditures excluded from the cap by vote of the Trustee Council are not included.

Executive Summary Table 1.

Thousands of dollars

Category	FY03*	FY04**	FY05**	FY06	FY07
External projects Proposed			$2,068	$1,699	$980
External projects Obligated	$4,400	$3,303	$1,812	$1,471	
Internal projects		$1,787	$1,810	$1,778***	$2,026***
Grand Total	*$4,400*	*$5,090*	*$5,690***	*$4,948*	*$3,006*

Amounts in shaded cells are from prior fiscal years for reference purposes

*Estimated expenditure

**Project cost approved May 14, 2004 are excluded as they are outside the $5 million dollar spending cap

*** Projections only: internal projects are authorized annually

Executive Summary Table 2. *Proposed amounts and obligations including amount authorized on May 14, 2004.*

	Thousands of dollars	
All External projects for FY 2005**	FY 2005	$ 3,880
May 14, 2005		$ 465
Internal projects for FY 2005	FY 2005	$ 1,810
FY 2005 Total $ 6,155		
All External projects for FY 2006	FY 2006	$ 3,170
Internal projects for FY 2006	FY 2006	$ 1,778
FY 2006 Total $4,948		
External projects for FY 2007	FY 2007	$ 980
Internal projects for FY 2007	FY 2007	$ 2,026
FY 2007 Total $3,006		
TOTAL FY 2005 – 2007 estimated (internal + external)		$ 14,109

Executive Summary Table 3. *Summary of GEM implementation funding and projections FY 2003 – FY 2006.*

	Thousands of dollars
External & Internal projects for FY 2003	$ 4,400
External projects for FY 2004**	$ 3,303
Internal projects for FY 2004	$ 1,537
External projects for FY 2005**	$ 3,880
Internal projects for FY 2005	$ 1,810
External projects for FY 2006	$ 3,170
Internal projects for FY 2006	$ 1,778
TOTAL FY 2003 – 2006 expenditures & authorized (internal + external)	$ 19,878

Note: **FY 04 figures exclude an estimated $250K in lapse in internal projects and also excludes $1,213K in projects funded on May 14, 2004. The FY 05 figures exclude $465K in external projects funded on May 14, 2004.

Exxon Valdez Oil Spill Trustee Council

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Workshop Objectives

Convene and conduct workshops

1. Injured species
2. Lingering Oil
3. Nearshore
4. Watersheds
5. Modeling
6. STAC (Policies, Science Plan, Invitation)

1. Injured species

A series of four workshops (three in FY 05 and one in FY 06) will bring together experts from TC agencies and elsewhere for the purposes of considering and validating criteria for species and resources not recovered, recovering and recovery unknown, and for moving toward consensus on the status of injured resources. Workshops are to culminate in January 2006 with session at Alaska Marine Science Symposium. Expected outcome is closure to the injured species list in the form of a list of "species of concern" for the long-term monitoring phase of Restoration (GEM). Attendees are experts in the resources under consideration, including appropriate members of the Habitat Subcommittee.

2. Lingering Oil

A post-season (Oct-Nov) presentation of results from the calendar year 2004 field season with discussion of status of injured resources, current understanding of fate and effects of *Exxon Valdez* oil, discussion of work already planned and budgeted for calendar 2005, and needs for the FY 2006 Invitation. Expected outcomes are recommendations for the content and persons to attend the Injured Species Workshops, and a section for the FY 2006 Invitation due out in February 2005. Attendees are principal investigators in lingering oil, appropriate members of the Lingering Oil Subcommittee, and other interested parties. The Public Advisory Committee and Executive Director have emphasized the need to develop recommendations on herring studies, as part of the resolution of the efforts on the injured species list during FY 2005-2006.

3. Nearshore

Two workshops based on the Eckert-FY04 Nearshore synthesis project and held in coordination with the Bodkin-FY05-Nearshore planning project are required to share results among all Nearshore projects, discuss plans for 2005 field season, anticipated modifications to currently funded in FY 2006, and the content of the Nearshore portion of the FY 2007 Invitation to be issued in February 2006. Attendees are Nearshore contractors and other interested parties.

4. Watersheds

One workshop in cooperation with the Edmundson-FY05-Watershed synthesis project is required to share results among all Watershed projects, discuss plans for 2005 field season, anticipated modifications to currently funded in FY 2006, and the content of the Watershed

portion of the FY 2007 Invitation to be issued in February 2006. Attendees are Watershed contractors and other interested parties.

5. Modeling
One workshop in support of the McNutt and Schumacher-FY05-Modeling projects is required to bring together all those from currently funded EVOSTC projects who expect to contribute to the biophysical model of production of birds, fish and mammals that is the long term goal of the GEM Program. Expected outcomes are specific modeling needs by habitat type, anticipated modifications to projects currently funded in FY 2006, and the content of the Modeling portion of the FY 2007 Invitation to be issued in February 2006. Attendees are interested EVOSTC contractors and prospective modelers and users of modeling products. Because of the potentially large number of attendees, should consider leveraging the Alaska Marine Science Symposium (January).

6. STAC (Policies, Science Plan, Invitation)
Three meetings are required to build on the experience gained since the formation of the STAC. The sequence of these meetings is to be determined. One meeting is to be focused on updating peer review policies and procedures with a view toward making the process as efficient as possible, while keeping the basic integrity we now have. Another meeting is to review the Science Plan, to identify the roles that individual STAC members will play in the revision, and to design the process for STAC recommendations on the revision. A third meeting is needed to determine what role the STAC wishes to play in the FY 2006 Invitation, and to start planning for the FY 2007 Invitation.

FY 05, 1st quarter (October 1, 2004-December 31, 2004)	
October 7	Draft STAC Policies and Procedures Peer Review
December	Watershed Workshop
November 8-9	Lingering Oil Workshop
November 1-2	Nearshore Workshop
December 3	Presentation to Trustee Council/Contingencies
FY 05, 2nd quarter (January 1, 2005-March 31, 2005)	
January 18	Initiate Symposium Planning (2006)
January 24-26	Annual GEM Workshop
January 27	Conduct STAC meeting on Science Plan
January 27	Injured Species Workshop One
January 28	Nearshore workshop
February 4	TC approve Final Draft Invitation (TC MTG)
February 15	Invitation for Proposals
March	Poll of peer reviewers
March	Conduct Watershed Workshop

FY 05, 3rd quarter (April 1, 2005-June 30, 2005)	
April 1	Receive proposals
April 15	Distribution to STAC
April	Watershed Workshop
April	Injured Species Workshop Two
May	Conduct external peer reviews
May	Send proposal materials to concerned parties
May18	Conduct STAC meeting
June 15	Draft funding memo recommendations
FY 05, 4th quarter (July 1, 2005-September 30, 2005)	
July 1-20	Coordination meetings liaisons, PAC
July 29	Draft Work Plan & Budget
Aug 10	Presentation to Trustee Council (TC approves)
September	Receive Annual Reports
September	Injured Species Workshop Three
September	Final Work Plan
FY 06, 1st quarter (October 1, 2005- December 31,2005	
October 15	Annual Report
December 2	Presentation to Trustee Council/Contingencies

SUMMARY OF RESTORATION ACTIVITIES 12/2004 DRAFT FOR REVIEW AND COMMENT

From Restoration Plan-Ch. 5 . Goals. Objectives. and Strategies (1994) and					From 2002 EVOS and 2004 Science Plan				
Resource	Recovered	Recovering	Not Recovered	Recovery Unknown	Resource	Injury and Recovery	Restoration Objective	Resteration Strategy	
Archaeological Resources	X				Archaeological Resources	Twenty-four archaeological sites are known to have been adversely affected by cleanup activities, or looting and vandalism linked to the oil spill	Archaeological resources will be considered recovered when spill related injury ends, looting and vandalism are at or below prespill levels	*Protect sites and artifacts from further injury and store them in appropriate facilities*	X
Bald Eagles	X				Bald Eagles	Two hundred to 300 bald eagles may have been killed in the spill productivity appear to have returned to prespill levels	Bald eagles will have recovered when their population and productivity return to prespill levels	*Rely on natural recovery. Monitor recovery*	X
Black Oystercatchers	X				Black Oystercatchers	An estimated 120 to 150 black oystercatchers, representing 12 to 15 percent of the total estimated population, died as a result of the spill	Bald eagles will have recovered when their population and productivity return to prespill levels	*Rely on natural recovery. Monitor recovery*	X
Common Murres	X				Common Murres	Productivity of common murres shows signs of recovery at some injured colonies but postspill population counts are still lower than prespill estimates	Common murres will have recovered when population trends are increasing significantly at index colonies in the spill area	*Conduct research why common murres are not recovering. Initiate or accelerate recovery Monitor recovery. Protect common murres and their habitat.*	
Pink salmon	X				Pink salmon	Pink salmon studies have demonstrated egg mortality, fry deformities, and reduced growth in juveniles. Populations may have declined, but there is uncertainty as to the injury	Pink salmon will have recovered when populations are healthy and productive and exist atprespill abundance	*Conduct research to find out why pink salmon are not recovering. Initiate or accelerate recovery . Monitor recovery. Protect pink salmon and their habitat.*	X
River Otters	X				River Otters	River otters in Prince William Sound have suffered subletha! effects from the spill and may continue to be exposed to hydrocarbons	Indications of recovery are when habitat use, food habitats and physiological indices have returned to prespill conditions	*Rely on natural recovery. Monitor recovery. Protect river otters and habitat.*	X
Sockeye Salmon	X				Sockeye Salmon	Sockeye salmon in Red Lake, Akalura Lake, and lakes in the Kenai River system declined in population because of adult overescapement in 1989	Sockeye salmon in the affected lakes will have recovered when populations can support overwinter survival and smolt outmigrations comparable to prespill levels	*Conduct research on populations Initiate, sustain, or accelerate recovery of sockeye salmon. Monitor recovery. Protect sockeye salmon and their habitats. Monitor recovery. Protect injured clam beds*	
Clams		X			Clams	Clams on sheltered beaches were killed by oiling and cleanup activities. In addition, growth appeared to be reduced by oil	Natural processes aided by protective measures will be the main agents of restoration.		
Commercial Fishing		X			Commercial Fishing	Commercial fishing was injured through injury to commercial fish species and also through fishing closures.	Commercial fishing will have recovered when the population levels and distribution of injured or replacement fish used by the commercial fishing industry match conditions that would have existed had the spill not occurred	*Promote recovery of commercial fishing as soon as possible Protect commercial fish resources from further degradation Monitor recovery*	
Designated Wilderness Areas		X			Designated Wilderness Areas	The oil spill delivered oil is varying quantities to the waters adjoining the seven areas within designated as wilderness areas and wilderness study areas	recovered when oil is no longer encountered in these areas and the public perceives them to be recovered from the spill	*No strategies have been identified that benefit only designated wilderness areas without also addressing injured resources.*	X
Intertidal Communities		X			Intertidal Communities	The lower intertidal zone and, to some extent, the middle intertidal zone are recovering. However, injuries persist in the upper intertidal zone	Each intertidal elevation will have recovered when community composition and ecosystem functions have returned to levels that were pre oil spill	*Conduct research to find out why some intertidal organisms are not recovering. Initiate, sustain, or accelerate recovery. Monitor recovery. Protect habitat.*	
Killer Whales		X			Killer Whales	Thirteen whales disappeared from one killer whale pod in Prince William Sound between 1988 and 1990. The injured pod is growing again	Killer whales will have recovered when the injured pod grows to at least 36 individuals (1988 level).	*Rely on natural recovery processes aided by protective measures will be the main agents of restoration. Monitor recovery*	X
Marbled Murrelets		X			Marbled Murrelets	Marbled murrelet populations in Prince William Sound were in decline before the spill. The spill probably increased the prespill rate of decline for this species in the spill area	Marbled murrelets will have recovered when population trends are increa	*Conduct research to find out why marbled murrelets are not recovering. Initiate, sustain, or accelerate recovery. Monitor recovery. Protect habitats*	X
Mussels		X			Mussels	In 1991, relatively high concentrations of oil were found in underlying mat of certain oiled mussel beds. The extent and magnitude of oiled mussel beds are unknown.	Mussels will have recovered when their populations and productivity are at prespill levels and they do not contain oil that contaminates higher trophic levels.	*Initiate, sustain, or accelerate recovery. Monitor recovery. . Protect mussels and their habitat.*	X
Passive Use		X			Passive Use	Injuries to passive uses are tied to public perceptions of injured resources.	Passive uses will have recovered when people perceive that values associated with the spill area are no longer diminished by the oil spill	*No strategies have been identified that benefit only passive uses, without also addressing injured resources.*	X
Recreation and Tourism		X			Recreation and Tourism	The spill disrupted use of the spill area for recreation and tourism	Recovered when the fish and wildlife resources and recreation use of oiled beaches is no longer impaired,	*Presene or improve the recreational and tourism values of the spill area. Remove or reduce residual oil if treatment is cost effective and. Monitor recovery.*	X
Sea otters		X			Sea otters	Sea otters do not appear to be recovering, but are expected to eventually recover to their prespill population.	Sea otters are considered recovered when population abundance and distribution are comparable to prespill abundance and distribution, and when all ages appear healthy	*Conduct research to find out why sea otters are not recovering. Initiate, sustain, or accelerate recovery. Monitor recovery. Protect sea otters and their habitats. .*	X
Sediments		X			Sediments	With tidal action, oil penetrated deeply into cobble and boulder beaches that are relatively common on the rocky islands of the spill area	Sediments will have recovered when contamination causes no negative effects to the spill ecosystem	*Monitor recovery. . Remove or reduce residual oil if treatment is cost effective and less harmful than leaving the oil in place..*	X
Subsistence			X		Subsistence	Continuing injury to natural resources used for subsistence may affect the way of life	Subsistence will have recovered when injured resources used for subsistence are	*Promote recovery of subsistence as soon as possible. Remove or reduce residual*	X
						Residual oil exists on some beaches with high value for subsistence.	healthy and productive and exist at prespill levels	*oil if treatment is cost effective and less harmful than leaving the oil in place.Protect subsistence resources from further degradation. Monitor recovery.*	
Harbor Seals			X		Harbor Seals	Harbor seal numbers were declining in Prince William Sound before the spill. Following the spill, seals in the oiled area had declined more	Recovery will have occurred when harbor seal population trends are stable or increasing	*Initiate sustain, or accelerate recovery of harbor seals. Monitor recovery. Protect harbor seals and their habitat.*	X
Harlequin Ducks			X		Harlequin Ducks	Reduced densities of harlequin ducks in the breeding season; a declining trend in the summer	Harlequin ducks will have recovered when breeding and postbreeding season densities and production of young return to estimated prespill levels	*Conduct research to find out why harlequin ducks are not recovering. Initiate, sustain, or accelerate recovery Protect ducks and their habitat Monitor recovery..*	X
Pigeon Guillemot			X		Pigeon Guillemot	The pigeon guillemot population in Prince William Sound was in decline before the spill. The causes of the prespill decline are unknown	Pigeon guillemots will have recovered when populations are stable or increasing	*Conduct research to find out why pigeon guillemots are not recovering Initiate, sustain, or accelerate recovery.Protect pigeon guillemots and their habitat*	X
Pacific Herring			X		Pacific Herring	Herring studies have demonstrated egg mortality and larval deformities. Populations may have declined, but there is uncertainty as to the full extent and mechanism of injury	Pacific herring will have recovered when populations are healthy and productive and exist at prespill abundances	*Conduct research to find out why herring are not recovering. Initiate, or accelerate recovery of herring. Monitor recovery. Protect habitat.*	X
Common Loon			X		Common Loon				X
Cormorants (3 species)				X	Cormorants (3 species)				
Cutthroat Trout				X	Cutthroat Trout	Cutthroat trout have grown more slowly in oiled areas than in unoiled areas. Insufficient data are available to determine whether they are recovering.	Cutthroat trout will have recovered when growth rates within oiled areas are comparable to those for unoiled areas.	*Rely on natural recovery. Monitor recovery. Protect cutthroat trout and their habitat*	X
Dolly Varden				X	Dolly Varden	Dolly Varden have grown more slowly in oiled areas than in unoiled areas. Insufficient data	Dolly Varden will have recovered when growth rates within oiled areas are comparable to those for unoiled areas.	*Rely on natural recovery. Monitor Recovery Protect Dolly Varden and their habitat.*	X
Kittlitz"s Murrelet				X	Kittlitz"s Murrelet				X
Rockfish				X	Rockfish	The extent and mechanism of injury to this species are unknown	Without further study, recovery cannot be defined	*Rely on natural recovery Determine if restoration is needed. Monitor recovery.*	X
Subtidal Communities					Subtidal Communities	Certain communities, likeeelgrass and some species of algae, appear to be recovering. Other communities , like leather stars and helmet crabs, showed little signs of recovery	Subtidal communities will have recovered when each injured subtidal community has returned to levels that would have prevailed in the absence of the oil spill.	*Conduct research to find out why some subtidal organisms are not recovering. Initiate, or accelerate recovery. Monitor recovery. Protect subtidal communities*	X

Natural Recovery	Monitor Recovery	Protect Habitat	Ongoing Research EVOS	2002 Status	Draft 2005 Status	2004-2005 Principal Investigators	Number of Studies-2004
X			NO	R	R		
X	X		NO	R	R	Irons/Ballachey	
X	X		NO	R	R		
	X	X	NO	R	R		
	X	X	C	R	R	Adams/Moffitt	
X	X	X	NO	R	R		
	X	X	NO	R	R	Honold/Mann/Willette Finney/Honnold	
	X			RNE	RNE	Lees	8
	X			RNE	RNE	Adams	4
X	X			RNE	RNE		1
	X	X	C	RNE	RNE	Pegau/Konar/Bishop/Lees Bodkin/Saupe/Eckert	51
X	X		C	RNE	RNE	Matkin	10
	X	X	C	RNE	RNE	Irons	15
	X	X	C	RNE	RNE	Rice	16
X			C	RNE	RNE		
	X		C	RNE	RNE	Thorne/Eckert/Baird	7
	X	X	C	RNE	RNE	Ballachey/Bodkin Rice	36
	X			RNE	RNE	Day/Bishop/Irvine	21
	X		C	RNE	RNE	Fall/Nelson/Ruesink	20
	X			RNE	RNE	Hoover-Miller	22
	X	X	C	RNE	RNE	Irons/Rosenberg Ballachey	15
		X		RNE			20
	X	X	C	RNE	RNE	Otis/Bechtol Cokelet/Batten	86
	X		C	RNE	RNE	Irons	1
						Irons	1
X	X	X	C	U	U		4
X	X		C		R	Heintz/Walker	
						Irons	9
X	X		C		R	Bechtol	3
	X	X	X	U	U	Pegau/Konar Eckert/Bishop/Saupe	23

C= conduct X= continuing action NO= none needed R= recovered

U= unknown RNE= Recovern Not Established

Note- PI's may work on several resource issues

Dick,

Following is a list of additional folks and their affiliations that should be included in our Nov. 1-2 nearshore workshop. They are mostly agency people that will likely have an interest in cooperating or collaborating in the nearshore component of GEM, and represent a diversity of expertise from contaminants, to marine birds and mammals. Following this list is a draft agenda with objectives and tasks. Following the agenda is the abstract of the 03 final report for project 030687 and Tables 1 and 2 from the 050687 proposal listing tasks and metrics to me sampled under the nearshore plan that should provide useful background for participants. I have copied Dede Bohn on this correspondence as she will have additional useful information on invitations.

Alan Bennet and William Thomas, NPS Anchorage
Tony DeGange, David Irons and Rosa Meehan, USFWS Anchorage
Robert Small, ADFG Juneau
Stan Senner Audobon Anchorage
Greg Balough USFWS Anchorage
Marilyn Sigman CACS

Agenda for GEM Nearshore Workshop 1-2 November 2004

Workshop Objectives

1. Introduce the GEM Nearshore Monitoring plan to agencies, academics and NGO's
2. Seek areas of coordination, collaboration, and integration between GEM and other interested parties and programs.

Provide participants with Abstract of Project 030687 report and Summary of Project 050687 as background

Workshop Outline
Background (Bodkin and Dean)

a. Historical perspective (pre-spill, spill, injury/restoration, lingering oil, GEM, Nearshore GEM
b. Developing the Nearshore design (workshops, meetings, comments, reviews), rational, objectives, definitions.
c. The Nearshore Design (what, why, where, how)
d. Community involvement

The next steps (Participants)

a. Identify cooperators and collaborators
b. Identify potential refinements to plan
c. FY 06 testing and site visits
d. FY 07 implementation

Attachment:

Alternative Sampling Designs for Nearshore Monitoring

Gulf Ecosystem Monitoring and Research Project G-030687
Draft Final Report

Study History: This project was initiated in December of 2002 with approval of funding by the *Exxon Valdez* Oil Spill (EVOS) Trustee Council. Early in 2003 we hired staff and began research and compilation of references to be included into a historic metadata base. The reference collection would include prior and current studies of a select assemblage of marine taxa, including alga, invertebrates, fishes, birds, and mammals that occupy nearshore habitats of the Gulf of Alaska. Concurrently we implemented a process to provide input into the selection of resources (biological taxa and physical attributes) and metrics to be included in our metadata. By 15 September of 2003 we concluded compilation of references and began finalizing inclusion of references in hand into the data set and began developing a GIS (ArcView themes) dataset that would eventually allow geographic representation of the metadata. Concurrently with the development of the metadata, we began conceptualizing and developing sampling alternatives for the nearshore habitats in the Gulf of Alaska for consideration of inclusion within the GEM program.

Abstract: Over the past several years a series of workshops were convened to help develop a monitoring plan for the nearshore. In these workshops it was recognized that the changes are likely to occur in the Gulf of Alaska over the next 100 years, and that these are likely to result from a number of different causal agents (e.g. global climate change, shoreline development and associated inputs of pollutants). It was also recognized that changes are likely to occur over varying temporal and spatial scales. For example, global climate change may result in a gradual change in the nearshore community that occurs over decades and has impacts over the entire GOA. On the other hand, impacts from shoreline development will likely be more episodic and more local. Thus, one challenge of designing a monitoring program was to detect changes occurring over these widely varying scales of space and time. To this end, a conceptual framework for monitoring was designed that had the following elements:

1) Synoptic sampling of specified physical and biological parameters (e.g. shoreline geomorphology and eelgrass cover) over the entire GOA
2) Intensive sampling of a variety of specified biological and physical parameters (e.g. abundance and growth of intertidal organisms, abundance of selected birds and marine mammals) within a few specified areas spread throughout the GOA.

3) Sampling of a smaller suite of selected biological and physical parameters (e.g. the abundance, growth, and contaminant levels in mussels and clams) at a larger number of less intensively studied sites stretching across the GOA. These are referred to as extensive sites.
4) Conduct of shorter-term studies aimed at identifying important processes regulating or causing changes within a given system or subsystem.

Intensive sampling was designed to detect larger spatial scale changes while extensive sampling was aimed at evaluating potential impacts from more localized sources, and especially those resulting from human activities. Process studies were to focus on determining causes for observed changes. While the workshops provided a valuable conceptual framework, they did not give necessary details (e.g. what to sample, where to sample, when to sample and at how many sites). In this report we provide those details in the form of three alternative sampling designs for the nearshore-monitoring program.

All of the proposed alternatives restrict sampling to the central GOA region between Kodiak and Cordova. Also, all alternatives include sampling of intertidal invertebrates and algae, selected vertebrate predators closely tied to the nearshore (e.g. sea otters and black oystercatchers), selected physical variables (e.g. temperature and salinity), and contaminant concentrations in the animal tissue. Sampling of intertidal invertebrates and algae is restricted to sheltered rocky and gravel / mixed sand-gravel habitats. All alternatives have an estimated average annual budget of approximately $900,000.

The three design alternatives differ primarily with respect to emphasis on intensive vs. extensive sampling effort. Alternative 1 provides a balanced approach, with relatively equal emphasis on detecting changes that may occur over both small and large spatial scales. Approximate equal weight was given to intensive sampling at a few widely scattered sites, and extensive sampling of a smaller suite of variables at a larger number of sites. Alternative 2 gave greater emphasis to detecting smaller scale changes and was ore heavily weighted toward sampling at extensive sites. In particular, this alternative prescribed sampling at a greater number of extensive sites, a higher frequency of sampling at those sites, and greater emphasis on sampling of contaminants. The third alternative was focused more at detecting larger scale changes and on examining possible mechanism of change. Sampling effort was increased at intensive sites, especially with respect to physical factors that may help explain biological changes. The number of extensive sites, the sampling frequency, and the level of effort for contaminant studies were reduced in this alternative. Detailed sampling plans, including number and location of sampling sites, a list of metrics to be sampled, sampling frequency, and cost estimates are supplied for each alternative.

As part of the design effort, we also provided a comprehensive historical perspective of locations and types of past studies conducted in the nearshore marine communities within Gulf of Alaska in the form of a geographical information system database. This database provides a visual means of assisting in site selection based (in part) on the locations for which historical data of interest are available.

Standard Operating Procedures

Standard operating procedures will be developed for all tasks in the sampling design outlined in Bodkin and Dean (2003). These can generally be categorized into 10 general tasks (Table 1). Metrics associated with each task are given in Table 2.

Table 1. List of general tasks for which SOPs will be developed and possible sources for SOP development

Task	Source
Aerial shoreline surveys	Harper
Algae and Invertebrates	Highsmith 1991 PISCO Glacier Bay NPP NAGISA EVOS, NVP
Sea otter abundance	Bodkin, USGS
Sea otter survival	Bodkin, USGS
Seabird abundance	Irons, FWS
Sea otter diet	Bodkin, USGS
Oystercatcher diet	Andres, FWS, Tessler, ADFG
Oystercatcher productivity	Andres, FWS, Tessler, ADFG
Physical-chemical	Manufacturer
Contaminants in mussels	NOAA lab ASTM procedures
Contaminants in harbor seal tissue	ADFG, FWS procedures Harbor seal commission

Table 2. List of metrics to be sampled for each task. Lists of intertidal plant and invertebrate species to be counted are tentative and will be finalized after an initial sampling.

Task	Metrics associated with each task
Aerial shoreline surveys	Shoreline geomorphologic type
	Relative slope and exposure
	Eelgrass canopy cover
	Kelp canopy cover
	Fucus (or brown algae) cover
	Mussel bed cover
Algae and invertebrates	Algal diversity
	Invertebrate diversity
	Fucus garderi cover
	Halosaccion glandiforme cover
	Neorhodomela larix cover
	Neorhodomela oregona cover
	Palmaria spp. cover
	Rhodoglossum – Matocarpus cover
	Ulva – Ulvaria sp. cover
	Filamentous brown algae cover
	Filamentous green algae cover
	Invertebrate diversity
	Balanus / Semibalalnus spp. cover
	Cthamalus spp. Cover
	Littorina scutulata density
	Littorina sitkana density
	Mytilus trossulus density
	Tectura person density
	Lottia pelta density
	Searlesia dira density
	Nucella lamellosa density
	Pcynopodia helianthoides density
	Dermasterias imbricata density
	Evasterias trochelli density
	Pisaster ochraceus density
	Tectura persona size distribution
	Mytilus trossulus size distribution
	Protothaca staminea density*
	Protothaca staminea size distribution
	Protothaca staminea growth rate
	Macoma spp. Density

Table 2. Continued	*Saxidomus gigantea* density
	Grain size distribution
Sea otter abundance	Number of sea otters per block
Sea otter survival	Sea otter age at death
	Sea otter survival
Seabird abundance	Loon abundance
	Cormorant abundance
	Harlequin duck abundance
	Scoter abundance
	Barrow's goldeneye abundance
	Common goldeneye abundance
	Merganser abundance
	Black oystercatcher abundance
	Mew gull abundance
	Glaucous-winged gull abundance
	Black-legged kittiwake abundance
	Tern abundance
	Pigeon guillemot abundance
	Murrelet abundance
Sea otter diet	Dive success rate
	Percent clams in diet
	Percent crabs in diet
	Percent sea urchins in diet
	Percent mussels in diet
	Energy of prey consumed
Oystercatcher diet	Percent mussels in diet
	Percent limpets in diet
	Percent snails in diet
	Percent chitons in diet
Oystercatcher productivity	Number of chicks at nest
Physical and Chemical	Temperature (2 depths)
	Density (2 depths)
	Temperature (air/water at 0 m depth)
	PH and dissolved oxygen (2 depths)

Table 2. Continued	
Contaminants in mussels	Metal screen (concentration of approximately 12 metals)
	Fluorescent hydrocarbon concentration
	Organics screen (concentration of approximately 10 organochlorides and PCBs)
	Mercury concentration
Contaminants in harbor seal tissue	Metal screen (concentration of approximately 12 metals)
	Fluorescent hydrocarbon concentration
	Organics screen (concentration of approximately 10 organochlorides and PCBs)
	Mercury concentration

Proceedings of November 1-2 EVOS GEM Nearshore habitat workshop
Restoration Project 040687

Prepared by

JL Bodkin and TA Dean

30 November, 2004

The Exxon Valdes Oil Spill Trustee Council has been actively engaged over the course of several years in the development of a Nearshore component to the Gulf Ecosystem Monitoring (GEM) Plan. The Nearshore Plan embraces the five programmatic goals of the GEM plan and focuses on understanding of factors that regulate populations of species injured by the 1989 oil spill. The Nearshore plan's emphasis is on nearshore species, but includes injured species that occur in other habitats as well.

On 1 and 2 November 2004 a workshop to advance the process toward implementing the Nearshore monitoring plan of the GEM Program was held in Anchorage Alaska. This report provides background information on the objectives of the monitoring plan and the agenda for the meeting. These are followed by the workshop summary and a synthesis of the notes taken during the workshop. Additional materials in the form of the project summary and abstract are also provided.

Background

A RESEARCH PLAN FOR:

IMPELMENTATION OF THE GEM NEARSHORE MONITORING PLAN: SITE SELECTION, STANDARD OPERATING PROCEDURES, AND DATA MANAGEMENT

Statement of Problem

In January 2004, a report was submitted to the Exxon Valdez Oil Spill Trustee Council that outlined several alternative sampling designs for monitoring in the nearshore (Bodkin and Dean 2003). The next phase in the effort to implement a nearshore monitoring plan requires that specific sampling sites be selected and specific Standard Operating Procedures (SOPs) be developed for each task outlined in the selected sampling design.

GEM Nearshore Monitoring Plan Objectives

The objectives of the proposed work are:

1. Select specific sites for sampling as prescribed in the sampling designs proposed (Bodkin and Dean 2003).
2. Develop Standard Operating Procedures (SOPs) for each task outlined in the alternative sampling designs. These are to address all aspects of each task, including field sampling procedures, required laboratory analyses, data analysis, and data management.
3. Develop a structure for a database management system to be used in the nearshore.
4. Test the sampling procedures and database management system for nearshore data.
5. Facilitate community involvement in selecting sites, developing SOPs, and testing field sampling protocols.

As part of the process toward meting these objectives a 2 day workshop was convened in Anchorage on 1-2 November, 2004. Following is the agenda for that workshop and the results of the workshop, in the form of summarized notes. Appended are the project abstract and summary provided as background.

Background

Agenda for GEM Nearshore Workshop 1-2 November 2004

Workshop Objectives

1. Introduce the GEM Nearshore Monitoring plan to agencies, academics and NGO's
2. Seek areas of coordination, collaboration, and integration between GEM and other interested parties and programs.

Provide participants with Abstract of Project 030687 report and Summary of Project 050687 as background

Workshop Outline

Background (Bodkin and Dean)

a. Historical perspective (pre-spill, spill, injury/restoration, lingering oil, GEM, Nearshore GEM
b. Developing the Nearshore design (workshops, meetings, comments, reviews), rational, objectives, definitions.
c. The Nearshore Design (what, why, where, how)
d. Community involvement

The next steps (Participants)

a. Identify cooperators and collaborators
b. Identify potential refinements to plan
c. FY 06 testing and site visits
d. FY 07 implementation

Workshop Results

Summary:

On 1 -2 November a workshop sponsored by the Exxon Valdez Oil Spill Restoration Office and the US Geological Survey was held in Anchorage, Alaska to advance the process of development of the Gulf Ecosystem Monitoring Plan specific to nearshore marine habitats in the Gulf of Alaska. Workshop participants included representatives from local, state, and federal governments, academia, and other private and public groups. Principal objectives of the workshop were to identify potential areas of cooperation and collaboration among entities with similar interests and to provide recommendations toward revising the Draft Nearshore Monitoring Plan. Additional workshops in rural communities and in Anchorage will be held in 2005.

A diverse assemblage of potential cooperators was identified and initial discussions related to the form of collaborations were engaged. It is anticipated that cooperative agreements will form an integral component of the work undertaken in the Nearshore GEM Plan. Potential areas of collaboration and cooperation are identified in the table below. A significant collaboration was identified with the National Park Service and the integration of their Vital Signs monitoring program with the Nearshore GEM program in Cook Inlet and the Alaska Peninsula.

Diverse and valuable suggestions for additions and revisions to the draft plan were discussed at length. The discussions focused on several aspects of the draft plan that can be categorizes as methodological, design, and scope. Specifically identified was the need to include the subtidal, focus on the benthic invertebrate food web, begin with a 5-10 year pilot program, allow for inference at multiple spatial scales, and clarify/focus the questions. A complete list of the recommendations is provided in the table below.

Prior to implementation of the Nearshore GEM Plan it will be beneficial in 2006 to verify and establish each of the selected sampling sites, conduct final testing of sampling protocols, and test data acquisition and management protocols.

WORKSHOP OUTLINE

a. Collaboration and Coordination
   1. ADFG, Dave Tessler: Non-game species Black Oystercatchers
   2. Census of Marine Life, Brenda Konar: incorporate subtidal
   3. Alaska Sea Life Center/ADFG, Harbor Seal Commission: Ann Hoover-Miller
   4. KBRR (Scott Pegau)
   5. AOOS, PWS OOS
   6. NPS SWAN vital sign program (Alan Bennet)
   7. FWS Bird/mammal surveys, sea otter surveys, carcass surveys (Verena Gill)
   8. NOAA, Lingering oil (Jeff Short)
   9. PWSSC (Carl Schoch)
   10. Contaminants NOAA, RCAC

b. Report/Proposal Revision
   1. Black Oystercatcher methods, focus on breeding pairs and test diet work
   2. West Cook Inlet (additive, NPS)
   3. Subtidal inclusion
   4. Focus on benthic invert. trophic web (0-20m)
   5. Harbor seals (Anne Hoover-Miller SOPs)
   6. Clarifying questions (large vs. small scale; human vs. global climate change)
   7. 10 yr "pilot" component to 100 yr plan, adaptive mgmt
   8. Incorporate, full region sampling each third yr. bird/mammals at reduced intensity to provide complete coverage
   9. Revisit design text (site selection, randomization, stratification), allow for future inference.
   10. Power analyses (sensitivity sea otters, birds, mussels, clams…)
   11. Emphasize detect change, not why, that's process
   12. Linkages to other habitats (anticipated, what we need and what we can provide to others)
   13. The nearshore as the interface between other habitats and the atmosphere, capable of small and large scale trends
   14. Peripheral vision (site visits, surveys, carcass collections..)
       presence/absence of selected species (checklist)
       phenology
       web based observations
   15. River otters, visit latrine sights as a population index and diet
   16. Subtidal kelps
   17. Incorporate lingering oil sampling

18. Integration with other GEM habitats, watersheds, ACC, offshore… (transitional species)
19. Incorporate lower Cook Inlet (CIRCAC, NPS)
20. Fish sampling (who, how, when, where?)
21. 5 year review of program
22. Revisit stratification rocky and sand/gravel?
23. Retrospective long term data sets (cores, growth rates, rings)
24. Sample archiving, who and how?

c. Implementation

1. Development and testing of protocols 2006
2. Revise and finalize Nearshore Plan 2006
3. Visit all sites in 2006 prior to implementation in 2007
4. Final testing of protocols in 2006

d. Community Involvement

1. Marilyn Sigman community workshops
2. EVOS annual meeting Jan 2005

Attachments: Project - - 0687 Abstract and Summary

Alternative Sampling Designs for Nearshore Monitoring

Gulf Ecosystem Monitoring and Research Project G-030687
Draft Final Report

Study History: This project was initiated in December of 2002 with approval of funding by the *Exxon Valdez* Oil Spill (EVOS) Trustee Council. Early in 2003 we hired staff and began research and compilation of references to be included into a historic metadata base. The reference collection would include prior and current studies of a select assemblage of marine taxa, including alga, invertebrates, fishes, birds, and mammals that occupy nearshore habitats of the Gulf of Alaska. Concurrently we implemented a process to provide input into the selection of resources (biological taxa and physical attributes) and metrics to be included in our metadata. By 15 September of 2003 we concluded compilation of references and began finalizing inclusion of references in hand into the data set and began developing a GIS (ArcView themes) dataset that would eventually allow geographic representation of the metadata. Concurrently with the development of the metadata, we began conceptualizing and developing sampling alternatives for the nearshore habitats in the Gulf of Alaska for consideration of inclusion within the GEM program.

Abstract: Over the past several years a series of workshops were convened to help develop a monitoring plan for the nearshore. In these workshops it was recognized that the changes are likely to occur in the Gulf of Alaska over the next 100 years, and that these are likely to result from a number of different causal agents (e.g. global climate change, shoreline development and associated inputs of pollutants). It was also recognized that changes are likely to occur over varying temporal and spatial scales. For example, global climate change may result in a gradual change in the nearshore community that occurs over decades and has impacts over the entire GOA. On the other hand, impacts from shoreline development will likely be more episodic and more local. Thus, one challenge of designing a monitoring program was to detect changes occurring over these widely varying scales of space and time. To this end, a conceptual framework for monitoring was designed that had the following elements:

1) Synoptic sampling of specified physical and biological parameters (e.g. shoreline geomorphology and eelgrass cover) over the entire GOA
2) Intensive sampling of a variety of specified biological and physical parameters (e.g. abundance and growth of intertidal organisms, abundance of selected birds and marine mammals) within a few specified areas spread throughout the GOA.
3) Sampling of a smaller suite of selected biological and physical parameters (e.g. the abundance, growth, and contaminant levels in mussels and clams) at a larger number of less intensively studied sites stretching across the GOA. These are referred to as extensive sites.

4) Conduct of shorter-term studies aimed at identifying important processes regulating or causing changes within a given system or subsystem.

Intensive sampling was designed to detect larger spatial scale changes while extensive sampling was aimed at evaluating potential impacts from more localized sources, and especially those resulting from human activities. Process studies were to focus on determining causes for observed changes. While the workshops provided a valuable conceptual framework, they did not give necessary details (e.g. what to sample, where to sample, when to sample and at how many sites). In this report we provide those details in the form of three alternative sampling designs for the nearshore-monitoring program.

All of the proposed alternatives restrict sampling to the central GOA region between Kodiak and Cordova. Also, all alternatives include sampling of intertidal invertebrates and algae, selected vertebrate predators closely tied to the nearshore (e.g. sea otters and black oystercatchers), selected physical variables (e.g. temperature and salinity), and contaminant concentrations in the animal tissue. Sampling of intertidal invertebrates and algae is restricted to sheltered rocky and gravel / mixed sand-gravel habitats. All alternatives have an estimated average annual budget of approximately $900,000.

The three design alternatives differ primarily with respect to emphasis on intensive vs. extensive sampling effort. Alternative 1 provides a balanced approach, with relatively equal emphasis on detecting changes that may occur over both small and large spatial scales. Approximate equal weight was given to intensive sampling at a few widely scattered sites, and extensive sampling of a smaller suite of variables at a larger number of sites. Alternative 2 gave greater emphasis to detecting smaller scale changes and was more heavily weighted toward sampling at extensive sites. In particular, this alternative prescribed sampling at a greater number of extensive sites, a higher frequency of sampling at those sites, and greater emphasis on sampling of contaminants. The third alternative was focused more at detecting larger scale changes and on examining possible mechanism of change. Sampling effort was increased at intensive sites, especially with respect to physical factors that may help explain biological changes. The number of extensive sites, the sampling frequency, and the level of effort for contaminant studies were reduced in this alternative. Detailed sampling plans, including number and location of sampling sites, a list of metrics to be sampled, sampling frequency, and cost estimates are supplied for each alternative.

As part of the design effort, we also provided a comprehensive historical perspective of locations and types of past studies conducted in the nearshore marine communities within Gulf of Alaska in the form of a geographical information system database. This database provides a visual means of assisting in site selection based (in part) on the locations for which historical data of interest are available.

Standard Operating Procedures

Standard operating procedures will be developed for all tasks in the sampling design outlined in Bodkin and Dean (2003). These can generally be categorized into 10 general tasks (Table 1). Metrics associated with each task are given in Table 2.

Table 1. List of general tasks for which SOPs will be developed and possible sources for SOP development

Task	Source
Aerial shoreline surveys	Harper
Algae and Invertebrates	Highsmith 1991 PISCO Glacier Bay NPP NAGISA EVOS, NVP
Sea otter abundance	Bodkin, USGS
Sea otter survival	Bodkin, USGS
Seabird abundance	Irons, FWS
Sea otter diet	Bodkin, USGS
Oystercatcher diet	Andres, FWS, Tessler, ADFG
Oystercatcher productivity	Andres, FWS, Tessler, ADFG
Physical-chemical	Manufacturer
Contaminants in mussels	NOAA lab ASTM procedures
Contaminants in harbor seal tissue	ADFG, FWS procedures Harbor seal commission

Table 2. List of metrics to be sampled for each task. Lists of intertidal plant and invertebrate species to be counted are tentative and will be finalized after an initial sampling.

Task	Metrics associated with each task
Aerial shoreline surveys	Shoreline geomorphologic type
	Relative slope and exposure
	Eelgrass canopy cover
	Kelp canopy cover
	Fucus (or brown algae) cover
	Mussel bed cover
Algae and invertebrates	Algal diversity
	Invertebrate diversity
	Fucus garderi cover
	Halosaccion glandiforme cover
	Neorhodomela larix cover
	Neorhodomela oregona cover
	Palmaria spp. cover
	Rhodoglossum – Matocarpus cover
	Ulva – Ulvaria sp. cover
	Filamentous brown algae cover
	Filamentous green algae cover
	Invertebrate diversity
	Balanus / Semibalalnus spp. cover
	Cthamalus spp. Cover
	Littorina scutulata density
	Littorina sitkana density
	Mytilus trossulus density
	Tectura person density
	Lottia pelta density
	Searlesia dira density
	Nucella lamellosa density
	Pcynopodia helianthoides density
	Dermasterias imbricata density
	Evasterias trochelli density
	Pisaster ochraceus density
	Tectura persona size distribution
	Mytilus trossulus size distribution
	Protothaca staminea density*
	Protothaca staminea size distribution
	Protothaca staminea growth rate
	Macoma spp. Density

Table 2. Continued	*Saxidomus gigantea* density
	Grain size distribution
Sea otter abundance	Number of sea otters per block
Sea otter survival	Sea otter age at death
	Sea otter survival
Seabird abundance	Loon abundance
	Cormorant abundance
	Harlequin duck abundance
	Scoter abundance
	Barrow's goldeneye abundance
	Common goldeneye abundance
	Merganser abundance
	Black oystercatcher abundance
	Mew gull abundance
	Glaucous-winged gull abundance
	Black-legged kittiwake abundance
	Tern abundance
	Pigeon guillemot abundance
	Murrelet abundance
Sea otter diet	Dive success rate
	Percent clams in diet
	Percent crabs in diet
	Percent sea urchins in diet
	Percent mussels in diet
	Energy of prey consumed
Oystercatcher diet	Percent mussels in diet
	Percent limpets in diet
	Percent snails in diet
	Percent chitons in diet
Oystercatcher productivity	Number of chicks at nest
Physical and Chemical	Temperature (2 depths)
	Density (2 depths)
	Temperature (air/water at 0 m depth)
	PH and dissolved oxygen (2 depths)

Ideas for the FY 2006 Invitation

The following program areas are identified in the Science Plan as possible next steps in the Restoration program for details, go to the program area's section on "Research Needs and Schedule" and see the section on "proposed actions" and the supporting text of the program area.

1. Modeling – The GEM model is identified as a requirement for further progress in all program areas. For example, the pink salmon modeling effort will need support from the GEM model to progress. First steps in running the pink salmon model would be possible in FY 2006.

2. Synthesis – Synthesis efforts in the Alaska Coastal current, the Watersheds and the Offshore habitat types are essential to move GEM forward, and they are important for evaluation of the status of most of the remaining injured resources.

3. Nearshore - First steps in implementing the long-term nearshore monitoring stations could be taken in FY 2006.

4. Lingering Oil and Nearshore - Follow up studies on continuing exposure of injured resources and related species to *Exxon Valdez* oil.

5. Lingering Oil and Nearshore - Remediation of Oiled Substrates - Are there methods available for removing or reducing the amount of *Exxon Valdez* oil now on and in substrates?

6. 2005 benchmark on restoration activities and status of injured species. In this we can look at the results of TC actions in land purchases etc, and what we have accomplished in our knowledge of injured species with a possible forecast.

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, Alaska 99501-2340 • 907/278-8012 • fax 907/276-7178

2004-2005 MEETING DATES

DATE	ACTION	COMMENT
9/07/04	STAC Meetings on Peer Review Policies	STAC
10/15/04	Annual Report	By Staff
12/10/04	**TC Meeting: Project Contingencies**	**Scheduled Meeting**
1/04/05	Prepare Initial Draft Invitation	By Staff
1/18/05	Initiate Symposium Planning for 2006	By Staff
1/24-26/05	**Annual Science Symposium/TC Meeting**	**Optional Meeting**
2/04/05	**TC Meeting: Approval of Draft Invitation**	**Scheduled Meeting**
2/15/05	2006 Work Plan Invitation Issued	By Staff
4/01/05	Deadline for Receipt of Proposals	By Staff
4/15/05	Proposal Distribution to STAC	By Staff
5/11-13/05	STAC Meeting: Proposal Review	STAC
6/15/05	Funding Memo Draft Recommendations	By Staff
7/29/05	Draft Work Plan and Budget	By Staff
8/10/05	**TC Meeting: Approval of Final Work Plan and Budget**	**Scheduled Meeting**
10/15/05	Annual Report	By Staff
12/02/05	**TC Meeting: Project Contingencies**	**Scheduled Meeting**

1. Information synthesis and scientific research for unknown and unanticipated EVOS impacts;
2. Continued monitoring, research, and evaluation of ongoing direct impacts from lingering oil;
3. Update on Injured Resources and Services;
4. Synthesis of information for each non-recovered species, habitat or service identified in Tables A1 - A3 in the 1994 Restoration Plan (evaluate the recovery objectives, restoration strategies and define clear, measurable and achievable restoration strategy endpoints along with a recovery action plan); and
5. Complete large parcel program and adopt small parcel program.

In response to your request for specific details regarding future work direction by EVOS staff, I have attached a revised agenda for the Council's next meeting. The agenda does not include information items and updates which I consider lower priorities.

from K. Fredrickson, ADEC, during Dec 10 mtg

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, Alaska 99501-2340 • 907/278-8012 • fax 907/276-7178

December 1, 2004

TO: Gail Phillips, Executive Director

FROM: Phil Mundy, Science Director

CC: EVOS Trustee Council, Agency Liaisons

RE: Request for close out funding for the Konar-Iken nearshore sampling project

The Konar-Iken project has been active in sampling intertidal communities and associated flora and fauna for two years (FY 2003 – 2004) throughout the oil spill affected area. The Council chose not to renew this effort for FY 2005. In choosing to close down such data gathering projects in the past, the Trustee Council has routinely provided funding to finish analyzing samples and to tie up any other loose ends in analysis, which was not done in this case. Such survey information on injured resources would be available in calendar 2005, in time to contribute to resolution of outstanding questions relative to lingering oil.

The Konar-Iken project is the only project we have that looks at the status of intertidal and near subtidal injured resources outside of Prince William Sound. The intertidal and subtidal resources are still listed as not recovered and recovery unknown, respectively, so project data and analysis would be critically important to resolving the status of those multi-species injured resource. Without this funding we would get a report that covers less data than is available to be analyzed, as explained in the proposal attached.

Attachment

Trustee Council Use Only
Project No: ____
Date Received: ____

GEM PROPOSAL SUMMARY PAGE

(To be filled in by proposer)

Project Title: Alaska Natural Geography in Shore Areas: Completion of the biodiversity census

Project Period: Jan. 01, 2005 to Dec. 31, 2005

Proposer(s):

Katrin Iken
Principal Investigator
907-474-5192
iken@ims.uaf.edu

Brenda Konar
Co-Principal Investigator
907-474-5028
bkonar@guru.uaf.edu

Study Location: Kachemak Bay, Prince William Sound and Kodiak Island

Abstract: The first goal of the Gulf Ecosystem Monitoring and Research Program for the Benthic and Intertidal Communities section is to determine how populations of benthic and intertidal communities fluctuate interannually and interdecadally Long-term monitoring is the only way to detect variability and changes in the nearshore ecosystem, which is particularly important for larger ecosystem functioning as well as for the coastal communities living at and from the seashore

Monitoring must be based on sound scientific information about the systems in question. It is particularly important to identify the biological and environmental key players, which will need to be monitored to reliably indicate changes In addition, it is essential that we have knowledge on the interannual variability in these systems to distinguish those from more permanent changes on larger time frames or drastic changes caused by human activities.

Funding:

EVOS Funding Requested: (must include 9%GA)	FY 05	$49,758.50	
	FY 06	$	
	FY 07	$	
			TOTAL: $49,758.50
Non-EVOS Funds to be Used:	FY 05	$	
	FY 06	$	
	FY 07	$	TOTAL:

Date: October 2004 Date proposal prepared

(NOT TO EXCEED ONE PAGE)

Alaska Natural Geography in Shore Areas: Completion of the biodiversity census

Katrin Iken and Brenda Konar, University of Alaska Fairbanks

I. NEED FOR THE PROJECT

A. Statement of Problem

The first goal of the Gulf Ecosystem Monitoring and Research Program for the Benthic and Intertidal Communities section is to determine how populations of benthic and intertidal communities fluctuate interannually and interdecadally. Long-term monitoring is the only way to detect variability and changes in the nearshore ecosystem, which is particularly important for larger ecosystem functioning as well as for the coastal communities living at and from the seashore.

Monitoring must be based on sound scientific information about the systems in question. It is particularly important to identify the biological and environmental key players, which will need to be monitored to reliably indicate changes. In addition, it is essential that we have knowledge on the interannual variability in these systems to distinguish those from more permanent changes on larger time frames or drastic changes caused by human activities.

During 2003-04, GEM funded the NaGISA (Natural Geography in Shore Areas) project to establish a biological inventory in intertidal and shallow subtidal communities in Prince William Sound, Kachemak Bay and Kodiak Island as regions of particular interest for the GEM program. The results from this research are the foundation for the development of standard operating procedures (SOP) for future monitoring, similar to what was suggested by Bodkin and Dean (2003). As such, we will participate in the GEM Nearshore Workshop on 1-2 November 2004 in Anchorage to incorporate our preliminary results into the long-term monitoring SOPs that will be outlined at this workshop.

The problem is that the NaGISA biodiversity samples obtained in summer 2004 are not fully analyzed and, hence, the full data set is not yet available. It is requested here that additional funds are made available to support completion of the sample analysis and the publication of the results so that they can serve as baseline data for the GEM planned long-term monitoring approach.

B. Relevance to GEM Program Goals and Scientific Priorities

The GEM programmatic goals include: 1) detecting annual and long-term changes in the marine ecosystem, 2) identifying causes of these changes, 3) providing integrated and synthesized information, 4) developing tools, technologies and information to improve management and help resource managers, and 5) developing the capacity to predict the status and trends of natural resources.

The previous (2003/2004) NaGISA biodiversity sampling builds the baseline framework for designing and implementing a long-term monitoring SOP to achieve these goals. Once the samples and data are fully analyzed, we can provide species lists by area, site and depth for

replicate study sites in three GOA regions of interest over the time frame of two years (goal 1 of GEM program). Concurrent measurements of physical parameters such as temperature, salinity and light within the extensive SOP will give some indication of environmental causes of these changes (goal 2). Analysis of these biodiversity samples needs to be completed and the information compiled and published, so that information can be made publicly available in a synthesized form online through the Ocean Biographic Information System website (OBIS, http://www.iobis.org) (goal 3). This database will serve as a reference for scientists and resource managers in the establishment of a long-term monitoring SOP, based on actual biodiversity data from the GOA area (goal 4). Once SOPs are implemented based on the data provided here, we can develop the capacity to predict the status and trends of natural resources (goal 5).

II. PROJECT DESIGN

A. Objectives

This one-year project has the objectives of

- completing the sorting, identification, and enumeration of the biodiversity samples obtained from previous GEM-funded research,
- analyzing data statistically, and
- preparing manuscripts for the broad dissemination of the results to the scientific community.

B. Procedural and Scientific Methods

Samples were taken in 2003/2004 in three core areas of the GOA region of interest: Kachemak Bay, Prince William Sound and Kodiak Island. In each region we sampled three replicate sites for rocky intertidal and subtidal community composition and one site for seagrass community composition, following the sampling protocols established within the NaGISA project (Nakashizuka and Stork 2002). NaGISA is the nearshore component of the Census of Marine Life (CoML, www.coml.org). Sampling included visual estimates of percent cover, counts of large macroflora and -fauna and destructive sampling of the entire community from a defined area. These last samples must be sorted into larger taxonomic groups, so that individuals can be identified to family, genus or species level.

All samples from the first year NaGISA biodiversity sampling (2003) are completely sorted into major taxonomic groups. Taxonomic experts for macroalgae, polychaetes and mollusks have nearly completed the identification of the material from 2003.

Currently, samples taken during 2004 are sorted. Sorting is taking longer than initially expected because diversity in all areas (Kodiak Island, Kachemak Bay and Prince William Sound) was much greater than originally anticipated. Once those samples are sorted into major taxonomic groups, several target groups (polychaetes, mollusks, macroalgae) will be identified to the lowest taxonomic level possible. Species lists for each site and depth strata will be compiled for the 2003 and 2004 data.

From our data we will provide identifications of key species in the various regions and depth strata, which will be specifically suitable as indicators for changes in community composition

over time. For example, both encrusting and upright coralline algae have high local abundance and their known ecological significance suggests that they are key groups to be monitored. Upright coralline algae are known microhabitats for a high diversity of associated meiofauna (Dean and Connell 1987, Brown and Taylor 1999) and also play a vital role in the establishment of kelp spores (Reed and Foster 1984). Encrusting coralline algae are strong space competitors, which is a limited resource in rocky shore habitats driving much of the community interactions (Steneck et al. 1991, Keats et al. 1994).

In addition, we will be able to deduce certain characteristics of ecosystem dynamics from these results. As example, in 2003 intertidal communities in Kachemak Bay had higher species richness and more open space than locations in Prince William Sound, which is an indication for higher physical disturbance in Kachemak Bay. Comparisons with the 2004 data will show whether these trends are persistent or subject to strong interannual fluctuations.

C. Data Analysis and Statistical Methods

All data are fully geo-referenced and will be entered into the publicly accessible OBIS (Ocean Biogeographic Information System) database. Data available include percent cover of all target organisms per sampling strata and site, counts of various organisms, as well as all ancillary data.

The biodiversity data will be analyzed for biodiversity using the PRIMER software package (Plymouth Routines In Multivariate Ecological Research). We plan on attending a PRIMER workshop in January 2005 so that we can apply the latest multivariate biodiversity analysis tools, which are available as part of this application package. Multivariate analyses will be based on standardized abundances and biomass for each site and depth (Field et al. 1982). Similarities between depth, sites and areas will be compared using multidimensional scaling (MDS) (Clarke 1993), and tested for significant differences by using ANOSIM (analysis of similarities, a multivariate analogue of ANOVA) (Clarke & Green 1988).

We will conduct repeated ANOVAs to look for temporal trends in community structure(s). One-way ANOVAs will detect statistical differences on various spatial scales, such as within sites, between sites within a certain area, and between areas. Physical parameters such as temperature, light, salinity and other environmental data can be used in correlation analyses to determine if changes in community structure correlate with these physical attributes.

D. Description of Study Areas

In Kachemak Bay, four sites were chosen and sampled based on the amount of past and present research, the high quality of infrastructure such as the Kasitsna Bay Marine Laboratory and the Kachemak Bay National Research Reserve, and the relative pristiness despite heavy recreational use. In 2004, we added Port Graham because of the commitment from the local community in Port Graham to long-term monitoring, and because this gave us a better spread along southern Kachemak Bay. Rocky sites sampled in Kachemak Bay are Cohen Island, Outside Beach, Elephant Island (2003, only visual sampling in 2004) and Port Graham (2004). The seagrass site is in Jakolof Bay.

In Prince William Sound, we chose our initial monitoring sites with historic data on intertidal and sublittoral fauna and flora from numerous detailed reports from the *Exxon Valdez* oil spill investigations. In 2004, we added one seagrass and three macroalgal sites. Rocky sites in PWS

are on Montague Island, Green Island and Knight Island (2003 and 2004). Visual sampling in 2004 was also performed on Dean's Reef, Bear Cape and Rocky Point. Seagrass sites are located in Naked Island (2003 and 2004) and in Ellamar (2004).

In Kodiak, all of the monitoring sites that were chosen are of scientific interest because of the presence of various marine mammals, including harbor seals, Steller sea lions, sea otters, and assorted whales and their prey. These areas also have Alaskan native communities, which were actively involved in our 2003 sampling, and the sites are relatively pristine. The rocky sites in Kodiak are Akhiok Bay, Uyak Bay and Old Harbor (2003, only visual sampling in 2004). In 2004, we added Woody Island because of its close proximity to the town of Kodiak. The seagrass site was Port Lions.

E. Coordination and Collaboration with Other Efforts

Local Groups

At present, we will be participating in the GEM Nearshore Workshop in Anchorage in early November 2004 to discuss the development and implementation of a SOP for long-term monitoring with other researchers (e.g., Jim Bodkin, Tom Dean, and Susan Saupe). The results of this project will be very important for this protocol development.

Previously, study sites were selected in coordination with many regional research groups as well as local native communities:

In Kachemak Bay, we contacted local researchers (Susan Saupe, Raymond Highsmith, Scott Pegau and Glenn Seaman) to get input into core site selection. Selection was based on information available from ShoreZone (Susan Saupe), from research conducted through the Kachemak Bay National Research Reserve (Scott Pegau, Glenn Seaman) and the Center of Alaska Coastal Studies (Marilyn Sigman). The local and native communities of Seldovia and Port Graham also had a large influence on the selection of study sites and helped with the intertidal sampling.

In Kodiak the sites were chosen after we conferred with researchers of the Gulf Apex Predator project (GAP; Kate Wynne, Loren Buck and Bob Foy), the Nearshore Habitat Use by Commercial Fish around Kodiak Island project (Bob Foy) and the Mapping Marine Habitat-Kodiak Island project (Bob Foy). Youth watch programs of the local native communities helped with the intertidal sampling.

In Prince William Sound, we communicated with local researchers (Raymond Highsmith, Jim Bodkin, Stephen Jewett, Howard Feder and Arny Blanchard) for input in core site selection. Sites also were selected based on information available after the oil spill and we made sure to select sites within and outside the spill area.

The NaGISA Consortium

All data collected in this study are comparable with those collected at other NaGISA sites throughout the world. Most of the NaGISA sampling is organized along a longitudinal gradient in the western Pacific area (mainly Asia) and a latitudinal transect in the eastern Pacific coast. This distribution of international NaGISA sites allows for comparison of sites along ecologically important gradients (e.g. for biogeographic distribution and range extension analyses) and

climate change related comparisons. The central organization of all NaGISA data within OBIS will make these comparisons feasible.

III. SCHEDULE

A. Project Milestones

Objective 1. Complete the sorting and identification of the biodiversity samples obtained from previous GEM-funded research.
To be met by April 2005.

Objective 2. Analyze data statistically.
To be met by August 2005.

Objective 3. Prepare manuscripts for the broad dissemination of the results to the scientific community.
To be met by December 2005

B. Measurable Project Tasks

FY05, 1st quarter (January 1, 2005-March 31, 2005)

January:	Project funding approved by Trustee council
(TBA)	Annual EVOS Workshop
(TBA)	Participation in PRIMER workshop in Mexico

FY05, 2nd quarter (April 1, 2005-June 30, 2005)

April 31:	Finish sorting 2004 samples

FY03, 3rd quarter (July 1, 2005-September 30, 2005)

August 31:	Finish statistical analysis of data

FY05, 4th quarter (October 1, 2005-December 31, 2005)

November 30:	Finish final draft of manuscript and submit to journal
December 31:	Submit final report to the Trustee Council Office

IV. RESPONSIVNESS TO KEY TRUSTEE COUNCIL STRATEGIES

A. Community Involvement and Traditional Ecological Knowledge (TEK)

Several local and native communities have been actively involved in the sampling in Kachemak Bay and Kodiak Island. This not only provided manpower for monitoring but also created curiosity and caring for the local natural history. Local communities were also invaluable for the selection of new monitoring sites because of their intimate knowledge of the region. The communities will be interested in the results stemming from this project and it will be a valuable resource for their own resource management plans as well as their potential involvement in long-term ecological monitoring.

B. Resource Management Applications

The results of this project will be useful to researchers, especially those involved in the GOA, for developing long-term monitoring procedures. It will provide quantitative information about species, which will help to select key organisms for monitoring purposes. Our data also will be available so that it can be used as ground-truthing for projects such as Gulf Apex Predator Project, ShoreZone, and others. The information gleaned here about species composition, abundance and variation over space and time also will be useful to resource managers. Correlation of community variability with environmental data can provide insight into underlying mechanisms of variability and thus enable resource managers to develop appropriate action plans.

V. PUBLICATIONS AND REPORTS

Our project will provide much needed information to better understand ecological principles of nearshore community structure and development. Within-site and between-site comparisons have case study characteristics that should be of interest for the local and international scientific community. We expect publications in peer-reviewed journals, such as Marine Biology, Marine Ecology Progress Series or Trends in Ecology and Evolution. Publications and reports also are likely to provide guidance to local agencies.

VI. PROFESSIONAL CONFERENCES

Travel support for attendance of the annual EVOS meeting is asked for so we can present the results of our study to the scientific community.

VII. PERSONNEL

A. Principal Investigators (PIs)

Katrin Iken
School of Fisheries and Ocean Sciences
University of Alaska Fairbanks
Fairbanks Alaska 99775-7220
iken@ims.uaf.edu
office 907-474-5192
fax 907-474-7204

Brenda Konar
School of Fisheries and Ocean Sciences
University of Alaska Fairbanks
Fairbanks Alaska 99775-7220
bkonar@ims.uaf.edu
office 907-474-5028
fax 907-474-5804

B. Other Key Personnel

A technician is needed to complete the sorting of the 2004 samples and the enumeration of the individuals they contain after they have been identified by taxonomists. We request support for a technician because the sorting has to be done by somebody with sufficient knowledge in invertebrate zoology.

C. Contracts

No contracts will be needed within this project.

VIII. PRINCIPAL INVESTIGATOR QUALIFICATIONS

Both PI's (Katrin Iken and Brenda Konar) hold faculty positions in Marine Biology at the University of Alaska Fairbanks. Both have extensive experience in nearshore ecological work that is documented in a list of peer-reviewed publications (see CV's). The experience of both PI's in working on shallow-water and intertidal community levels as well as on an organismal level with macroalgae and invertebrates provides the background necessary for the proposed project. Both are PI's on the current GEM-funded NaGISA project to collect and analyze biodiversity in selected sites in the GOA (end date: 31 December 2004). Reports for this project were always submitted in a timely fashion and the same can be expected from publications of this biodiversity study.

IX. LITERATURE CITED

Bodkin, JL and T Dean. 2003. Alternative Sampling Designs for Nearshore Monitoring (Gulf Ecosystem Monitoring and Research Project G-030687), US Geological Survey, Alaska Science Center, Anchorage Alaska.

Brown PJ and RB Taylor. 1999. Effects of trampling by humans on animals inhabiting coralline algal turf in the rocky intertidal. J. Exp. Mar. Biol. Ecol. 235: 45-53

Clarke KR. 1993. Non-parametric multivariate analyses of changes in community structure. Aust. J. Ecol. 18: 117-143

Clarke KR and RH Green. 1988. Statistical design and analysis for a "biological effects" study. Mar. Ecol. Prog. Ser. 46: 213-226

Dean RL and JH Connell. 1987. Marine invertebrates in an algal succession. 1. Variations in abundance and diversity with succession. J. Exp. Mar. Biol. Ecol. 109: 195-215.

Field JG, KR Clarke and RM Warwick. 1982. A practical strategy for analyzing multispecies distribution patterns. Mar. Ecol. Prog. Ser. 8: 37-52

Keats DW, I Matthews and G Maneveldt. 1994. Competitive relationships and coexistence in a guild of crustose algae in the eulittoral zone, Cape Province, South-Africa. South African J. Bot.60: 108-113

Nakashizuka, T and N Stork. 2002. Biodiversity Research Methods: IBOY in Western Pacific and Asia. Kyoto University Press.

Reed, DC and MS Foster. 1984. The effects of canopy shading on algal recruitment and growth in growth in a giant kelp forest. Ecology 65 (3): 937-948.

Steneck RS, SD Hacker and MN Dethier. 1991. Mechanisms of competitive dominance between crustose coralline algae – an herbivore-mediated competitive reversal. Ecology 72: 938-950.

Biographical Sketch — Katrin Barbara Iken

Address: Institute of Marine Science, School of Fisheries and Ocean Sciences
University of Alaska Fairbanks
Fairbanks, AK 99775-7220
Fax: (907) 474-7204
E-mail: iken@ims.uaf.edu

Education:
Ph. D. Marine Biology, Alfred Wegener Institute for Polar and Marine Research, Germany, 1995
M. Sc Ecology, University of Bayreuth, Germany, 1991
B. A. Biology, University of Düsseldorf, Germany, 1987

Appointments:

2002-present	Assistant Professor Marine Biology (tenure track), University of Alaska Fairbanks
1999-2001	Postdoctoral Research Fellow, University of Alabama at Birmingham, USA
1996-1999	Postdoctoral Research Fellow, Alfred Wegener Institute for Polar and Marine Research (AWI), Bremerhaven, Germany
1992-1995	Graduate Student, AWI, Bremerhaven, Germany
1987-1991	Teaching assistant, University of Bayreuth, Germany

Five related publications:

Lippert, H., **Iken, K.**, Rachor, E., Wiencke, C. (2001). Macrofauna associated with macroalgae at Kongsfjord (Spitsbergen) – Species composition and distribution on abundant macroalgal species. *Polar Biology,* 24, 512-522.

Iken, K., Brey, T, Wand, U., Voigt, J., Junghans, P. (2001) Trophic relationships in the benthic community at Porcupine Abyssal Plain (NE Atlantic): a stable isotope analysis. *Progress in Oceanography,* 50, 383-405.

Iken, K., Amsler. C.D., Greer, S P., McClintock, J.B. (2001). Quantitative and qualitative studies of the swimming behaviour of *Hincksia irregularis* spores (Phaeophyceae): Ecological implications and parameters for quantitative swimming assays. *Phycologia*, 40, 359-366
→ awarded the Tyge Christensen Prize of the International Phycological Society

Iken, K. (1999). Feeding ecology of the Antarctic herbivorous gastropod *Laevilacunaria antarctica* Martens. *Journal of Experimental Marine Biology and Ecology, 236 (1)*, 133-148.

Iken, K., Barrera-Oro, E.R., Quartino, M.L., Casaux, R.J., Brey, T. (1997). Grazing in the Antarctic fish *Notothenia coriiceps*: Evidence for selective feeding on macroalgae. *Antarctic Science, 9 (4),* 386-391.

Five other significant publications:

Lippert, H., **Iken, K.,** Volk, C., Köck, M., Rachor, E. (2004). Chemical defense against predators in a sub-Arctic fjord. *Journal of Experimental Marine Biology and Ecology* 310: 131-146.

Lippert H., Brinkmeyer R., Müllhaupt T., **Iken K.** (2003). Antimicrobial activity in sub-Arctic marine invertebrates. *Polar Biology*, 26: 591-600.

Lippert, H. and **Iken, K.** (2003) Biochemical composition and palatability of invertebrates in a sub-Arctic fjord. *The Marine Biological Association of the United Kingdom* 83: 1215-1219.

Iken, K., Avila, C., Fontana, A., Gavagnin, M. (2002). Chemical ecology and origin of chemical defense in the Antarctic nudibranch *Austrodoris kerguelenensis. Marine Biology*, 141, 101-109.

Iken, K., Quartino, M.L , Wiencke, C. (1999) Histological identification of macroalgae from stomach contents of the Antarctic fish *Notothenia coriiceps* gives new insights in its feeding ecology *Marine Ecology, 20 (1),* 11-18

Outreach and service activities:

- Press interviews (Alaska Airlines Magazine, Associated Press)
- School visits with touch tank exhibitions and public presentations
- Websites (www.westnurc.uaf.edu/anagisa.html; http://oceanexplorer.noaa.gov/explorations/02arctic; www.wow.uab.edu)
- Judge at science fairs
- UAF: Faculty Senate, Dive Control Board member, Outcome Assessment Committee Chair

Polar Research experience:

2004	Northern Chukchi Sea, Arctic
2002 and 2003	Boulder Patch, Beaufort Sea, Arctic
2000and 2001	Palmer Station (USA), Antarctica
1998	Expedition ANTXV/3 with RV "Polarstern" (Germany) to Weddell Sea and Antarctic Peninsula
1996	ICE-BAR Expedition with RV "Lance" (Norway) to Northern Barents Sea, Arctic
1992/93/94	Jubany Station/Dallmann Laboratory (Argentina/Germany), Antarctica
1992	Koldewey Station (Norway/Germany), Svalbard, Arctic

Scientific Diving qualification:

German Scientific Diving Board: Certified scientific diver since 1993,

- Scientific diving coordinator at AWI, Germany 1996-1999
- diving operations in the Arctic and Antarctic

AAUS: Certified Scientific Diver since 1999,

- diving operations in the Antarctic and Arctic
- member of Dive Control Board at UAF

Collaborators and other affiliations:

Major Professors and Postdoctoral Advisors.

M Sc.:	Dr. Konrad Dettner, Ecology & Entomology, University of Bayreuth, Germany
Ph. D.:	Dr. Wolf Arntz, Marine Benthic Ecology, Alfred Wegener Institute for Polar and Marine Research (AWI), Bremerhaven, Germany
Postdoctoral:	Dr. Tom Brey, Polar Ecology, AWI, Bremerhaven, Germany
Postdoctoral:	Dr. Jim McClintock and Dr. Charles Amsler, University of Alabama at Birmingham

Graduate students

Heike Lippert, Alfred Wegener Institute for Polar and Marine Research. PhD Thesis. 1999-2003.
Carrie Belben, University of Alaska Fairbanks, M.S. Thesis. 2004-present.
Angela Dubois, University of Alaska Fairbanks, M.S. Thesis. 2003-present.

Collaborators within the last 48 months:

Dr. Brenda Konar, University of Alaska Fairbanks
Dr. Ken Dunton, University of Texas at Austin, Port Aransas
Dr. Bodil Bluhm, University of Alaska Fairbanks
Dr. Rolf Gradinger, University of Alaska Fairbanks
Dr. Gerry Plumley, University of Alaska Fairbanks
Dr. Ian McDonald, Texas A&M University Corpus Christi
Dr. Bill Baker, Dept. of Chemistry, University of South Florida, Tampa
Dr. James McClintock, Dept. of Biology, University of Alabama at Birmingham
Dr. Charles Amsler, Dept of Biology, University of Alabama at Birmingham
Dr. Stephen Greer, Geneva College, Beaver Falls
Dr. Christian Wiencke, Alfred Wegener Institute for Polar and Marine Research, Germany
Dr. Heike Lippert, Alfred Wegener Institute for Polar and Marine Research, Germany
Dr. Eike Rachor, Alfred Wegener Institute for Polar and Marine Research, Germany
Dr Tom Brey, Alfred Wegener Institute for Polar and Marine Research, Germany
Dr. Karin Riemann, Alfred Wegener Institute for Polar and Marine Research, Germany
Dr. Guido Cimino, Istituto per la Chimica di Molecole di Interesse Biologico, Italy
Dr. Angelo Fontana, Istituto per la Chimica di Molecole di Interesse Biologico, Italy
Dr. Margharita Gavagnin, Istituto per la Chimica di Molecole di Interesse Biologico, Italy
Dr. Letitia Ciavatta, Istituto per la Chimica di Molecole di Interesse Biologico, Italy
Dr. Yoshihisa Shirayama, Kyoto Marine Laboratory, Japan
Dr. Conxita Avila, Center for Avdanced Studies, Blanes, Spain

Biographical Sketch

Brenda Konar
School of Fisheries and Ocean Sciences
University of Alaska Fairbanks
P.O. Box 757220, Fairbanks, Alaska 99775
e-mail: bkonar@ims.uaf.edu

Professional Preparation:

San Jose State University, San Jose, CA	Zoology	B.A. 1986
Moss Landing Marine Laboratories, CA	Marine Sciences	M.S. 1991
University of California, Santa Cruz	Biology	Ph.D. 1998

Appointments:

2000 TO PRESENT Assistant Professor. School of Fisheries and Ocean Sciences, University of Alaska Fairbanks and Staff Scientist for the West Coast and Polar Regions National Undersea Research Center.

1999 TO 2000. Research Assistant Professor, School of Fisheries and Ocean Sciences, University of Alaska Fairbanks and Staff Scientist for the West Coast and Polar Regions National Undersea Research Center.

Publications

Estes, J. A., E. M. Danner, D. F. Doak, B. Konar, A. M. Springer, P. D Steinberg, M. T. Tinker and T. M. Williams. Complex trophic interactions in kelp forest ecosystems. In Press: Bulletin of Marine Science

Konar, B. and Estes, J. A. 2003. The stability of boundary regions between kelp beds and deforested areas. Ecology 84: 174-185.

Konar, B. 2001. Effects of varying macroalgal cover on a subarctic sea urchin population. Polar Biology 24:754-763.

Konar, B. 2000. Seasonal inhibitory affects of marine plants on sea urchins: structuring communities the algal way. Oecologia 125:208-217

Konar, B. 2000. Limited effects of a keystone species: trends of sea otters and kelp forest at the Semichi Islands, Alaska. Marine Ecology Progress Series 199:271-280.

Konar, B. and C. Roberts. 1996. Large scale landslide effects on two exposed rocky subtidal areas in California. Botanica Marina. 39:517-524.

Lenihan, H. S., K. A. Kiest, K. E. Conlan, P. N. Slattery, B. H. Konar, and J. S. Oliver. 1995. Patterns of survival and behavior in Antarctic benthic invertebrates exposed to contaminated sediments: Field and laboratory bioassay experiments. Journal of Experimental Marine Biology and Ecology. 192:233-255.

Konar, B. and M. Stephenson. 1994. Gradients of subsurface water toxicity to oyster larvae in bays and harbors in California and their relation to Mussel Watch bioaccumulation data. Chemosphere. 30:165-172.

Konar, B. 1993. Demography and morphology of the geniculate coralline, *Bossiella californica* ssp. *schmittii* (Corallinales, Rhodophyta) in a central California kelp forest. Phycologia. 32:284-291.

Konar, B. and M. S. Foster 1992. Distribution and recruitment of subtidal geniculate coralline algae. Journal of Phycology. 28:273-280.

Collaborators:

Dr. Ken Coyle, University of Alaska Fairbanks
Dr. Ken Dunton, University of Texas Galveston
Dr. James Estes, University of California, Santa Cruz
Dr. Gayle Hanson, Oregon State University
Dr. Raymond Highsmith, University of Alaska Fairbanks
Dr. Katrin Iken, University of Alaska Fairbanks
Dr. Yuri Latypov, Far East Branch Russian Academy of Sciences
Dr. Sandra Lindstrom, University of British Columbia
Dr. Andrey Proshutinsky, University of Alaska Fairbanks
Dr. Boris Sirenko, Zoological Institute Russian Academy of Sciences
Dr. Kate Wynne, University of Alaska Fairbanks
Dr. Yoshihisa Shirayama, Seto Marine Biological Lab, Kyoto University

Budget Justification

FY05

Personnel - $31,520 (incl. fringe benefits)
One month of salary for each of the PIs (Iken and Konar) is requested ($17,175). Konar and Iken's tasks in this project are general oversight, analyzing the data using the PRIMER software and preparing manuscripts for publication. They will also invest time to meet with other researchers and local communities to discuss the inclusion of the results of this biodiversity project into long-term monitoring strategies.
Five months (half-time) support ($14,345) is requested for a technician to assist in the sorting of the 2004 NaGISA samples into major taxonomic groups. Intertidal and subtidal samples of the GOA regions are much more diverse and rich than anticipated and sorting of the samples is very labor intense. Processing of the completed 2003 NaGISA samples has shown that it takes an experienced technician an average of 4 hours to sort a sample, and a total of 200 samples remain to be sorted.

Benefits:
Staff benefits are applied according to UAF's proposed benefit rates for FY05, negotiated with the Office of Naval Research (ONR). Rates are 32.4% for senior salaries and 8.4% for the technician A copy of the proposed agreement is available at:
http://www.alaska.edu/controller/cost-analysis/downloads/Reports/FY05_FB_Prop.pdf

Travel - $5,000
Travel is requested for the PIs to travel to the annual GEM science meeting ($2000). It is essential to attend a workshop on the use of the computer program PRIMER for multivariate biodiversity analysis to be able to apply the necessary statistical analyses ($3000).

Facilitates and Administrative (F&A) Costs are calculated at 25% as per the agency guidelines. UAF budget is attached. EVOS GEM budget is also attached, which includes the standard Trustee Agency GA (9% of Project Total).

EXXON VALDEZ OILSPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Budget Category:	Proposed FY 05	Proposed FY 06	Proposed FY 07	TOTAL PROPOSED
Personnel	$31,520.0	$0.0	$0.0	$31,520.0
Travel	$5,000.0	$0.0	$0.0	$5,000.0
Contractual	$0.0	$0.0	$0.0	$0.0
Commodities	$0.0	$0.0	$0.0	$0.0
Equipment	$0.0	$0.0	$0.0	$0.0
Subtotal	$36,520.0	$0.0	$0.0	$36,520.0
Indirect (rate will vary by proposer)	$9,130.0			$9,130.0
Project Total	**$45,650.0**	$0.0	$0.0	**$45,650.0**
Trustee Agency GA (9% of Project Total)	$4,108.5	$0.0	$0.0	$4,108.5
Total Cost	$49,758.5	$0.0	$0.0	$49,758.5

FY 05-07

Date Prepared:

Project Number:
Project Title: Alaska Natural Geography in Shore Areas: Completion of the biodiversity census
Name: Katrin Iken
Agency: University of Alaska Fairbanks

FORM 4A NON-TRUSTEE SUMMARY

EXXON VALDEZ OILSPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Personnel Costs:			Months	Monthly		Personnel
Name	Description		Budgeted	Costs	Overtime	Sum
K Iken	Principal Investigator		1 0	8377.0		8,377 0
B Konar	Principal Investigator		1 0	8798.0		8,798 0
Heloise Chenelot	Technician		5 0	2869.0		14,345 0
						0 0
						0 0
						0 0
						0 0
						0 0
						0 0
						0 0
						0 0
						0 0
		Subtotal	7 0	20044 0	0.0	
					Personnel Total	$31,520 0

Travel Costs:		Ticket	Round	Total	Daily	Travel
Description		Price	Trips	Days	Per Diem	Sum
RT to Primer workshop		1500 0	2			3,000.0
RT GEM Meeting		1000 0	2			2,000 0
						0 0
						0 0
						0 0
						0 0
						0 0
						0.0
						0 0
						0 0
						0 0
						0 0
					Travel Total	$5,000 0

FY 05

Project Number:
Project Title: Alaska Natural Geography in Shore Areas: Completion of the biodiversity census
Name: Katrin Iken
Agency. University of Alaska Fairbanks

FORM 4B
Personnel
& Travel
DETAIL

EXXON VALDEZ OILSPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Contractual Costs:	Contract Sum
Description	
If a component of the project will be performed under contract, the 4A and 4B forms are required. **Contractual Total**	$0 0

Commodities Costs:	Commodity Sum
Description	
Commodities Total	$0 0

FY 05

Project Number:
Project Title: Alaska Natural Geography in Shore Areas. Completion of the biodiversity census
Name: Katrin Iken
Agency University of Alaska Fairbanks

FORM 4B
Contractual & Commodities DETAIL

EXXON VALDEZ OILSPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

New Equipment Purchases:	Number	Unit	Equipment
Description	of Units	Price	Sum
			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

Existing Equipment Usage:	Number	Inventory
Description	of Units	Agency

FY 05

Project Number:
Project Title. Alaska Natural Geography in Shore Areas: Completion of the biodiversity census
Name. Katrin Iken
Agency University of Alaska Fairbanks

FORM 4B
Equipment
DETAIL

PROJECT SHORT TITLE.
Alaska Natural Geography in Shore Areas
PI: Iken, K.
START. January 1, 2005
END: December 31, 2005

SCHOOL OF FISHERIES AND OCEAN SCIENCES

SFOS #:
05-070

BANNER #:
S00006097

			E Class	Wage/HR	Leave Rate	Mos	Year 1	Total Project
A. Senior Personnel:								
	Total Number of Months							
K Iken	1 00	Principal Investigator	F9	$35 86	1.4%	1 00	$6,327	$6,327
B Konar	1 00	Principal Investigator	F9	$37 66	1.4%	1.00	$6,645	$6,645
	A. Total Senior Personnel						**$12,972**	**$12,972**
B. Other Personnel:		**(full time = 174 hours per month)**						
	Total Number of Months							
Technician (Heloise Chenelot)	5 00		NT	$15 21	0.0%	5.00	$13,233	$13,233
	B. Total Other Personnel						**$13,233**	**$13,233**
	Total Salaries and Wages (A+B)						**$26,205**	**$26,205**
C. Fringe Benefits								
		Faculty Benefits	F9		32.4%		$4,203	$4,203
		Temporary NonExempt	NT		8.4%		$1,112	$1,112
	C. Total Fringe Benefits						**$5,315**	**$5,315**
	Total Salaries and Benefits (A+B+C)						**$31,520**	**$31,520**
E. Travel								
	1 Domestic							
RT to Primer workshop		$1500 each	2				$3,000	$3,000
RT GEM Meeting		$1000 each	2				$2,000	$2,000
	E. Total Travel						**$5,000**	**$5,000**
J. Total Direct Costs (A-I)							**$36,520**	**$36,520**
L. Base							**$36,520**	**$36,520**
M. Total Indirect Costs (F&A)	**2 TDC (EVOS)**			**Current Rate:**	**25.0%**		**$9,130**	**$9,130**
N. Total Direct & Indirect (J+M)							**$45,650**	**$45,650**
	Funding Agency Total						**$45,650**	**$45,650**

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator:	Other agencies to which this proposal has been/will be submitted:
Katrin Iken	None

Support: ☒ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Essential habitats in our Arctic front yard: Nearshore benthic community structure
SFOS 05-006, S5642, G0460
Source of Support. Alaska Sea Grant College Program
Total Award Amount: $ 10,000 Total Award Period Covered: 01-MAY-2004 to 30-APR-2005
Location of Project: Alaska
Months of Your Time Committed to the Project. FY05 0 20 FY 06 0.00 FY 07 0.00 Sumr:

Support: ☒ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title.
Kelp-Grazer Interactions in Kachemak Bay, Alaska: Grazing Activity, Chemical Defenses and Resource Allocation in Selected Kelp Species SFOS 04-098, S4962, G1616
Source of Support: North Pacific Research Board
Total Award Amount: $ 188,963 Total Award Period Covered: 15-APR-2004 to 30-APR-2006
Location of Project. Alaska
Months of Your Time Committed to the Project: FY05 2.00 FY 06 2.00 FY 07 0.00 Sumr:

Support: ☒ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Arctic Benthic Community Structure and Trophic Relationships
SFOS 04-037R1, S4668, G191
Source of Support: Cooperative Institute for Arctic Research
Total Award Amount. $ 61,637 Total Award Period Covered. 01-APR-2004 to 31-MAR-2005
Location of Project: Alaska
Months of Your Time Committed to the Project: FY05 1 50 FY 06 0 00 FY 07 0.00 Sumr

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title.
Ecological baseline information for Gulf of Alaska oil exploration areas using "samples of opportunity"
SFOS 05-038, S5891 (Letter of Intent)
Source of Support: Coastal Marine Institute
Total Award Amount $ 110,610 Total Award Period Covered: 01-MAY-2005 to 30-SEP-2006
Location of Project. Alaska
Months of Your Time Committed to the Project: FY05 0.13 FY 06 0.13 FY 07 0.00 Sumr:

*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period.

(USE ADDITIONAL SHEETS AS NECESSARY)

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator.	Other agencies to which this proposal has been/will be submitted
Katrin Iken	None

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Gelatinous zooplankton and benthic epifauna as indicators of environmental conditions in the Arctic deep sea
SFOS 05-033, S5849
Source of Support. West Coast & Polar Undersea Research Center
Total Award Amount. $ 36,620 Total Award Period Covered: 01-MAR-2005 to 28-FEB-2007
Location of Project: Alaska
Months of Your Time Committed to the Project: FY05 0 00 FY 06 1 00 FY 07 0.00 Sumr·

Support· ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Community Dynamics in Antarctic Shallow Water Ecosystems
SFOS 04-183, S5503
Source of Support: National Science Foundation
Total Award Amount: $ 653,307 Total Award Period Covered· 01-JUL-2005 to 30-JUN-2008
Location of Project: Alaska
Months of Your Time Committed to the Project· FY05 0 00 FY 06 3 00 FY 07 3 00 Sumr:

Support. ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Continuation of Arctic Nearshore Impact Monitoring in Development Area (cANIMIDA)· Task Order 006 Monitoring the Boulder Patch SFOS 04-174, S5395
Source of Support· LGL Alaska Research Associates, Inc
Total Award Amount $ 38,000 Total Award Period Covered. 01-JAN-2005 to 31-DEC-2007
Location of Project. Alaska
Months of Your Time Committed to the Project FY05 0 97 FY 06 0 97 FY 07 0 25 Sumr.

Support ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Rhodolith Beds: A Newly Discovered Habitat in Sub-Arctic Alaska
SFOS 05-043, S5933
Source of Support: NOAA – Ocean Exploration
Total Award Amount: $ 40,549 Total Award Period Covered: 01-MAY-2005 to 30-APR-2006
Location of Project: Alaska
Months of Your Time Committed to the Project· FY05 0.00 FY 06 1 00 FY 07 0.00 Sumr.

*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period.

(USE ADDITIONAL SHEETS AS NECESSARY)

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator	Other agencies to which this proposal has been/will be submitted
Katrin Iken	None

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title. The Hidden Ocean Explorations under the ice of the Western Arctic -Phase 2
In Darwin's footsteps. food limitation and habitat heterogeneity as selective forces of diversity in the deep-sea benthos SFOS 05-042
Source of Support: NOAA OE
Total Award Amount: $ 135,743 Total Award Period Covered: 01-MAY-2005 to 30-APR-2006
Location of Project. Alaska
Months of Your Time Committed to the Project: FY05 0 00 FY 06 2.00 FY 07 0.00 Sumr:

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

The Hidden Ocean: Explorations under the ice of the Western Arctic life in the crystal palace of the sea ice Phase 2 SFOS 04-030R2, S4680
Source of Support: NOAA OE
Total Award Amount. $ 139,766 Total Award Period Covered 01-MAY-2005 to 30-APR-2006
Location of Project Alaska
Months of Your Time Committed to the Project: FY05 0 00 FY 06 1 50 FY 07 0 00 Sumr.

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Rhodoliths as Recorders of Environmental Variation
SFOS 05-041, S5922
Source of Support: National Science Foundation
Total Award Amount: $ 467,339 Total Award Period Covered: 01-APR-2005 to 29-FEB-2008
Location of Project: Alaska
Months of Your Time Committed to the Project: FY05 2.00 FY 06 2.00 FY 07 2.00 Sumr:

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title Alaska Natural Geography in Shore Areas: Completion of the biodiversity census
SFOS 05-070 S6097
THIS PROPOSAL
Source of Support: EVOS
Total Award Amount. $ 45,650 Total Award Period Covered: 01 Jan 2005 to 31 Dec. 2005
Location of Project. Alaska
Months of Your Time Committed to the Project. FY05 1 0 FY 06 FY 07 Sumr

*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period

(USE ADDITIONAL SHEETS AS NECESSARY)

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator.	Other agencies to which this proposal has been/will be
Brenda Konar	None

Support: ☒ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title.
Role of Grazers on the Recolonization of Hard-Bottom Communities in the Alaska Beaufort
SFOS 02-062R, G0636
Source of Support: Minerals Management Service
Total Award Amount: $ 248,777 Total Award Period Covered: 01-MAY-2002 to 30-APR-2005
Location of Project: Alaska
Months of Your Time Committed to the Project. FY05 2.00 FY 06 0.00 FY 07 0.00 Sumr:

Support ☒ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Essential habitats in our Arctic front yard: Nearshore benthic community structure
SFOS 05-006, S5642, G0460
Source of Support: Alaska Sea Grant College Program
Total Award Amount: $10,000 Total Award Period Covered. 01-MAY-2004 to 30-APR-2005
Location of Project. Alaska
Months of Your Time Committed to the Project FY05 0.20 FY 06 0 00 FY 07 0 00 Sumr

Support: ☒ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title
West Coast & Polar Regions Undersea Research Center: Funding 04-05 Phase I
SFOS 04-124, G1074
Source of Support: NOAA
Total Award Amount. $1,112,785 Total Award Period Covered: 01-MAR-2004 to 30-APR-2005
Location of Project: Alaska
Months of Your Time Committed to the Project: FY05 3.00 FY 06 0.00 FY 07 0.00 Sumr.

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title
Community Dynamics in Antarctic Shallow Water Ecosystems
SFOS 04-183, S5503
Source of Support: NSF
Total Award Amount: $ 653,307 Total Award Period Covered: 01-JUL-2005 to 30-JUN-2008
Location of Project: Alaska
Months of Your Time Committed to the Project: FY05 0.00 FY 06 3 00 FY 07 3.00 Sumr:

*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period

(USE ADDITIONAL SHEETS AS NECESSARY)

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator:	Other agencies to which this proposal has been/will be
Brenda Konar	None

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Collaborative Research. Kelp forest interaction webs in the Aleutian archipelago: trophic cascades and indirect Effects 05-017, S5738
Source of Support: National Science Foundation
Total Award Amount: $ 342,563 Total Award Period Covered: 01-MAR-2005 to 28-FEB-2008
Location of Project: Alaska
Months of Your Time Committed to the Project. FY05 2 00 FY 06 2.00 FY 07 2 00 Sumr:

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Essential larval and juvenile fish habitat in nearshore waters of Kachemak Bay, Alaska
SFOS 05-036, S5883
Source of Support. UA Foundation – Pollock Conservation Cooperative Research Center
Total Award Amount: $ 127,304 Total Award Period Covered 01-APR-2005 to 31-MAR-2007
Location of Project Alaska
Months of Your Time Committed to the Project: FY05 2.00 FY 06 2 00 FY 07 0.00 Sumr.

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Ecological baseline information for Gulf of Alaska oil exploration areas using "samples of opportunity"
SFOS 05-038, S5891 (Letter of Intent)
Source of Support. Coastal Marine Institute
Total Award Amount: $ 110,610 Total Award Period Covered: 01-MAY-2005 to 30-SEP-2006
Location of Project: Alaska
Months of Your Time Committed to the Project FY05 0 13 FY 06 0.13 FY 07 Sumr.

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Under-Ice Foraging Ecology of Ringed Seals
UAS 05, S5860
Source of Support: West Coast & Polar Regions Undersea Research Center
Total Award Amount $ 391,490 Total Award Period Covered 01-FEB-2006 to 31-JAN-2008
Location of Project Alaska
Months of Your Time Committed to the Project: FY05 0 00 FY 06 2.00 FY 07 2.0 Sumr:

*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period

(USE ADDITIONAL SHEETS AS NECESSARY)

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator.	Other agencies to which this proposal has been/will be
Brenda Konar	None

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title
Rhodolith Beds. A New Habitat in Subarctic Alaska
SFOS 05-043 S5933
Source of Support NOAA -- Ocean Exploration
Total Award Amount. $ 40,549 Total Award Period Covered. 01-MAY-2005 to 30-APR_2006
Location of Project Alaska
Months of Your Time Committed to the Project: FY05 0 00 FY 06 1.00 FY 07 0.00 Sumr

Support ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:
Rhodoliths as Recorders of Environmental Variation
SFOS 05-041, S5922
Source of Support: National Science Foundation
Total Award Amount $ 467,339 Total Award Period Covered: 01-APR-2005 to 29-FEB-2008
Location of Project Alaska
Months of Your Time Committed to the Project: FY05 2 00 FY 06 2.00 FY 07 2 00 Sumr:

Support: ☐ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title: Alaska Natural Geography in Shore Areas: Completion of the biodiversity census
THIS PROPOSAL

Source of Support EVOS
Total Award Amount $ 45,650 Total Award Period Covered 01 Jan 2005 to 31 Dec. 2005
Location of Project: Alaska
Months of Your Time Committed to the Project FY05 FY 06 FY 07 Sumr

Support ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:
Total Award Amount: $ Total Award Period Covered 01 Jan 2005 to 31 Dec 2005
Location of Project:
Months of Your Time Committed to the Project FY05 1 0 FY 06 FY 07 Sumr:

*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period

(USE ADDITIONAL SHEETS AS NECESSARY)

Data Management and Quality Assurance/Quality Control ("QA/QC") Statement

This proposal to GEM seeks support to complete sample and data analysis of previously taken NaGISA samples within the GOA (at Kodiak, Prince William Sound and Kachemak Bay).

The NaGISA project obtained quantitative data of species composition and biomass through standardized protocols. These include collections at various intertidal and shallow subtidal depth strata. Biological measures of abundance, biomass and species richness are supplemented by measurements of environmental conditions, and include temperature (HOBO Water Temp Pro logger, hourly for one year at each sampling strata), light (LiCOR), and salinity (VWR Conductivity Meter; latter two at day of collection). Sampling occurred in three core areas of the Gulf of Alaska, in Prince William Sound, Kodiak Island and Kachemak Bay, with four sampling sites within each core area.

All data obtained in the NaGISA project are internally managed through the UAF School of Fisheries and Ocean Sciences and are also entered into a joint NaGISA database. This database is fully geo-referenced and contains site-specific data on species composition, abundance and biomass. These raw data are then available to be analyzed for different diversity measures at various geographical and temporal scales. The statistical methods will include aspects of the PRIMER statistical package for biodiversity analysis.

This NaGISA website is linked to the OBIS (Ocean Biogeographic Information System) database, which enlarges the scale (local, regional and global) of data available for comparative analysis.

The type of data produced by the project are taxonomic (quantitative sampling of intertidal and subtidal biota and their taxonomic identification to species level), quantitative (biomass and abundance) and physical measurements (environmental data). These data are the baseline data that will be available for application in long-term management.

Quality insurance of samples is given through the supervision of the PIs Iken and Konar. They led the field collections and now supervise the sorting of the samples. Identification of samples is through the PIs for the more commonly known flora and fauna, but voucher organisms were created for each species. Voucher organisms and type specimen will be stored at the University of Alaska Museum collection. Species identification of unknown species and confirmation of identified specimens will be through taxonomic experts for certain fields. As macroalgal experts we have acquired Gayle Hansen (Hatfield Marine Science Center, Oregon State University) who has many years experience in working with Alaskan macroalgae. Nora Foster and Max Hoberg (both UAF) are invertebrate experts for Mollusca and Polychaeta. Other taxa will be treated on higher taxonomic level. The name of the experts who have identified species will be referenced in the database. Any uncertainty of species identification will be clearly indicated in the database.

All data will be publicly available after the final report to GEM and publication of the results. If access to data is necessary for resource managers before that, it can be granted upon request.

Nearshore biodiversity in Gulf of Alaska Region
Metadata:

- Identification_Information
- Spatial_Data_Organization_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information.
Citation
Citation_Information
Originator. Katrin Iken
Publication_Date. 20041025
Title Nearshore biodiversity in Gulf of Alaska Region
Geospatial_Data_Presentation_Form map
Publication_Information
Publication_Place Institute of Marine Science/University of Alaska Fairbanks
Publisher IMS/UAF
Description
Abstract
Biodiversity in intertidal and shallow subtidal regions in Kachemak Bay, Kodiak Island and Prince William Sound is evaluated. Target areas are hard bottom communities with large macroalgal cover and soft-bottom seagrass sites. Biodiversity data are provided on species level for macroalgae, molluscs and polychaetes and on higher taxonomic level for other groups.
Purpose:
Provide baseline data for the deveoplment of long-term monitoring programs
Supplemental_Information
Temperature, salinity and light are provided as supplementary information for the biological dataset
Time_Period_of_Content.
Time_Period_Information
Range_of_Dates/Times:
Beginning_Date 20030501
Ending_Date 20040730
Currentness_Reference ground condition
Status
Progress In work
Maintenance_and_Update_Frequency Irregular
Spatial_Domain
Bounding_Coordinates
West_Bounding_Coordinate: 155
East_Bounding_Coordinate: 145
North_Bounding_Coordinate 61
South_Bounding_Coordinate 58
Keywords
Theme
Theme_Keyword_Thesaurus.
Theme_Keyword biodiversity
Theme_Keyword. abundance
Theme_Keyword. biomass
Place
Place_Keyword_Thesaurus
Place_Keyword Kachemak Bay
Place_Keyword. Prince William Sound
Place_Keyword Kodiak Island
Temporal
Temporal_Keyword_Thesaurus
Temporal_Keyword summer 2003
Temporal_Keyword summer 2004
Access_Constraints
Use_Constraints:

Spatial_Data_Organization_Information
Direct_Spatial_Reference_Method: Point

Distribution_Information
Distributor
Contact_Information
Contact_Person_Primary
Contact_Person Katrin Iken
Contact_Organization University of Alaska Fairbanks
Contact_Address.
Address_Type Mailing and Physical Address
Address
245 O'Neill Institute of Marine Science
University of Alaska Fairbanks
City: Fairbanks
State_or_Province: AK
Postal_Code 99775
Country: USA
Contact_Voice_Telephone: 907-4745192
Contact_Facsimile_Telephone 907-4747204
Contact_Electronic_Mail_Address:
iken@ims.uaf.edu
Distribution_Liability

Metadata_Reference_Information
Metadata_Date:
Metadata_Contact
Contact_Information
Contact_Person_Primary
Contact_Person Katrin Iken
Contact_Organization University of Alaska Fairbanks
Contact_Address.
Address_Type Mailing and Physical Address
Address
245 O'Neill Institute of Marine Science
University of Alaska Fairbanks
City Fairbanks
State_or_Province AK
Postal_Code. 99775
Country: USA
Contact_Voice_Telephone: 907-4745192
Contact_Facsimile_Telephone: 907-4747204
Contact_Electronic_Mail_Address
iken@ims.uaf.edu
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version FGDC-STD-001-1998

Generated by mp version 2.6.0 on Wed Oct 27 13 32 16 2004

SFOS 05-070

University of Alaska Fairbanks Proposal

TO: *Exxon Valdez* Oil Spill Trustee Council
Gulf of Alaska Ecosystem Monitoring & Research (GEM) Program
441 West 5th Avenue, Suite 500,
Anchorage, AK 99501
Attn: Dr. Phil Mundy

FROM: Institute of Marine Sciences and
Global Undersea Research Unit
School of Fisheries and Ocean Sciences
University of Alaska Fairbanks
Fairbanks, AK 99775-7220

CONTACT: Grant and Contract Services, PO Box 757880,
109 Administrative Services Center, Fairbanks, AK
99775-7560

TITLE: Alaska Natural Geography in Shore Areas: Completion of the biodiversity census

PRINCIPAL INVESTIGATORS: Katin Iken Brenda Konar

NEW/CONTINUATION: New

DURATION: 1 Year

PROPOSED START DATE: January 1, 2005

UAF AMOUNT REQUESTED: $ 45,650

Katrin Iken 10/26/04
Katrin Iken /Date
Principal Investigator
907-474-5192
iken@ims.uaf.edu

for Brenda Konar 10/26/04
Brenda Konar /Date
Co-Principal Investigator
907-474-5028
bkonar@guru.uaf.edu

John Kelley for Mike 10/27/4
Michael Castellini /Date
Director
Institute of Marine Science
School of Fisheries and Ocean Sciences

R.C. Highsmith 10/26/04
Raymond Highsmith /Date
Director
Global Undersea Research Unit
School of Fisheries and Ocean Sciences

10/27/04
Denis Wiesenburg /Date
Dean
School of Fisheries and Ocean Sciences

10/27/04
John Blake /Date
Interim Director
Office of Sponsored Programs

GEM PROPOSAL SIGNATURE FORM

THIS FORM MUST BE SIGNED BY THE PROPOSED PRINCIPAL INVESTIGATOR AND SUBMITTED ALONG WITH THE PROPOSAL. If the proposal has more than one investigator, this form must be signed by at least one of the investigators, and that investigator will ensure that Trustee Council requirements are followed. Proposals will not be reviewed until this signed form is received by the Trustee Council Office.

By submission of this proposal, I agree to abide by the Trustee Council's data policy (*Trustee Council/GEM Data Policy**, adopted July 9, 2002) and reporting requirements (*Procedures for the Preparation and Distribution of Reports***, adopted July 9, 2002).

PROJECT TITLE: Alaska Natural Geography in Shore Areas: Completion of the biodiversity census

Printed Name of PI: Katrin Iken

Signature of PI: Katrin Iken Date 10/26/04

Printed Name of co-PI: FOR Brenda Konar

Signature of co-PI: Date 10/26/04

Printed Name of co-PI: _____

Signature of co-PI: _____ Date _____

* Available at http://www.evostc.state.ak.us/pdf/admin/datapolicy.pdf

** Available at http://www.evostc.state.ak.us/pdf/admin/reportguidelines.pdf

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, Alaska 99501-2340 • 907/278-8012 • fax 907/276-7178

Memorandum

To: Trustee Council Members

From: Gail Phillips

Date: October 25, 2004

Re: Allocation correction to project 050749 Hoover-Miller

This is a request for an additional $4.5 for Project 050749 Harbor Seal Monitoring. On August 23, 2004 the council authorized $92.7 for FY 05. The figures were transposed and should have been $97.2. Therefore we are requesting an additional $4.5 to be authorized for FY 05 bringing the total Direct authorized from $84.7 to $88.8 and current GA total of $8.0 to $8.4 for a total project budget of $97.2.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Budget Category:	Proposed FY 05	Proposed FY 06	Proposed FY 07		TOTAL PROPOSED
Personnel	$0.0	$0.0	$0.0		$0.0
Travel	$1.7	$3.0	$1.8		$6.5
Contractual	$76.5	$74.5	$73.7		$224.7
Commodities	$0.0	$2.0	$0.0		$2.0
Equipment	$11.0	$40.0	$0.0		$51.0
Subtotal	$89.2	$119.5	$75.5		$284.2
General Administration (9% of Subtotal)	~~$8.0~~	$10.8	$6.8		$25.6
Project Total	$97.2	$130.3	$82.3		$309.8

+ 4,095
+ 405GA
8.405

Need 4.5 additional to AOF=G

Cost-share Funds:
In this box, identify non-EVOS funds or in-kind contributions used as cost-share for the work in this proposal. List the amount of funds, the source of funds, and the purpose for which the funds will be used. Do not include funds that are not directly and specifically related to the work being proposed in this proposal.

NPS/OASLC: 2004 Support: $44 salaries, $6 intern stipends related to Aialik Bay ecology per year, continuation requested.
NPS/CCI: 2003 Support: $14 bi-monthly aerial surveys; $41 cameras, $8 outreach, $9 interns, $5 travel, $5 supplies, 2004 continuation pending . With GEM support for cameras, available funding will support CTD and plankton sampling in Aialik Bay
Port Graham Corporation: Real estate for Aialik Bay repeater site
USFWS, ANMWR: Real estate for Squab and Chiswell Islands repeater site

need to request an additional 4.5 $ was transposed

FY 05-07
Date Prepared:

Project Number: 050749
Project Title: Ecology of Harbor Seals in a Tidewater Glacier Fjord
Agency: NOAA

FORM 3A
TRUSTEE
AGENCY
SUMMARY

approved 8/23/04

Trustee Council Use Only
Project No: 050749
Date Received: ____

GEM PROPOSAL SUMMARY PAGE
(To be filled in by proposer)

Project Title:	Harbor seal monitoring in southern Kenai Peninsula fjords
Project Period:	FY 05-FY 07
Proposer(s):	Anne Hoover-Miller and Shannon Atkinson **Alaska SeaLife Center** **P.O. Box 1329** **Seward, Alaska 99664-1329** Email: anne_hoovermiller@alaskasealife.org Email: shannon_atkinson@alaskasealife.org
Study Location:	Kenai Peninsula

Abstract: This proposal supports an existing remote video monitoring system in Aialik Bay, a tidewater glacial fjord. This system is used to observe harbor seals in glacial ice habitats and the impacts of vessels on seals. Haulout activity, numbers of seals, vessel impacts on seals, ambient behaviors of undisturbed seals, glacial activity, ice conditions, weather, and other events affecting seals are recorded daily. Seed funding is requested to test prototype digital still cameras at land-based haulouts in Day Harbor for documenting seals in a fjord lacking tidewater glaciers. Integration of the remote monitoring into GEM provides ecological measures of conditions at the heads of fjords that will complement long-term oceanographic monitoring in adjacent waters. This study is augmented by ancillary studies and support from the ASLC and National Park Service through a partnership in the Ocean Alaska Science and Learning Center, the University of Alaska, Fairbanks, Alaska National Maritime Wildlife Refuge System, and Port Graham Corporation.

Funding:	EVOS Funding Requested:	FY 05	$ 92.7	
	(must include 9%GA)	FY 06	$ 130.3	
		FY 07	$ 82.3	
				TOTAL: 309.8
	Non-EVOS Funds to be Used:	FY 05	$ 165 (pending FY 05-FY07)	
		FY 06	$ 165	
		FY 07	$ 165	TOTAL: 495

Date: April 15, 2004

(NOT TO EXCEED ONE PAGE)

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Budget Category:	Proposed FY 05	Proposed FY 06	Proposed FY 07		TOTAL PROPOSED	
Personnel	$0.0	$0.0	$0.0		$0.0	
Travel	$1.7	$3.0	$1.8		$6.5	
Contractual	$76.5	$74.5	$73.7		$224.7	
Commodities	$0.0	$2.0	$0.0		$2.0	
Equipment	$11.0	$40.0	$0.0		$51.0	
Subtotal	$89.2	$119.5	$75.5		$284.2	
General Administration (9% of Subtotal)	$8.0	$10.8	$6.8		$25.6	
Project Total	$97.2	$130.3	$82.3		$309.8	

Cost-share Funds:
In this box, identify non-EVOS funds or in-kind contributions used as cost-share for the work in this proposal. List the amount of funds, the source of funds, and the purpose for which the funds will be used. Do not include funds that are not directly and specifically related to the work being proposed in this proposal.

NPS/OASLC: 2004 Support: $44 salaries, $6 intern stipends related to Aialik Bay ecology per year, continuation requested.
NPS/CCI: 2003 Support: $14 bi-monthly aerial surveys; $41 cameras, $8 outreach, $9 interns, $5 travel, $5 supplies, 2004 continuation pending .
With GEM support for cameras, available funding will support CTD and plankton sampling in Aialik Bay
Port Graham Corporation: Real estate for Aialik Bay repeater site
USFWS, ANMWR: Real estate for Squab and Chiswell Islands repeater site

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FY 05-07

Date Prepared:

Project Number: 050749
Project Title: Ecology of Harbor Seals in a Tidewater Glacier Fjord
Agency: ADF&G

FORM 3A
TRUSTEE
AGENCY
SUMMARY

approved 8/23/04

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Personnel Costs:		GS/Range/	Months	Monthly		Personnel
Name	Description	Step	Budgeted	Costs	Overtime	Sum
						0.0
						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	Travel
Description	Price	Trips	Days	Per Diem	Sum
RT to EVOS Annual Meeting	0.1	2	4	0.1	0.6
RT to Alaska Native Harbor Seal Commission Meeting (Location TBD)	0.5	1	3	0.2	1.1
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$1.7

FY 05

Project Number:
Project Title:
Agency:

FORM 3B
Personnel
& Travel
DETAIL

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Contractual Costs:	Contract Sum
Description	
SeeMore Wildlife Systems 6 mo maintenance contract	36.0
Helicopter and vessel travel	13.0
Facilities cost (rent) at Alaska SeaLife Center	9.0
Indirect costs at Alaska SeaLife Center (26.22% of direct costs, excluding equipment items costing > $5000)	18.5
If a component of the project will be performed under contract, the 4A and 4B forms are required. **Contractual Total**	$76.5

Commodities Costs:	Commodity Sum
Description	
Commodities Total	$0.0

FY 05

Project Number:
Project Title:
Agency:

FORM 3B
Contractual & Commodities DETAIL

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

New Equipment Purchases: Description	Number of Units	Unit Price	Equipment Sum
Prototype remote time-lapse still cameras @ $2,200 ea	5	2.2	11.0
			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	$11.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

FY 05

Project Number:
Project Title:
Agency:

FORM 3B
Equipment
DETAIL

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Personnel Costs:		GS/Range/	Months	Monthly		Personnel
Name	Description	Step	Budgeted	Costs	Overtime	Sum
						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	Travel
Description	Price	Trips	Days	Per Diem	Sum
RT to EVOS Annual Meeting	0.1	2	4	0.1	0.6
16th Biennial Conference on Biology of Marine Mammals (San Diego)	0.8	1	8	0.2	2.4
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$3.0

FY 06

Project Number:
Project Title:
Agency:

FORM 3B
Personnel
& Travel
DETAIL

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Contractual Costs:	Contract Sum
Description	
SeeMore Wildlife Systems 6 mo maintenance contract	36.0
Helicopter and vessel travel	13.0
Facilities cost (rent) at Alaska SeaLife Center	9.0
Indirect costs at Alaska SeaLife Center (26.22% of direct costs, excluding equipment items costing > $5000)	16.5
If a component of the project will be performed under contract, the 4A and 4B forms are required. **Contractual Total**	$74.5

Commodities Costs:	Commodity Sum
Description	
Publication Costs: Ecology of Glacial Ice Inhabiting Harbor Seals in Aialik Bay	1.0
Publication Costs: Effects of vessels on harbor seals in a tidewater glacial fjord.	1.0
Commodities Total	$2.0

FY 06

Project Number:
Project Title:
Agency:

FORM 3B
Contractual & Commodities DETAIL

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

New Equipment Purchases: Description	Number of Units	Unit Price	Equipment Sum
3 Year Capital Lease in support of 3 camera sites and 1 repeater sites	4	10.0	40.0
			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	$40.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

FY 06

Project Number:
Project Title:
Agency:

FORM 3B
Equipment
DETAIL

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Personnel Costs:		GS/Range/	Months	Monthly		Personnel
Name	Description	Step	Budgeted	Costs	Overtime	Sum
						0.0
						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	Travel
Description	Price	Trips	Days	Per Diem	Sum
RT to EVOS Annual Meeting	0.1	2	4	0.1	0.6
RT to Alaska Native Harbor Seal Commission Meeting (Location TBD)	0.6	1	3	0.2	1.2
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$1.8

FY 07

Project Number:
Project Title:
Agency:

FORM 3B
Personnel
& Travel
DETAIL

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

Contractual Costs:	Contract Sum
Description	
SeeMore Wildlife Systems 6 mo maintenance contract	36.0
Helicopter and vessel travel	13.0
Facilities cost (rent) at Alaska SeaLife Center	9.0
Indirect costs at Alaska SeaLife Center (26.22% of direct costs, excluding equipment items costing > $5000)	15.7
Contractual Total	$73.7

Commodities Costs:	Commodity Sum
Description	
Commodities Total	$0.0

FY 07

Project Number:
Project Title:
Agency:

FORM 3B
Contractual & Commodities DETAIL

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
DETAILED BUDGET FORM FY 05 - FY 07

New Equipment Purchases: Description	Number of Units	Unit Price	Equipment Sum
			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

Existing Equipment Usage: Description	Number of Units	Inventory Agency

FY 07

Project Number:
Project Title:
Agency:

FORM 3B
Equipment
DETAIL

BUDGET JUSTIFICATION

FY2005

Travel: $1,700

Two round-trips to the EVOS Annual Meeting in Anchorage have been requested with roundtrip mileage ($100 each) and per diem for 2 days for each person ($100/day). One round-trip to the Alaska Native Harbor Seal Commission Meeting has also been budgeted. The location is yet to be determined; therefore, mileage ($100), airfare ($400) and $200/day per diem for 3 days has been requested.

Contractual: $76,500

The maintenance contract through SeeMore Wildlife Services, Inc., for the video monitoring system totals $36,000 over 6 months ($6,000/month for May-October). An additional $13,000 is requested for helicopter and vessel travel to reach the camera sites from Seward. $9,000 is requested to cover facility rental costs at the Alaska SeaLife Center. This amount covers office space for the PI and a research technician plus a small amount of laboratory space used to analyze video signals. Indirect costs of $18,500 are calculated as 26.22% of direct costs excluding equipment items costing greater than $5,000 each. This indirect rate is the federally-negotiated rate for the Alaska SeaLife Center.

New Equipment Purchases: $11,000

Five prototype remote time-lapse still cameras are being requested at $2,200 each.

FY2006

Travel: $3,000

Two round-trips to the EVOS Annual Meeting in Anchorage have been requested with roundtrip mileage ($100 each) and per diem for 2 days for each person ($100/day). One round-trip to San Diego for the 16th Biennial Conference on Biology of Marine Mammals has also been budgeted. Mileage and airfare ($800) and $200/day per diem for 8 days are requested.

Contractual: $74,500

The maintenance contract through SeeMore Wildlife Services, Inc., for the video monitoring system totals $36,000 over 6 months ($6,000/month for May-October). An additional $13,000 is requested for helicopter and vessel travel to reach the camera sites from Seward. $9,000 is requested to cover facility rental costs at the Alaska SeaLife Center. This amount covers office space for the PI and a research technician plus a small amount of laboratory space used to analyze video signals. Indirect costs of $16,500 are calculated as 26.22% of direct costs excluding equipment items costing greater than $5,000 each. This indirect rate is the federally-negotiated rate for the Alaska SeaLife Center.

Commodities Costs: $2,000

Publications costs for two journal articles are requested at $1000 each. The articles working titles are: "Ecology of glacial ice-inhabiting harbor seals in Aialik Bay" and "Effects of vessels on harbor seals in a tidewater glacial fjord."

New Equipment Purchases: $40,000

During FY2006, the capital lease with SeeMore Wildlife Systems, Inc., supporting the video monitoring equipment will be due for renewal. The lease cost for three camera sites and one repeater site will total $40,000.

FY2007

Travel: $1,800

Two round-trips to the EVOS Annual Meeting in Anchorage have been requested with roundtrip mileage ($100 each) and per diem for 2 days for each person ($100/day). One round-trip to the Alaska Native Harbor Seal Commission Meeting has also been budgeted. The location is yet to be determined; therefore, mileage ($100), airfare ($500) and $200/day per diem for 3 days has been requested.

Contractual: $73,700

The maintenance contract through SeeMore Wildlife Services, Inc., for the video monitoring system totals $36,000 over 6 months ($6,000/month for May-October). An additional $13,000 is requested for helicopter and vessel travel to reach the camera sites from Seward. $9,000 is requested to cover facility rental costs at the Alaska SeaLife Center. This amount covers office space for the PI and a research technician plus a small amount of laboratory space used to analyze video signals. Indirect costs of $15,700 are calculated as 26.22% of direct costs excluding equipment items costing greater than $5,000 each. This indirect rate is the federally-negotiated rate for the Alaska SeaLife Center.

COST SHARE FUNDS

- NPS/OASLC: 2004 Support: $44 salaries, $6 intern stipends related to Aialik Bay ecology per year, continuation requested.
- NPS/CCI: 2003 Support: $14 bi-monthly aerial surveys; $41 cameras, $8 outreach, $9 interns, $5 travel, $5 supplies, 2004 continuation pending . With GEM support for cameras, available funding will support CTD and plankton sampling in Aialik Bay
- The Port Graham Corporation provides real estate for Aialik Bay repeater site.
- USFWS and ANMWR provide real estate for the Squab Island and Chiswell Island repeater sites.

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator: Anne Hoover-Miller	Other agencies to which this proposal has been/will be submitted: This research has been supported by OASLC

Support: ☒ Current ☒ Pending ☐ Submission Planned in Near Future ☒ *Transfer of Support (partial)

Project/Proposal Title: Aialik Bay remote-controlled video monitoring.

Source of Support: National Park Service / Ocean Alaska Science and Learning Center

Total Award Amount: $ 63,000 Total Award Period Covered: Feb 2004-Feb 2005, FY 05 funding TBD

Location of Project: Aialik Bay

Months of Your Time Committed to the Project: FY05: 3 FY 06: 3 FY 07: 3 Sumr: 9

Support: ☒ Current ☒ Pending ☐ Submission Planned in Near Future ☒ *Transfer of Support (partial)

Project/Proposal Title: Restoration of tidewater glacial fjord habitat and reversal of impacts to selected apex marine species

Source of Support: National Park Service / Ocean Alaska Science and Learning Center, Cooperative Conservation Initiative

Total Award Amount: $ 103,000 Total Award Period Covered: Oct 2003-Sept 2004, pending FY2004 funding

Location of Project: McCarty Fjord to Johnstone Bay (aerial surveys), Aialik Bay

Months of Your Time Committed to the Project: FY05: 3 FY 06: 3 FY 07: 3 Sumr: 9

Support: ☒ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title: Harbor Seal Research

Source of Support: Congressional Appropriation

Total Award Amount: $ 976,777 Total Award Period Covered: July 1, 2004-Sept 30, 2005

Location of Project: ASLC, some field work in Prince William Sound & Glacier Bay

Months of Your Time Committed to the Project: FY05: 6 FY 06: 6 FY 07. 6 Sumr: 18

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support

Total Award Amount:

Location of Project:

Months of Your Time Committed to the Project. FY05 FY 06 FY 07 Sumr:

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*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period.

(USE ADDITIONAL SHEETS AS NECESSARY)

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator: Shannon K. Atkinson, Ph.D.	Other agencies to which this proposal has been/will be submitted:

Support: ☒ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title: Alaska SeaLife Center Steller Sea Lion Research Program

Source of Support: NOAA/National Marine Fisheries Service

Total Award Amount: $4,637,588 Total Award Period Covered: 07/01/03 – 06/30/05 FY04 pending

Location of Project: Seward, Alaska

Months of Your Time Committed to the Project: FY05: 0 FY 06: 0 FY 07: 0 Sumr: 0

Support: ☒ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title: Alaska SeaLife Center Eider Research Program

Source of Support: US Fish & Wildlife Service

Total Award Amount: $872,495 Total Award Period Covered: 07/01/03 – 06/30/08 FY04 pending

Location of Project: Seward, Alaska

Months of Your Time Committed to the Project: FY05: 0 FY 06: 0 FY 07: 0 Sumr: 0

Support: ☒ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title: Alaska SeaLife Center Sea Otter Research Program

Source of Support: US Fish & Wildlife Service

Total Award Amount: $685,515 Total Award Period Covered: 07/01/03 – 06/30/08 FY04 pending

Location of Project: Seward, Alaska

Months of Your Time Committed to the Project: FY05: 0 FY 06: 0 FY 07: 0 Sumr: 0

Support: ☒ Current ☒ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title: Alaska SeaLife Center Harbor Seal Research Program

Source of Support: NOAA/National Marine Fisheries Service

Total Award Amount: $310,822 Total Award Period Covered: 07/01/03 – 06/30/04 FY04 pending

Location of Project: Seward, Alaska

Months of Your Time Committed to the Project: FY05: 0 FY 06: 0 FY 07: 0 Sumr: 0

*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period.

(USE ADDITIONAL SHEETS AS NECESSARY)

CURRENT AND PENDING SUPPORT FORM

The following information must be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator: Shannon K. Atkinson, Ph.D.	Other agencies to which this proposal has been/will be submitted:

Support: ☒ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title: Improved rehabilitation techniques through monitoring of nutrition and growth rates in free-ranging and rehabilitated harbor seal pups

Source of Support: NOAA/National Marine Fisheries Service Prescott Award

Total Award Amount: $100,00 Total Award Period Covered: 03/01/03 – 09/29/04

Location of Project: Seward, Alaska

Months of Your Time Committed to the Project: FY05: 1 FY 06: 0 FY 07: 0 Sumr: 0

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:

Total Award Amount: $ Total Award Period Covered:

Location of Project:

Months of Your Time Committed to the Project: FY05 FY 06 FY 07 Sumr:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:

Total Award Amount: $ Total Award Period Covered:

Location of Project:

Months of Your Time Committed to the Project: FY05 FY 06 FY 07 Sumr:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:

Total Award Amount: $ Total Award Period Covered:

Location of Project:

Months of Your Time Committed to the Project: FY05 FY 06 FY 07 Sumr:

*If this project has previously been funded by another entity, please list and furnish information for immediately preceding funding period.

(USE ADDITIONAL SHEETS AS NECESSARY)

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, Alaska 99501-2340 • 907/278-8012 • fax 907/276-7178

Memorandum

To: Trustee Council

Thru: Gail Phillips
Executive Director

From: Paula Banks
Administrative Manager

Date: November 10, 2004

Re: Move previously approved travel funds from ADEC to ADFG

The Trustee Council met on August 23rd, 2004 and approved travel funds for the Trustee Agencies. The Alaska Department of Environmental Conservation was allocated $4.9 for EVOS related travel ($4.5 direct and $.4 General Administration). It has been brought to our attention that DEC does not have EVOS spending authority for FY 05 therefore can not spend the travel monies allocated to them. I have spoken with ADFG administrators and it has been recommended to me that the funds be re-allocated to ADFG and a Reimbursable Spending Agreement be established to cover ADEC EVOS related travel. This would require Trustee Council's approval through a motion. It has also been recommended to ADEC to obtain EVOS spending authority for travel expenses in FY 2006 and future years.

Motion: Trustee Council approves a motion to move DEC project 050100 (travel) authority ($4500 direct + 400 GA) to ADFG.

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, Alaska 99501-2340 • 907/278-8012 • fax 907/276-7178

To: Gail Phillips, Executive Director

From: Paula Banks, Administrative Manager

Date: August 31, 2004

Re: Budget amendments for project 050100, 050550, 050455, 050630

There has been an increase in employer costs that were not known at the time the budgets were approved and were not calculated into the initial budget submitted and approved by the council on August 23, 2004. This increase has resulted in an increase cost in personnel and has affected the following budgets.

Project	Employee	Out side Federal contributions (NOS Grant)	Individual Personnel Cost	Total authorized August 23, 2004	Total budget amendment
11950550	Holba, Carrie		93,565.75	90,000.00	3,565.75
	Project Total 050550		**93,565.75**		**3,565.75**
11950630	Dworsky, Richard	57600	49,593.00	45,100.00	4,493.00
11950630	Hall, Brenda		59,745.61	57,600.00	2,145.61
11950630	Vacant/Intern Partime		6,968.70	6,800.00	168.70
	Project Total 050630		**116,307.31**		**6,807.31**
11951000	Phillips, Gail		144,841.29	142,800.00	2,041.29
11951000	Womac, Cherri	49500	23,035.98	20,010.00	3,025.98
11951000	Goodrich, Elizabeth		43,179.65	42,000.00	1,179.65
11951000	Mundy,Phil		144,351.72	138,000.00	6,351.72
	Project Total 050100		**355,408.63**		**12,598.63**
11954550	Schlei, Michael	52200	14,253.50	16,200.00	(1,946.50)
11954550	Bochenek, Rob		91,924.02	87,600.00	4,324.02
	Project Total 050455		**106,177.53**		**2,377.53**
	TOTAL EVOS PERSONNEL	**$ 159,300.00**	**671,459.22**	**646,110.00**	**25,349.22**

Please authorize additional personnel funds as outlined in the spreadsheet above.

STAC Changes 12/2/2004

From August to September, the STAC worked to revise the Policies and Procedures to conform more fully with the way in which they operate. The STAC description and responsibilities were somewhat vague when compared to how the STAC operated. The new re-write includes clearer language that explains how the STAC will systematically consider all of the proposals, have access to proposal peer reviews, apply standard criteria to proposal review, review the budgets and compare budgets with available funds, rank the annual proposals, and provide the resulting recommendations to the executive director."

The STAC reviewers included: Stephen R. Braund; Thomas C. Royer; Phil Mundy; Brenda L. Norcross; Leslie Holland-Bartels; Charlie Miller; Ronald O'Dor and Dick Dworsky and after the proposed changes were made the completed proposal was sent to the Liaisons and the STAC for review.

Motion to accept recommended revisions to the Scientific and Technical Advisory Committee section of the *Exxon Valdez* Oil Spill Trustee Council's Policies and Procedures.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL GULF OF ALASKA ECOSYSTEM MONITORING AND RESEARCH PROGRAM PROCESS FOR PROVIDING SCIENTIFIC AND TECHNICAL ADVICE AND PEER REVIEW

I. DESCRIPTION OF PROCESS FOR SCIENTIFIC ADVICE

The GEM Program is a long-term monitoring and research program, responsive to the needs of resource management agencies, stakeholders and the public, consistent with the program's mission and goals, and held to a high standard of scientific excellence. The process for providing scientific and technical advice includes 1) advice on the program as a whole; 2) advice at the individual project level; and 3) peer review of all proposals and reports.

The GEM scientific advice process builds upon the Trustee Council's successful record of 13 years of peer-reviewed science. This process will be implemented by staff to the *Exxon Valdez* Oil Spill Trustee Council; a committee structure consisting of a Scientific and Technical Advisory Committee (STAC) and related subcommittees and work groups; and a periodically convened independent review committee (see Figure 6.1 below). Programmatic and technical review largely will be separated. This process will be reviewed and refined over time, as experience with program implementation permits better understanding of the Trustee Council's needs for scientific advice under GEM.

In addition to scientific advice provided by the proposed STAC and subcommittees, the Trustee Council also relies on advice from the Program Advisory Committee, other members of the public, and trustee agency staff. The Executive Director is expected to take this broad spectrum of advice into account when resolving conflicting issues and developing recommendations for Trustee Council consideration.

A. Staff

Since the Trustee Council receives information and guidance from a number of sources, the Council relies on its Executive Director to ensure that all advice and reviews are organized and summarized to assist the Council's decision-making. The Executive Director reports directly to the Trustee Council and has the ultimate responsibility for implementing all the Trustee Council's programs, policies and procedures.

The Executive Director will be assisted by a Science Director and other staff.

The Science Director will assist the Executive Director by 1) providing scientific leadership for the GEM Program; 2) serving as GEM's primary scientific spokesperson and a non-voting permanent co-chair of the STAC; and 3); ensuring that the GEM Program is implemented with a high standard of scientific excellence. This role is expected to adapt to the changing needs of the growing GEM program.

The Science Coordinator primary responsibility will be the coordination of science program, time frames, processes, reports and peer review of specific projects and

Deleted: Senior Science Advisor for Oil Spill Effects,

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Deleted: The Senior Science Advisor for Oil Spill Effects will provide advice on direct oil-spill¶

Deleted: coordinating the scientific¶ committee structure

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proposals. The Science Coordinator will ensure consistency in work and will assist the Science Director and Executive Director as needed

Additionally, a Senior Science Advisor for Oil Spill Effects will provide advice on direct oil-spill related injury and recovery, including peer review of related project proposals and reports. This position will chair the Oil Effects Subcommittee and report the committee's recommendations to the STAC.
Adopted 2-25-02 STAC Process XI-2

B. Committee Structure

Scientific and Technical Advisory Committee (STAC). The STAC is a standing committee that is expected to provide the primary scientific advice to the Executive Director on how well the collection of proposed monitoring and research projects (the Work Plan) and the overall GEM Program meet the mission and goals of the Trustee Council (GEM Program Document Vol. I, Chapter 1) and test the adequacy of the GEM conceptual foundation (see Figure 4.3). As needed and appropriate, the STAC may participate in and/or lead the peer review process of proposals and project reports.

Subcommittees. The subcommittees are standing committees organized to address the "nuts and bolts" of developing and implementing projects responsive to the Council's needs, coordinating among scientists and other interested parties, and helping to organize technical peer review of individual proposals.

Work groups. *Ad hoc* work groups are subcommittees temporarily formed to address specific issues. They have a specific purpose and a limited duration.

C. External Review Committee
Periodically (every five to ten years), the Trustee Council will contract with an external entity, such as the National Research Council, to review the entire GEM Program.

II. ESTABLISHING AND MAINTAINING COMMITTEE STRUCTURE

A. Scientific and Technical Advisory Committee (STAC) Responsibilities
1. The STAC shall meet as often as needed to provide to the Executive Director broad programmatic advice and guidance on the GEM Work Plan with respect to the GEM Program's mission, goals, conceptual foundation, central hypotheses and questions.
2. The STAC shall recommend to the Executive Director projects for the GEM Work Plan best suited to the mission, goals, conceptual foundation, and central hypothesis. A written record of these recommendations shall be presented to the Program Advisory Committee (PAC) and to the Trustee Council.
Adopted 2-25-02 STAC Process XI-3
3. The STAC co-chairs shall brief the PAC and the Council once a year on the state of the GEM program and on other occasions at the request of the Trustee Council, the Executive Director, or the STAC.
4. The STAC, in conjunction with the subcommittees, shall provide leadership in

identifying and developing testable hypotheses relevant to the conceptual foundation and central questions of the GEM Strategic Plan, consistent with the GEM Program's mission and goals and the policies of the Trustee Council.
5. The STAC, using recommendations provided by the subcommittees and other means, shall identify and recommend syntheses, models, process studies, and other research activities for the Invitation to Submit Proposals.
6. The STAC shall meet with subcommittee chairs as needed.
7. The STAC shall select the subcommittee members, following a process approved by the Trustee Council. The STAC shall receive reports and briefings from the subcommittee chairs as needed.
8. The STAC shall assist Trustee Council staff in identifying peer reviewers, and may, upon request, conduct peer review on individual responses to the Invitation for Proposals and project reports.
9. Subject to funding restrictions and in consultation with the Executive Director, the STAC may convene special review panels or work groups to evaluate and make recommendations about aspects of the GEM program, or to meet with project investigators and others to fully explore particular projects or issues.

Membership

1. The STAC shall have seven members: six voting members appointed by the Trustee Council with the advice of the independent nominating committee and the Trustee Council's GEM Science Director as the seventh member who serves as permanent non-voting co-chair.
2. The STAC members shall be drawn from the scientific sectors of academic, government, NGO, and private institutions. Together the members shall possess expertise in the habitats, species and environments of the Alaska Coastal Current and offshore, the intertidal and subtidal (nearshore), the watersheds, modeling, resource management, human activities and their potential ecological impacts, and community-based science programs.
3. The STAC members shall be selected for their expertise, broad perspective, long experience and leadership in areas important to the GEM Program.
4. STAC members cannot be principal investigators for presently funded or ongoing GEM projects.
5. The STAC members shall serve terms of four years, renewable once at the option of the Trustee Council, except during the first two years of the program when three members shall serve initial terms of two years, renewable for a full four year term. All renewals for a second term are at the option of the Trustee Council.
6. After serving on the STAC, a person is not eligible to serve again on the STAC for two years, with the exception of a person who was appointed from the list of alternates to complete a partial term. A person appointed as an alternate is eligible to be nominated to an open membership slot to serve a full term, and may, if serving less

than two years and at the discretion of the Trustee Council, also be eligible for renewal.
7. In the event of a vacancy prior to the end of a term, the Trustee Council shall appoint a replacement from among the list of alternates. Inactive members may be removed by the Trustee Council from the STAC membership.

Rules of Procedure

1. The STAC shall elect a co-chair by majority vote at least once every two years. The Science Director shall serve as the other co-chair.
2. Matters that cannot be resolved by consensus shall be decided by four affirmative votes of the STAC membership.
3. The STAC shall develop procedures for interfacing with the subcommittees, work groups and the Program Advisory Committee.

B. Subcommittees

Responsibilities

1. Subcommittees shall provide guidance within each habitat type to the STAC and to the Trustee Council staff regarding testable hypotheses and other topics for consideration in future Invitations to Submit Proposals.
2. Subcommittees shall identify implementation strategies and possible locations for measuring monitoring variables that are relevant to the key questions and testable hypotheses.
3. Subcommittees shall, upon request, help organize the peer review on proposals and project reports in their broad habitat types, including recommending appropriate peer reviewers.
4. Initially, the subcommittees shall be organized along the lines of the four primary habitat types: offshore, Alaska Coastal Current, nearshore and watersheds, with additional subcommittees for oil effects and data management. The subcommittee structure may change following further review and discussion (and pending final NRC review).
5. Subject to funding restrictions, subcommittees may convene special review panels from time to time to evaluate and make recommendations about aspects of the GEM program. At other times, special panels may meet with project investigators and others to fully explore particular topics, problems, or projects.
6. A subcommittee may notify the STAC when it encounters the need for a work group.

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Membership

1. Subcommittees are composed of at least 5 and not more than 8 individuals: scientists, resource managers, and/or other experts selected by the STAC primarily for their disciplinary expertise and familiarity with a broad habitat type (watersheds, intertidal and subtidal, ACC, or offshore). Other criteria include institutional and professional affiliations in order to promote collaboration and cooperation.

2. Subcommittee members serve three year renewable terms.
3. Subcommittee members may include principal investigators of GEM projects.
4. Nominees who agreed to serve, but were not selected by the STAC, may serve as peer reviewers and recommend peer reviewers, and are automatically considered as nominees to fill vacancies on subcommittees.

Rules of Procedure

1. Subcommittees shall elect their own chairs, usually in a person's third year on the committee.

2. Matters that cannot be resolved by consensus shall be decided by majority vote of the membership.

C. Work Groups

Responsibilities

1. Work Groups shall recommend to the STAC or a subcommittee courses of action on the task for which the work group has been established. Tasks may include developing strategies to implement specific monitoring and research goals.
2. Work Groups may help organize the peer review on proposals submitted to address the task for which the work group has been established.

Membership

1. Any number of individuals may be appointed to work groups established by the Executive Director at the request of the STAC. Expertise will depend on the issue to be addressed.
2. Members are approved by the Executive Director from nominees submitted by the STAC or subcommittee that identified the need for the work group.
3. Work groups are expected to be issue specific and of a limited duration specified by the Executive Director at its inception.

Rules of Procedure

1. Work groups shall elect a chair by majority vote.
2. Matters that cannot be resolved by consensus shall be decided by majority vote of the membership.

III. SELECTING COMMITTEE MEMBERS

A. Selection Process for STAC

1. The Executive Director shall issue a public call for nominations to serve on the STAC. The call will identify the types of expertise and the qualifications the Trustee

Council desires to see for the nominees. Any person (including oneself) or organization is free to make a nomination.
2. Those nominating a person – or the person being nominated -- will be asked to submit a one-page synopsis of the nominee's qualifications to the Executive Director.
3. At the request of the Executive Director, a Nominating Committee will convene to develop a recommended list of persons fitting STAC membership criteria. The Nominating Committee shall recommend to the Executive Director a nominee for each vacant seat on the STAC, after determining that each is willing to serve on the STAC. Remaining nominees who are willing to serve may become alternates. The list of nominees and alternates shall be forwarded to the Trustee Council by the Executive Director.
4. The Nominating Committee may suggest names of persons not nominated if there are gaps in desired expertise among the nominees provided to it by the process (i.e., nominating committee members may also make their own nominations).

STAC Nominating Committee Responsibilities

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1. The STAC Nominating Committee shall review nominations for the STAC; if necessary, it may solicit additional nominations at its discretion.
2. The nominating committee shall provide the Executive Director a list of preferred and alternate nominees for appointment to the STAC.
3. The Nominating Committee chair shall brief the Trustee Council on its recommendations.

Membership

1. The STAC Nominating Committee shall be composed of seven members who are familiar with the development and operation of regional monitoring programs similar to GEM.
2. Nominating Committee members may not currently be receiving funding from the Trustee Council, nor may they be closely associated with, or dependent on, those who are funded by the Trustee Council. For example, the Nominating Committee members may not be funded investigators within the EVOS/GEM program, nor may nominating committee members be the immediate supervisors or supervisees of currently funded investigators, or members of their immediate family.
3. At least five Nominating Committee members shall reside in Alaska. STAC nominees and current STAC members may not serve on the Nominating Committee.
4. Nominating Committee members shall be selected by the Executive Director in consultation with the Trustee Council. The Executive Director shall also determine the life of the Nominating Committee.

Adopted 2-25-02 STAC Process XI-7

Rules of Procedure

1. The Nominating Committee shall elect a chairperson by majority vote to conduct the meetings.
2. The Nominating Committee shall establish a schedule and a process for developing a recommended list of nominees for the STAC that is consistent with applicable state and federal statutes, particularly with regard to Equal Employment Opportunity principles and diversity considerations.
3. The Executive Director shall provide assistance as requested by the Nominating Committee chair.

B. Selection Process for Subcommittee Members

1. The Executive Director shall issue public calls for nominations to the subcommittees. The announcements shall list desirable qualifications and other nominating criteria.
2. The STAC shall review the nominees and make recommendations to the Trustee Council for approval.

C. Selection Process for Work Group Members

1. The Executive Director shall approve work group members upon the recommendation of the STAC and/or subcommittees.

IV. PEER REVIEW

Deleted: Each project proposal, as well as some annua l and all final reports, will be peer-reviewed¶

Figures follow on two pages

Adopted 2-25-02 STAC Process XI-9

Figure 4.3 Selecting monitoring elements starts with the mission and goals established by the Trustee Council, as expressed in the conceptual foundation, which is regularly updated by new information from a variety of sources. GEM Program Document, Vol. I, Chapter 4, page 38.

Adopted 2-25-02 STAC Process XI-10

Figure 6.1. The organizational elements involved in GEM implementation. Modified in response to comments from the NRC, after GEM Program Document, Vol. I, Chapter 6, page 66.

PROCESS FOR PROVIDING SCIENTIFIC AND TECHNICAL ADVICE AND PEER REVIEW

IV. Peer Review Process and Procedures

Each project proposal, as well as some annual and all final reports, will be peer-reviewed by appropriate experts who are not competing for funding from the GEM program in the same competition and, in general, also are not conducting projects funded by the Trustee Council. The external peer review process will provide a rigorous critique of the scientific merits of proposals and reports. The goals of the review process are to ensure that studies sponsored by the Trustee Council:
1) Adhere to a high standard of scientific excellence;
2) Have scientific objectives that are relevant and consistent with the GEM Program's conceptual foundation, central questions, and testable hypotheses; and
3) Use valid methods that will allow them to achieve these objectives.

The peer review may be either paid or volunteer, or some combination, whichever is most expeditious and appropriate. Reviews and recommendations shall be documented in writing.

The STAC or subcommittees may convene work groups from time to time to evaluate and make recommendations about aspects of the GEM program. These may include special peer review panels that would meet with project investigators and others to fully explore particular topics, problems, or projects.

A. Overview of Review Procedures.
The review procedure starts with the reviewers. Thus, the first priority in choosing reviewers should be to engage the most competent scientists and where all scientific peer review is based upon an assumption of integrity. While peer review should be insulated

from politics as much as possible, the Trustee Council recognizes that even the best scientific peer review cannot give policy makers the 'right' answer.

Scientific peer review must maintain programmatic flexibility while efforts to revise any of the process of peer review should acknowledge the differences in professional culture that often divide scientists, policy makers, and the public and treat documentation of proposals and studies in this light of these differences.

B. EVOS Operating Procedures for STAC Peer Review

Identify Priorities and Previous Year Invitations

Priorities for funding are the responsibility of the Science director, the Executive Director and lastly the Trustee Council. These priorities will be discussed at the proposal review meeting. Prior to the STAC meeting the invitation and the areas for high priority funding will be sent out to the STAC. Within these confines and with the assistance of EVOS staff, the STAC will evaluate how the proposal will contribute to the six implementation goals and strategies of the TC and how the proposal meet the five major program goals of GEM.

The history of the proposal or project, if it has one, will be made available to STAC by the staff. This history, including annual and final reports on topics/continuations of projects that have been previously funded for same PIs., can help evaluate the activities of the proposer and their willingness to respond to reviewer's and STAC's recommendations.

Identify Funding Limits and Budget Limitations

In order for proposers to submit adequate justifications, the EVOS budget form shall be redesigned to require explicit details that are required by reviewers. The Budget Justification should include details for each budget item, e.g., personnel - persons, responsibilities, time required and amount requested; commodities - what and why; equipment - what and why; travel - who, where, why, and all contractual obligations.

Prepare Invitation

The EVOS staff will prepare the annual information book along with funding and technical priorities.

C. STAC Operating Procedures

Meetings

Regarding the annual STAC proposal review meeting, approximately 2 ½ days will be required to review the proposals, discuss the priorities for the next round of proposals and take care of other STAC business. Proposals reviews should be closed meetings, i.e., only STAC members allowed. This is legal under Alaska law and is standard procedure for other agencies such as NSF.

A Defined Review Process

The responsibility of the primary reviewer is to write a paragraph which serves as the STAC's "straw man" recommendation that can be edited into a final recommendation at the June 2004 meeting. Secondary and other reviewers are encouraged to write a paragraph. A narrative supporting the paragraph is also a good idea, as it helps one to remember the specifics that went into crafting the paragraph.

Prepare Structured Rational for Proposals

The defined review paragraph should state clearly why the project should or should not be funded. The primary responsibility of the STAC is not nuts and bolts review of technical competency, although review of this part could be undertaken where necessary and appropriate. The STAC items that should be addressed are:

1. Responsiveness of the proposal to the invitation
2. The extent to which the proposal will contribute to meeting the GEM five major program's goals, hypotheses and questions
3. How the proposal will contribute to meeting the six implementation goals and strategies of the Council (e.g., promoting community involvement, developing resource management applications, and leveraging funds from other sources.
4. Relevance to a particular item in the Science Plan, such as a gap identified
5. Technical merit (after STAC review of technical reviews)
8. Budgetary or fiscal concerns
9. Concerns about qualifications or past performance of project personnel, or any other specific you find important in making the recommendation.

Not all items would be addressed in every case. For example, in the case of technically flawed proposals, that may be all that needs to be said. The paragraph should be no longer than necessary, but the draft should err on the side of completeness where it can always be edited to a shorter version.

The STAC will systematically consider all of the proposals, have access to proposal peer reviews, apply standard criteria to proposal review, review the budgets and compare budgets with available funds, rank the annual proposals, and provide the resulting recommendations to the executive director.

Prepare Review comments

A paragraph or two will be prepared by each proposal submitter that condenses the project presented to the STAC, which includes reasoning and justification, is a starting plan for a STAC discussion.

A STAC member can review and verify the summaries and add, if needed, other (1) rationale - not for public consumption, and (2) draft STAC recommendation. The funding recommendations that are sent out for public comment and will not have STAC reviewers names attached.

Voting Members

The presence of at least five of the six voting members is needed for the review meeting. In limited cases one of those five could be hooked by teleconference.

Identify priority for proposals

The STAC will systematically consider all of the proposals, have access to proposal peer reviews, apply standard criteria to proposal review, review the budgets and compare budgets with available funds, rank the annual proposals, and provide the resulting recommendations to the executive director.

D. Review and Conclusion

The STAC will be notifies as to the disposition of the review and actions taken by the staff.

Formatted: Bullets and Numbering

Gail Phillips

From: Phil Mundy [phil_mundy@evostc.state.ak.us]

Sent: Friday, December 03, 2004 4:45 PM

To: Tony DeGange; Brett Huber; Cam Toohey; Carol Fries; Dede Bohn; Larry Dietrick; Michael Baffrey; Peter Hagen, Robert D. Mecum; Ron Klein; Steve Zemke

Cc: Kurt Fredriksson; Drue Pearce; James Balsiger; Joe Meade; Kevin Duffy; Gregg Renkes; Rob Bochenek; richard_dworsky@evostc.state.ak.us; brenda_ramos@evostc.state.ak.us; Cherri Womac; Elizabeth Goodrich; Holba, Carrie; Michael Schlei; Paula Banks; Phillips Gail

Subject: Work Group Process

Dear Liaisons:

I have heard from a number of you that there are questions about the process for selecting members of the work groups. I believe that there may be some misunderstanding of why we followed the procedures we used, so I am writing to explain that. I have written a "how it is supposed to work" explanation of the procedures for selecting work groups below. But first I would like to explain why we haven't had problems setting up work groups in the past.

In past practice the staff has worked with each Trustee agency to address any concerns about the composition of committees or work groups. All any liaison or Trustee has to do to have a voice in the membership of the work groups is to call us. As it now stands the Council has placed the selection of work groups in the hands of the Executive Director. The Trustees may choose to amend the policies and procedures manual on how work groups are selected, however any amended process would necessarily be written to be consistent with other policies and procedures adopted by the Council. In any event, I do not think it would be appropriate for the Trustees to address the issue of who serves on a work group on the public record. Here is how the current procedure works.

Procedures for selecting work groups

According to the procedures adopted by the Council, the membership of each work group is at the discretion of the Executive Director, subject to advice from the STAC which includes the Science Director. Agency personnel may be invited to participate based on past experience and disciplinary expertise. When an agency declines to permit an individual's participation, the Executive Director would then invite someone else with similar expertise to fill that need on the work group. Since the objective is to form a work group with expertise appropriate to the task at hand, the replacement selected would not necessarily be from the same agency or from a Trustee Council agency.

The Trustee Council adopted this procedure for seating work groups

for a number of reasons. The first is financial control; work group members get travel support, so the Executive Director needs the authority to control the number of members to keep within budget. The second is the Executive Director's responsibility to implement the Council's policy on public participation that requires that Restoration include meaningful public participation at all levels of the program. Public participation is insured in the work group process by including appropriate expertise from universities, private firms, NGO's, and the public at large, in addition to agency scientists. Public participation is further insured by seeing that the public and particularly the members of Public Advisory Committee are informed about the activities of the work groups and their work products periodically during the life of each work group. The third is the Executive Director's responsibility to protect the integrity of the Council's independent scientific review process by insuring that the composition of the work group is not dominated by any particular institution, and that its composition represents the appropriate balance of necessary expertise, without regard to institutional representation. The fourth is that the Trustees in the past have not wanted to be seen as prescribing or otherwise manipulating the kinds of scientific advice that comes to them through the scientific review process.

If there are questions, please give me a call.

Phillip R. Mundy, Ph.D., Science Director
Gulf of Alaska Ecosystem Monitoring and Research Program
Exxon Valdez Oil Spill Trustee Council
441 West 5th Avenue Suite 500
Anchorage, AK 99501-2340
907-278-8012
907-276-7178 fax

Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, Alaska 99501-2340 • 907/278-8012 • fax 907/276-7178

MEMORANDUM

TO: Trustee Council Members

FROM: Gail Phillips, Executive Director
Phil Mundy, Science Director

DATE: December 2, 2003

RE: Changes to the Policies and Procedures: Annual and Final report due dates

Currently section *V. Reports Procedures* in the *Exxon Valdez Oil Spill Trustee Councils Policies and Procedures* handbook requires the PI to submit an Annual Report for approval by September 1 of each fiscal year for which a project receives funding, with the exception of the final funding year in which a Final Report shall be prepared. Not having a concluding project submit an Annual report means that the EVOS office will not have information on the project for the public until the following spring, when the Final Report is due. We are asking Council approval to amend the policies and procedures to require all projects, terminating and continuing, to submit an Annual report by August 15. Changing the date from September 1 to August 15 would give the staff more time to review, approve and make available to the public all Annual reports.

Also in the Policies and Procedures handbook, all Final Reports for peer review are due by April 15 of the year following the fiscal year in which each project is complete, unless a different date is specified in the approved proposal contract. Having both Final Reports and proposals in response to our yearly Invitation due on the same date (April 15) puts too much work load on staff. We request that the due date for all Final Reports be changed from April 15 to January 5 of the year following the fiscal year in which the project was funded, unless a different date is specified in the approved proposal contract. Having Final Reports due on January 5 would make it possible for EVOS staff to have this information available for the public at our annual meeting.

The draft Sea Grant book in now available on the EVOS web site.

Following is the link to the GEM Science Book being edited and published by UAA Sea Grant Program. Please note it is a DRAFT and not to be reproduced or cited without permission of the EVOS TC Science Director.

Go to: http://www.evostc.state.ak.us/gem/documents.html. On this page, each chapter has a separate hyperlink.

December 9, 2004

TO: Trustee Council
FROM: Phil Mundy, Science Director PWM
CC: Gail Phillips, Executive Director

RE: Spies project (nn0600) ECOSYSTEM CHANGE IN THE NORTHERN GULF OF ALASKA , A Scientific Synthesis Following the *Exxon-Valdez* Oil Spill

In response to questions from Trustee Drue Pearce I have reviewed the text on the web site that is being used by the authors of the book to exchange chapters. There are approximately 246 pages in the manuscript (122,930 words @ 500 words per page). The actual number of pages in the book will depend on the format in which it is printed. The status of each chapter is given below.

Updated: December 9, 2004

READY means that the chapter is ready to go to external peer review

NOT READY means the chapter has one or more incomplete sections as called for in the outline.

I. INTRODUCTION - READY
II. ECOSYSTEM STRUCTURE - READY
III. AGENTS OF ECOSYSTEM CHANGE - NOT READY
IV. LONG TERM CHANGE IN THE GOA NOT READY
V. THE EXXON VALDEZ OIL SPILL - READY
VI. DISCUSSION - NOT READY
VII. IMPLICATIONS OF ECOSYSTEM CHANGE - NOT READY

There are ten sections from the incomplete chapters that are in various stages of writing. The sections that are incomplete are listed in the first attachment.

Here are some key points

1. The draft provided for review is Chapter 5, however it was written to be viewed within the context of the other chapters. I earlier had the incorrect impression that the review draft was drawn from different parts of the book, but the outline has apparently changed. This draft will be revised in response to peer review comments.

2. The chapter on the effects of oiling was not required by the original contract to be submitted separately. This draft was submitted in order to receive an extension on the contract deadline.

3. Although the book will contribute to resolution of the oil-injured resources list to the extent that scientific findings permit, resolution of the oil injured resources list was not its primary purpose. Its primary purpose was to put the findings of the Restoration Program into an ecosystem context as envisioned by the 1994 Restoration Plan and the policies adopted by the Council from the 1994 Record of Decision of the Environmental Impact Statement on Restoration Plan. In the words of the original proposal,

> **The effort being proposed is a synthesis of the main scientific findings from the EVOS Restoration Program, with an emphasis on what new has been learned about the affected ecosystem, particularly the variability in this ecosystem in response to the spill and to natural factors. It will be based mainly on the products of the scientific studies following the spill and will cover the period of 1989 to 2001, with reference of course to literature covering earlier ecosystem responses and significant findings from non-EVOSTC studies. Publications, final reports and data will be evaluated to determine what can be learned about human and natural forcing factors in the spill area ecosystem.** (Spies proposal language page 2, nn0600)

The product was designed to support implementation of the GEM Program by putting the work from the Restoration Program into an environmental context.

4. The book is about nine months behind schedule, with the book expected to go to the publisher in summer 2005. Here is the original schedule as it stood in April 2002.

July 2002	Preliminary chapter outlines completed and list of references assembled
August 2002	Book outline finalized
September 2002	First drafts of chapters initiated
November 2002	Negotiations with a publisher completed
February 2003	Second meeting of synthesis team for integration
June 2003	Rough drafts of all chapters due
August 2003	Completion of internal reviews of chapter rough drafts
September 2003	Chapter reviews redistributed to authors with recommendations for revision
December 2004	Multimedia presentation completed
March 2004	Revised chapters due from authors
April 2004	Start of external review of chapters
June 2004	External chapter reviews due, distribute to authors
August 2004	Final revised chapters due
September 2004	Send entire manuscript to publisher

5. This is a complex management task involving fifteen total authors. List of Authors: Spies, Cooney, Kruse, Rice, Springer, Weingartner, Rice, Carls, Short, Moles, Brown, Boeing, Martin, Duffy-Anderson, Piatt, Reno

Attachments (2):

Incomplete Sections and Authors as of 12/9/2004

Full outline of Spies Synthesis Book

Incomplete Sections and Authors as of 12/9/2004

– roman numeral is Chapter number

III.B.5. Disease *(Reno)*

IV.C.2. Herring *(Brown)* IV.C.4. Sea birds - murres, kittiwakes, puffins - combined discussion *(Springer)*

IV.D. Explaining Patterns of Change (Spies, Cooney, Weingartner, Kruse, Rice, Springer)

VI.A. How do anthropogenic and natural forcing affect the production of the marine ecosystem in the northern GOA?

VI.B. Modified or new ideas about how the system works to produce the long-term changes that have been observed – possibly a new conceptual model hypothesis or conjecture.

VI.C. What is the state of the ecosystem?

VII.A. Resource management *(Kruse)*

VII.B. Responding to pollution events *(Rice)*

VII.C. Agency and institutional governance *(Kruse)*

VII.D. Future research *(Spies)*

ECOSYSTEM CHANGE IN THE NORTHERN GULF OF ALASKA

A Scientific Synthesis Following the *Exxon-Valdez* Oil Spill

Core writing team: R.B. Spies (editor), R.T. Cooney, G.H. Kruse, S.D. Rice, A.M. Springer and T.J. Weingartner.

Condensed Outline V7.02

Updated: May 03, 2004

Italicized names in outline denote lead author(s).
* Asterisk indicates that the lead author will be assisted by external writers in specialized subsections.

I. INTRODUCTION *(Spies, Cooney)*

II. ECOSYSTEM STRUCTURE [including seasonal patterns]

II.A. Introduction *(Cooney, Weingartner)*

II.B. Climate and weather; physical oceanography; nutrient supply *(Weingartner)*

II.C. The marine production cycle; pelagic and benthic *(Cooney)*

II.D. Transfer of marine production through the food web; trophic structure for fish, birds and mammals *(Cooney)*

II.E. Strategies for survival

II.E.1. Introduction *(Springer)*

II.E.2. Strategies for survival: Pink salmon, herring and pollock *(Cooney*)*

II.E.3. Strategies for survival: Murres, kittiwakes and puffins *(Springer*)*

II.E.4. Strategies for survival: Steller sea lions, harbor seals and sea otters *(Springer*)*

II.E.5. Strategies for survival: Shrimp and crab *(Kruse)*

III. AGENTS OF ECOSYSTEM CHANGE

III.A. Introduction *(Spies)*

III.B. Forcing factors

III.B.1. Climate *(Weingartner)*

III.B.2. Geophysical *(Spies)*

III.B.3. Species interactions *(Kruse)*

III.B.4. Fishing, harvesting, predator control *(Kruse)*

III.B.5. Disease *(Spies*)*

III.B.6. Contaminants *(Rice*, Spies)*

IV. LONG TERM CHANGE IN THE GOA

IV.A. Introduction *(Spies)*

Ways of knowing , inductive vs. deductive reasoning , and determining cause and effect in marine ecosystems

IV.B. Climate, oceanography and plankton

IV.B.1. Long-term changes in the atmosphere and oceans *(Weingartner)*

IV.B.2. Long-term changes in plankton *(Cooney)*

IV.C. Higher trophic levels - Case Histories

IV.C.1. Pink salmon *(Cooney)*

IV.C.2. Herring *(Cooney*)*

IV.C.3. Pollock and ground fish *(Cooney*)*

IV.C.4. Sea birds - murres, kittiwakes, puffins - combined discussion *(Springer*)*

IV.C.5. Sea lions *(Springer*)*

IV.C.6. Harbor seals *(Springer*)*

IV.C.7. Sea otters *(Springer*)*

IV.C.8. Shrimp and crab *(Kruse)*

IV.D. Explaining Patterns of Change

Compare and contrast different patterns of change as presented in IV.B. and IV.C. Are there common patterns in the long-term records in IV.B and IV.C?. Analyses of large data sets indicate that there the northern GOA fluctuates differently from S.E. Alaska and the Bering Sea.

V. THE EXXON VALDEZ OIL SPILL *(Rice*, Spies*)*

V.A. Introduction *(Rice*)*

V.A.1. Overview

V.A.2. Pre-spill conditions

V.A.3. History of the spill

V.B. Oil fate: transport, weathering and persistence *(Short)*

V.B.1. Contaminants in Prince William Sound prior to the Exxon Valdez oil spill

V.B.2. Initial fate of the oil

V.B.3. Oil clean up efforts

V.B.4. Long-term persistence

V.B.5. Bioavailability of persistent oil

V.C. Biological effects

V.C.1. Acute effects

V.C.1.a. Introduction

V.C.1.b. Birds

V.C.1.c. Sea otters

V.C.1.d. Seals

V.C.1.e. Sea lions

V.C.1.f. Whales

V.C.2. Short-term effects

V.C.2.a. Pacific herring

V.C.2.b. Juvenile pink salmon

V.C.2.c. Intertidal communities

V.C.3. Long-term effects

V.C.3.a. Pink salmon eggs and embryos

V.C.3.b. Mussels and intertidal communities

V.C.3.c. Sea otters and harlequin ducks

V.D. Indirect effects and cascades - limpets and sea urchins

V.E. Discussion, oil spill

V.E.1. New findings in spill science

V.E.2. Lessons learned in the management of science.

VI. DISCUSSION *(All core authors)*

VI.A. How do anthropogenic and natural forcing affect the production of the marine ecosystem in the northern GOA?

VI.B. Modified or new ideas about how the system works to produce the long-term changes that have been observed – possibly a new conceptual model hypothesis or conjecture.

VI.C. What is the state of the ecosystem?

VII. IMPLICATIONS OF ECOSYSTEM CHANGE

VII.A. Resource management *(Kruse)*

VII.B. Responding to pollution events *(Rice)*

VII.C. Agency and institutional governance *(Kruse)*

VII.D. Future research *(Spies)*

Copies of this chapter were presented to you at the November meeting in Seattle.

-Draft –

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THE *EXXON VALDEZ* OIL SPILL: A SYNTHESIS EMPHASIZING LONG-TERM EFFECTS

Final Report
for the
Synthesis Project 00600, 2001-2004

September 2004

Prepared for...

The *Exxon Valdez* Oil Spill Trustee Council
441 West 5th Avenue, Suite 501
Anchorage, Alaska 99501

Prepared by:

APPLIED marine SCIENCES
4749 Bennett Drive, Suite L
Livermore, California 94551

-Draft –

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THE *EXXON VALDEZ* OIL SPILL: A SYNTHESIS EMPHASIZING LONG-TERM EFFECTS[a]

Robert B. Spies[1], Stanley D. Rice[2], Mark G. Carls[2], Jeffrey W. Short[2], and Adam Moles[2]

1. Applied Marine Sciences, P.O. Box 315, Little River, CA 95456
2. National Oceanographic and Atmospheric Administration, National Marine Fisheries Service, Auke Bay Laboratory, 11305 Glacier Highway, Auke Bay, Alaska 99801-8626

A Final Report for the Synthesis Project 00600, 2001-2004

Applied Marine Sciences
4749 Bennett Drive, Suite L
Livermore, California 94551

[a] This synthesis is based on Section V of a forthcoming book on long-term ecological change in the northern Gulf of Alaska. This report is provided to the *Exxon Valdez* Trustee Council as a final report for the synthesis, although the book will be the ultimate result of their sponsorship of the synthesis project. Because of editing and other considerations the contents of the book will likely differ from this report.

Table of Contents

December 9th, 2004

TO: Gail Phillips and the EVOS Trustee Council

FROM: Stacy Studebaker, EVOSTC PAC member

RE: The Trustee Council's decision (August 23rd, 2004 meeting) for funding the 2005-2007 GEM Workplan.

I have been a member of the EVOSTC Public Advisory Committee for the last eight years representing Recreational Users and the Kodiak Archipelago. I have a Masters degree in Science Teaching and recently retired from a long career of teaching high school science in Kodiak. I have been adjunct faculty of the Kodiak College since 1982 where I continue to teach.

During my tenure on the EVOS PAC, I have been involved in the development of the GEM Program from its very beginning. Institutional memory is one advantage I have, having served under two different executive directors, two governors, many different federal and state trustees, and two Department of the Interior Secretaries. I know and greatly appreciate the magnitude of the time, effort, scientific and public review, and public funds that have gone into the development of the Restoration Plan and the GEM Program as it stands today, ready to begin. If implemented the way it has been envisioned, the GEM Program stands to serve as a universal model for marine ecosystem monitoring.

But recently I became aware of a radical departure from the public process by which the funding decisions have been made for the Restoration Plan and for launching the GEM Program with the 2005-2007 GEM Workplan. Some recent actions by the Trustee Council at the August 23, 2004 meeting have drastically jeopardized the Restoration Plan and the GEM Program as planned, envisioned, published, and communicated to the public and scientific community.

I am here today to voice a number of my concerns and ask for some explanations, which I believe the TC owes the Public Advisory Committee, the Science and Technical Review Committee, the EVOSTC staff, the scientific community, and the general public.

To make sure that what I am saying today is accurate, I consulted the October 1994 Record of Decision for the Exxon Valdez Oil Spill Restoration Plan, otherwise known as the legal bible for this institution. If I am out of line, I'm sure that the esteemed Mr. Mutter will correct me.

PROCESS

It is my understanding from some people present at the August 23rd, 2004 TC meeting that the TC made funding decisions based on deliberations that took place behind closed doors and not in public. I believe this was a violation of process and procedures and would like you to give an explanation for why this occurred.

Another rather drastic deviation from past process is that the TC funded their own list of projects many of which were not recommended or even considered by the Science Director, The Science and Technical Advisory Committee or the Public Advisory Committee because they did not fit the criteria for the GEM Program.

Both committees had met previously to review, discuss, and make their recommendations based on the criteria established in the GEM Program.
This does not include the considerable time each individual took to read every proposal prior to the meetings. The PAC discussed the docket publicly, proposal by proposal, with the science director, and chairman of the STAC as we have done in most previous years. We rolled up our sleeves and took our task seriously to be sure

we were representing the injured resources and the public honorably while making our recommendations to launch the GEM Program that we have worked so hard on.

I really want to go on record here that I believe there has been a serious violation of policies and procedures.

At the August 23rd meeting, the Science Director had prepared a presentation to brief the TC on the 2005-2007 Workplan projects that were recommended for funding by the reviewers and committees. The TC did not want to see the presentation so the public never got to see what had been recommended through the established review process. Instead, after the closed door meeting, the TC presented their own list for funding. **I would like to know how and why you made the decisions you did? What was your rational for funding these projects? Project by project, we have to justify our decisions and recommendations so why don't you?**

Here are some other serious deviations from our recommendations and the established policies.

UNIVERSITY OF ALASKA PARTICIPATION

The University of Alaska has been a major traditional player in the research for the Restoration Plan and for planning and implementing the GEM Program. The TC chose not to fund any of their proposals many of which were recommended by the STAC, PAC and the Science Director. **How do you justify your decision and explain this to university scientists many of whom have been the core researchers of exemplary EVOS funded work?**

COMMUNITY INVOLVEMENT

Community monitoring and involvement has been identified as a major, central component of GEM. Considerable time and funds have been spent to establish this component of GEM. It has been recognized as an important way to compile more and extensive databases on the Gulf of Alaska. **Key projects that were identified, already ongoing, and recommended by the STAC and PAC were discarded by the TC. How do you justify this?**

MEANINGFUL PUBLIC PARTICIPATION

On page 7 of the Policies Common to All Action Alternatives in the 1994 Record of Decision Plan, it says, "Restoration must include meaningful public participation at all levels – planning, project design, implementation, and review. "

The key word in that sentence is "must". The TC actions that I have described above certainly negate the efforts of the public in this instance and are therefore legally questionable. **How can the PAC continue any meaningful participation in the process if their recommendations aren't considered in the TC decision-making?** I don't really think any of the PAC members want to go through the superficial motions at our meetings just to create an illusion of public process for the TC. We are far too busy and our time is far too valuable to waste.

Likewise, how can you expect the staff of this organization to answer to and work with the scientific community and public when the TC doesn't follow its own rules?

Do the Public Advisory Committee and the Science Technical Advisory Committee have a worthwhile future role in the public process of this organization?

It seems pretty clear that the integrity of this organization has been compromised by these recent actions. I don't know how we gain back the trust of the scientific community and the public. How can we repair the damage done to the GEM Program to get it back on track unless the TC funding decision for the 2005-2007 Workplan is withdrawn and we pretend like the August 23rd meeting never happened? You could admit your mistake and we could replay the August 23rd meeting the way it was supposed to happen. That would be the most honorable thing to do.

I greatly appreciate this opportunity and look forward to receiving your answers to my questions.

Sincerely,

Stacy Studebaker
P.O. Box 970
Kodiak, AK 99615

December 10th, 2004

TO: Gail Phillips and the EVOS Trustee Council

FROM: Stacy Studebaker, EVOSTC PAC member

RE: The Trustee Council's decision (August 23rd, 2004 meeting) for funding the 2005-2007 GEM Workplan.

I have been a member of the EVOSTC Public Advisory Committee for the last eight years representing Recreational Users and the Kodiak Archipelago. I have a Masters degree in Science Teaching and recently retired from a long career of teaching high school science in Kodiak. I have been adjunct faculty of the Kodiak College since 1982 where I continue to teach.

During my tenure on the EVOS PAC, I have been involved in the development of the GEM Program from its very beginning. Institutional memory is one advantage I have, having served under two different executive directors, two governors, many different federal and state trustees, and two Department of the Interior Secretaries. I know and greatly appreciate the magnitude of the time, effort, scientific and public review, and public funds that have gone into the development of the Restoration Plan and the GEM Program as it stands today, ready to begin. If implemented the way it has been envisioned, the GEM Program stands to serve as a universal model for marine ecosystem monitoring.

But recently I became aware of a radical departure from the public process by which the funding decisions have been made for the Restoration Plan and for launching the GEM Program with the 2005-2007 GEM Workplan. Some recent actions by the Trustee Council at the August 23, 2004 meeting have drastically jeopardized the Restoration Plan and the GEM Program as planned, envisioned, published, and communicated to the public and scientific community.

I am here today to voice a number of my concerns and ask for some explanations, which I believe the TC owes the Public Advisory Committee, the Science and Technical Review Committee, the EVOSTC staff, the scientific community, and the general public.

To make sure that what I am saying today is accurate, I consulted the October 1994 Record of Decision for the Exxon Valdez Oil Spill Restoration Plan, otherwise known as the legal bible for this institution. If I am out of line, I'm sure that the esteemed Mr. Mutter will correct me.

PROCESS

It is my understanding from some people present at the August 23rd, 2004 TC meeting that the TC made funding decisions based on deliberations that took place behind closed doors and not in public I believe this was a violation of process and procedures and would like you to give an explanation for why this occurred.

Another rather drastic deviation from past process is that the TC funded their own list of projects many of which were not recommended or even considered by the Science Director, The Science and Technical Advisory Committee or the Public Advisory Committee because they did not fit the criteria for the GEM Program.

Both committees had met previously to review, discuss, and make their recommendations based on the criteria established in the GEM Program.
This does not include the considerable time each individual took to read every proposal prior to the meetings. The PAC discussed the docket publicly, proposal by proposal, with the science director, and chairman of the STAC as we have done in most previous years. We rolled up our sleeves and took our task seriously to be sure

we were representing the injured resources and the public honorably while making our recommendations to launch the GEM Program that we have worked so hard on.

I really want to go on record here that I believe there has been a serious violation of policies and procedures.

At the August 23rd meeting, the Science Director had prepared a presentation to brief the TC on the 2005-2007 Workplan projects that were recommended for funding by the reviewers and committees. The TC did not want to see the presentation so the public never got to see what had been recommended through the established review process. Instead, after the closed door meeting, the TC presented their own list for funding. **I would like to know how and why you made the decisions you did? What was your rational for funding these projects? Project by project, we have to justify our decisions and recommendations so why don't you?**

Here are some other serious deviations from our recommendations and the established policies.

UNIVERSITY OF ALASKA PARTICIPATION

The University of Alaska has been a major traditional player in the research for the Restoration Plan and for planning and implementing the GEM Program. The TC chose not to fund any of their proposals many of which were recommended by the STAC, PAC and the Science Director. **How do you justify your decision and explain this to university scientists many of whom have been the core researchers of exemplary EVOS funded work?**

COMMUNITY INVOLVEMENT

Community monitoring and involvement has been identified as a major, central component of GEM. Considerable time and funds have been spent to establish this component of GEM. It has been recognized as an important way to compile more and extensive databases on the Gulf of Alaska. **Key projects that were identified, already ongoing, and recommended by the STAC and PAC were discarded by the TC. How do you justify this?**

MEANINGFUL PUBLIC PARTICIPATION

On page 7 of the Policies Common to All Action Alternatives in the 1994 Record of Decision Plan, it says, "Restoration must include meaningful public participation at all levels – planning, project design, implementation, and review. "

The key word in that sentence is "must". The TC actions that I have described above certainly negate the efforts of the public in this instance and are therefore legally questionable. **How can the PAC continue any meaningful participation in the process if their recommendations aren't considered in the TC decision-making?** I don't really think any of the PAC members want to go through the superficial motions at our meetings just to create an illusion of public process for the TC. We are far too busy and our time is far too valuable to waste.

Likewise, how can you expect the staff of this organization to answer to and work with the scientific community and public when the TC doesn't follow its own rules?

Do the Public Advisory Committee and the Science Technical Advisory Committee have a worthwhile future role in the public process of this organization?

It seems pretty clear that the integrity of this organization has been compromised by these recent actions. I don't know how we gain back the trust of the scientific community and the public. How can we repair the damage done to the GEM Program to get it back on track unless the TC funding decision for the 2005-2007 Workplan is withdrawn and we pretend like the August 23rd meeting never happened? You could admit your mistake and we could replay the August 23rd meeting the way it was supposed to happen. That would be the most honorable thing to do.

I greatly appreciate this opportunity and look forward to receiving your answers to my questions.

Sincerely,

Stacy Studebaker
P.O. Box 970
Kodiak, AK 99615

December 2, 2004

Gregg Renkes
Attorney General
State of Alaska

Kurt Fredriksson
Alaska Department of Environmental Conservation

Kevin Duffy
Commissioner
Alaska Department of Fish and Game

James W. Balsiger
Administrator, Alaska Region
National Marine Fisheries Service

Drue Pearce
Senior Advisor to the Secretary for Alaskan Affairs
U.S. Department of the Interior

Joe Mead
Forest Supervisor, U.S. Forest Service
U.S. Department of Agriculture

Attn: Gail Phillips, Executive Director
Exxon Valdez Oil Spill Trustee Council
441 West Fifth Avenue, Suite 500
Anchorage, AK 99501

Subject: Proposal by the City of Cordova Regarding the Cordova Center

Dear Members of the Exxon Valdez Oil Spill ("EVOS") Trustee Council:

On behalf of the City of Cordova, Alaska, I request that you favorably consider this proposal by our city for the use of some funding from Settlement and Consent Decree EVOS-related features of the Cordova Center in Cordova, Alaska.

Although you may have reviewed earlier drafts of our proposal, as you will see, we have amended our request to more clearly ensure the project's nexus to restoration of EVOS injured resources hurt by the spill and the related reduced or lost services, or human uses (commercial fishing, recreation and tourism, subsistence). We believe that this community economic restoration project falls within the goals and objectives for the use of funding available to the EVOS Trustee Council for "restoring . . . enhancing . . . the equivalent of natural resources injured . . . and the reduced or lost services provided by such resources . . . ."

The City has refined this project to ensure that the Cordova Center project correlates more clearly with the goals and objectives of the Restoration Plan prepared under the Civil Settlement and Consent Decree, Memorandum of Agreement, and the statutory authority provided in S. 711 enacted as part of P.L. 106-113. In the Committee Report accompanying S. 711 in the 106th Congress, the Senate Energy and Natural Resources Committee Chairman, Senator Frank Murkowski stated:

> "Speaking of the human element, I also hope this bill will lead to the Trustee Council placing a greater emphasis on economic development projects for the impacted communities as provided for in the legislation. It is for this reason that language

> [Section 1(e)(2)(C)] specifically authorizes **'community and economic restoration projects and facilities.'** [i]t is my intent that this provision include economic development projects such as the **Cordova Center** which is proposed by the people of the economic and emotional ground zero of the spill." (emphasis added).

More recently, Governor Frank Murkowski stated in his letter dated July 6, 2004 (Enclosure #2) that: "I am glad to see the community come together behind a project like the Cordova Center. This facility can serve as an economic, cultural, and quality-of-life stimulus for your community, which has struggled through so much in recent years . . . This . . . may be the perfect time to secure funding from the Exxon Valdez Oil Spill (EVOS) Trustee Council . . . I feel the trustees should begin re-focusing their efforts . . . to community and economic restoration projects and facilities . . ."

Over the past several years, through the assistance of Senator Ted Stevens and the other members of the Alaska Congressional Delegation, the Cordova Center has received start up funding assistance. The Delegation has also encouraged and supported the use of some EVOS funding to complement the federal and private funding for the project.

The spill's damage to Prince William Sound also injured Cordova's commercial fishing industry and tourism, both injured resources/services identified in the Council's Restoration Plan, in addition to other key aspects of its economy, social fabric, and its future. A part of the Cordova Center mission is committed to addressing and restoring those injured resources/services. Additionally, the Center's mission will include public education and outreach to disseminate lessons learned from the spill, to convey historically what occurred and, importantly, to encourage through oil spill displays, conferences, research carried out under the auspices of the Congressionally-mandated and authorized Oil Spill Recovery Institute located in Cordova and public education the research and development, spill prevention and oil spill response technology that have been put in place and are evolving to deal with a potential spill in the future.

Diversifying and strengthening the local economy that was seriously injured by the spill has been a goal of our community since the 1989 oil spill. The community has determined, after considerable thought and analysis that the most effective way for it to overcome those injuries is through the establishment and operations of the Cordova Center. It will provide a feasible and lasting means of addressing harm from the spill and simultaneously creating a stimulus to the local economy. This multi-purpose facility will serve as a forum and catalyst for marine research in the Sound and its dissemination, oil spill research and development, oil spill response training, education and serve as a venue for an array of conferences, retreats, meetings, and conventions. Oil spill response training sessions, scientific and research conferences, conventions and workshops related to government, tourism, non-profit organizations, and commercial fishing will be major steps towards helping restore Cordova's injured Prince William Sound resource-based industries and businesses diversify and will provide a much needed catalyst for the economy of the entire region. It will also serve as a lynchpin to the future for the community that was severely impacted by the spill in other fields including commerce, education, technology, health, culture (Alaska Native and non-Native), and the arts and sciences.

Although this project is somewhat different from projects in the regular work plan of the Trustee Council, we know that for our community, there is no project that has any greater potential for addressing and remedying the injuries and after-effects of the 1989 oil spill than the Cordova Center. Cordova fully supports the efforts of the Council and the scientific and academic communities in implementing the Gulf Ecosystem Monitoring program. At the same time, though, with the very viability of our community so seriously affected by the spill continuing to be in jeopardy in part from the 1989 Good Friday spill, we have to believe that part of the restoration work that is warranted is that dealing with people whose community is vitally dependent on the injured natural resources and services of the Sound.

We urge and request the Trustee Council to utilize a small portion of its available funding to join with our community in effectively ameliorating some of the injuries from the 1989 oil spill. And, while we believe that there is ample authority for the Council to participate in this project at some level as the Governor himself has advocated, if such use needs further clearance, we urge that such support or approval, as necessary and appropriate, be sought from the Court or Congress.

We encourage you to review the enclosures which set forth in more detail the vision behind the Center and its myriad functions and capabilities so as to have a positive effect on injured resources and services from the EVOS.

We look forward to discussing the Cordova Center Project with you once you have had the opportunity to review the enclosed information. We believe that this is the best project to help this community, the injured resources, and services on which the community depends to be restored to a significant extent. Whatever level of funding assistance the Council can agree to will be utilized to leverage additional funding resources . . . both public and private. So it will be, in our view, a sensible and highly productive use of the Council's funding resources. The Cordova Center offers an opportunity for Cordova to become a restored and, once again, strong and vibrant community of Prince William Sound.

We will deeply appreciate your favorable consideration of our request for assistance.

Sincerely,

Tim Joyce

Tim Joyce
Mayor

Enclosures:
(1) Cordova Center Project Proposal
(2) Letter from Governor Murkowski to Mayor Tim Joyce, July 2004.
(3) Letter from Native Village of Eyak to Cordova Center Committee, April 15, 2004.
(4) Letter from US Forest Service District Ranger to Cordova Center Committee, January 23, 2004
(5) Letter from Prince William Sound Science Center to Cordova Center Committee, October 28, 2003

BACKGROUND INFORMATION ABOUT THE RATIONALE FOR AND PURPOSE OF THE CORDOVA CENTER PROJECT

Goals for the Cordova Center Project that Support the Mission of the EVOS Trustee Council: The EVOS Trustee Council website states that "A better understanding of the ecosystem, along with significant improvements in the tools fish and wildlife managers use to evaluate populations means better decisions for the health of those populations and the people who depend on them."

It follows then, that sharing such information, including the Gulf of Alaska Ecosystem Monitoring and Research Program (GEM), related research, exhibits, and resource materials, is critical to the future of the Gulf of Alaska ecosystem and the human activities that depend on it. This underscores a strong need for a facility whose mission includes helping to provide the venue and resources for education of citizens, students, scientists, resource managers and stakeholders about the Gulf ecosystem and how best to manage its natural resources.

This critical role can be filled by the Cordova Center, providing a centrally located facility equipped to serve as the public outreach center for the EVOS Trustee Council and the lessons learned from the experience of the 1989 oil spill; a venue to host meetings, symposia, workshops and classes, provide a library supporting scientific research and offering public online access to GEM program reports and other EVOS-related information, and a museum with exhibits both on oil spill history and the advances in technology and industry that were stimulated by the spill. There is no other similar facility offering easily understandable educational displays of the results of Gulf of Alaska Ecosystem Monitoring and Research Program (GEM) research findings, of restoration efforts and their results of the many tourist destinations in the spill region for premier outdoor recreation experiences, or of culture representative of the ecosystems of the Sound.

There is a need for venues where coastal communities in the region can share results of studies of Gulf ecosystems, EVOS programs and collective knowledge gained through GEM to apply toward efforts to sustain the ecosystems and human use of its resources allowing the EVOS Trustee Council to fulfill its goal to: "**Inform:** Provide integrated and synthesized information to the public, resource managers, and industry and policy makers in order for them to respond to changes in natural resources."

These EVOS Trustee Council outreach and related needs correspond with needs for the City of Cordova. Cordova has no centrally located community center providing the facilities and amenities necessary to meet all the population's civic needs. While there are public and private facilities that are used for receptions, meetings and conferences in the community, none provides adequate space, equipment and services to meet Cordova's needs. The existing facilities in Cordova for science education programs,

meeting rooms, museum, library, auditorium/theater and emergency response are inefficient and do not meet ADA standards. The existing municipal building functions as emergency dispatch and communications center in case of an oil spill, Tsunami and other emergencies. The facility is within the Tsunami zone requiring equipment and personnel to be relocated to higher ground for actual events. The current visitor center is not adequate; yet diversifying Cordova's injured tourism and fishing-based economy depends increasingly on the expanding our tourism and outdoor recreation-based industries.

The following provides an example of how the Cordova Center will meet needs for EVOS Trustee Council, the community of Cordova and the impacted region. In 1989, the Prince William Sound Science Center was established in Cordova to study and monitor the ecosystem of the Sound. In partnership with the U.S. Forest Service, the Science Center offers a Discovery Program that provides a variety of science education programs for youth with region-wide outreach to Tatitlek, Chenega, Valdez and surrounding Prince William Sound communities. A monthly theme is explored by youth who participate in hands-on activities related to the theme. The Discovery Program is housed in Cordova's community college (formerly the Cordova hospital) with limited space for displays, exhibits, demonstrations and the library collection, a valuable resource for the community. The shared space requires staff to dismantle exhibits, discouraging demonstrations that would effectively augment the programs. The new Cordova Center will include a large education room that will provide all the spaces needed for a flourishing Science Discovery program, offering storage and secure informational displays visible from the Center's common areas prominently located in the heart of the City as well as the education room.

Linkage to EVOS Program Goals and Priorities: As is stated on its website, to fully achieve its mission, the Gulf of Alaska Ecosystem Monitoring and Research Program must provide information that enables resource-dependent people, such as subsistence users, recreationalists, commercial fishers and the residents of impacted communities to better understand and therefore cope with changes in marine resources. As information accumulates, the ability for GEM to provide problem-solving information and tools can and must increase.

The Cordova Center Project is an important part of Cordova's efforts to model the original mission of the Trustee Council's Restoration Program, by "taking into account the importance of the quality of life and the need for viable opportunities to establish and sustain a reasonable standard of living."

The EVOS Trustee Council goals to "Provide **information** to communities regarding data and scientific research performed by the Trustee Council science program" and to "Improve **communication** of findings and results of restoration efforts to spill area

residents, village councils, and the appropriate regional organizations" will be directly addressed by the proposed Cordova Center project.

The Cordova Center will provide a setting to support the GEM components of synthesis, data management and information transfer. "Synthesis is intended to produce communication tools such as publications, video conferences, oral presentations and other media to inform scientists, stakeholders and other members of the public about the developing understanding of the factors responsible for change in the marine environment." The Cordova Center will be the perfect facility to support this, with its meeting rooms, auditorium, library, and technology. The Cordova Center will also function as a repository for data generated by GEM projects that will make this information "readily available in a timely fashion to the scientific communities, resource managers, resource dependent people and their communities, policy makers, and other members of the public" as well as "to EVOS staff and contractors, GEM committees and working groups (if any), state and federal resource agencies, and concerned members of the public." (GEM Program Document, Chapter 3). Our City will take on this responsibility as part of the Center's overall mission.

The new facility will offer EVOS Trustee Council a means of disseminating information in a form easily accessible by the public, including displays, exhibits and art. In addition to the general public and visitors to the state, the commercial fishing community, policy makers, resource managers and other scientists can obtain and share information through services at the Center, fulfilling the Trustee Council's goal of disseminating information on restoration to the broadest audience possible.

As an integrated community facility, the Cordova Center is designed to address all of the following GEM objectives: it will provide access to GEM data through library services; citizen training and support in oil spill response through the emergency response center; citizen training and support of environmental monitoring activities through the science discovery program; provide findings to government and present findings locally; manage a data/local knowledge archive; receive and disseminate GEM information; provide a forum to identify community concerns and to review GEM information; provide educational programs; increase regional community involvement in GEM Program activities; publicize GEM community involvement opportunities provide a forum to identify important community and region-wide issues and concerns that could be addressed by GEM monitoring and research.

The Cordova Center project will also address the EVOS Trustee Council objectives for human services that depend on natural resources by supporting and marketing outdoor recreation and tourism in the Sound.

PROJECT DESIGN

Project Description: The City of Cordova is seeking funding to construct the Cordova Center, a 31,150 square foot, fully ADA accessible multi-use facility. The Center will combine a number of functions for the City of Cordova including **Conference Center, Library, Science Discovery Room, Museum, Oil Spill Response Center and Visitors' Center.** Throughout the building there will be educational displays of the results of GEM research findings, of restoration efforts and their results and of art representative of the ecosystems of the Delta and the Sound. These displays will ensure that any visitor to the Center in any capacity will have exposure to educational materials about the natural resources of the region and the progress of restoration efforts related to the EVOS.

As well as providing a solution to the problems noted above, the Cordova Center offers many exciting opportunities. The Cordova Center is strategically positioned to be a centerpiece of EVOS Trustee Council information sharing in the region. The new facility will create opportunities in scientific research services and the regional visitor industry.

Objectives:

Conference Center: A Venue for Sharing of GEM and other EVOS Research

- Host EVOS-related workshops, marine research conferences and symposiums;
- Provide space for government agency and resource manager meetings;
- Facilitate communication between scientific community and stakeholder user groups in Prince William Sound; and
- Make available space for Eyak tribal members to share traditional ecological knowledge and to hold tribal meetings.

Library: Providing Access to EVOS-Related Information

- Inform the public about the status of restoration efforts in the spill region;
- Act as a repository and dissemination source of EVOS and GEM publications and related research reports for scientific communities, resource managers, policy makers, and members of the public;
- Expand library collection of materials relating to scientific research needs, commercial fishing, oil spill history, oil spill response, fisheries management related to the spill, its impact and its restoration and recovery;
- Support oil spill and related marine researchers' needs through online sources and interlibrary loans; such as providing computer access to the ARLISS library for reference literature on oil spill research;
- Present educational programs for all ages regarding research results; provide online links and access to EVOS Trustee Council related educational materials; and
- Share resources for research needs of Prince William Sound Science Center, Native Village of Eyak, and Prince William Sound Community College.

Science Discovery Room: Educating Environmental Stewards

- Facilitate community involvement with Science Discovery Room;
- Conduct programs related to health and sustainability of marine resources;
- Exhibit science public education displays;
- Educate youth through hands-on stewardship and monitoring activities; and
- Facilitate student involvement in EVOS and other research projects.

Museum: Documenting the Past and Looking to the Future

- Create an exhibit on history of the oil spill and advancements in technology for oil spill response, containment, cleanup, and restoration;
- Disseminate information on restoration activities; and
- Expand exhibits on history of resource development in the Copper River Region.

Oil Spill Response Center: Oil Spill Prevention and Response Training

- Provide space for oil spill response training (Members of Cordova fishing fleet were and are first responders to a spill in Prince William Sound);
- Educate community members in oil spill prevention and clean up techniques;
- Build partnerships between resources-dependent community members and state and federal resource agencies; and
- House an Oil Spill Response Emergency and Communications Center

Visitors' Center: Restoration of and Developing Cordova's Outdoor Recreation, Tourism and Commercial Fishing Industries

- House Visitor Center to promote opportunities for outdoor recreation and tourism in the Prince William Sound region;
- Serve as stimulus for region in restoration of injured services of recreation and tourism; and
- Provide for seafood marketing and availability information in a kiosk at the Cordova Center helping to expand markets for Alaska fishing resources and to restore commercial fishing injured by the spill.

Procedure: The Cordova Center project has been under way since 2001, starting with community meetings to ascertain general needs and high-priority features. A strong consensus was achieved for the vision of a multi-purpose community center incorporating the library, museum, science discovery center, auditorium space, and offices in a single facility with a marine resource theme.

A strategic plan has been developed for the capital campaign. A working fundraising plan is being formulated, with a tactical development plan for carrying out each strategy. The current estimate for total construction of the project is $14.7 million based on a cost estimate developed by HMS Engineering, experts in cost estimating in the state of Alaska. As conceptual plans are reviewed by engineers, projected costs may

change. To date $2.69 million have been secured for the Center. Federal funds have been dedicated to the project from the Economic Development Administration, USDA Rural Economic Development Administration and appropriations from HUD.

As well as this request to the Exxon Valdez Oil Spill Trustee Council, additional funding requests are being made to the Alaska Congressional delegation and to the state for budget appropriations.

A public fundraising campaign has been launched and will be on-going throughout the duration of the project. These local contributions show support for the project and will stimulate funding from non-local sources. Grant requests will be submitted to foundations, and corporations with a local presence and businesses. Lead donors will be approached and the public capital campaign will continue. Further federal and state funding requests will be made to augment other funding sources. The broad based support from local, regional, state and federal sources should result in a successful capital campaign.

The City of Cordova will own and operate the Cordova Center. The city will provide funding for operation and maintenance costs for the new facility from a variety of sources including income from use of the center, auditorium and leased space.

Geographical Area: The City of Cordova, incorporated in 1909, is located at the southeastern end of Prince William Sound in the Gulf of Alaska. The community was built on Orca Inlet, at the base of Eyak Mountain. It lies 52 air miles southeast of Valdez and 150 miles southeast of Anchorage. Cordova is a rural community accessible by air or water. Alaska Airlines provides federally subsidized daily jet service to the state airport. Access to the community is also available by smaller planes. The Alaska Marine Highway provides ferry service. The addition of the new fast ferry, MV Chenega, which will come online in 2005, makes the community even more accessible.

A home rule municipality with a Council-Manager form of government and a volunteer elected mayor, Cordova has a year-round population of 2,454 residents (DCED 2001). With 22% of the population Native American, the culture of the Alutiiqs, Athabascans and Eyaks plays an important role in the community. Most Eyak tribal members reside within the community of Cordova.

Gateway to the Copper River Delta, a 60-mile arc of extraordinary wetland ecosystem, Cordova is built upon a rich and diverse foundation of bounties from both the sea and the land. Snowcapped peaks, glaciers, forested mountains and the sea all add to Cordova's scenic beauty and remote location. Nearly half of all households are involved in the commercial fishing industry, exemplifying Cordova's reliance on the abundance of the sea for their economy.

For 15 years, the community has worked to re-group from the devastating effects to the economy in this region from the Exxon Valdez oil spill. Cordova continues to experience economic difficulties as fluctuations occur in the fishing industry.
In 1989, the Prince William Sound Science Center was established to study and monitor the ecosystems of the Sound and adjoining Copper River Delta.

Coordination and Collaboration: Cordova Center planners have met with EVOS Trustee Council members to initiate a dialog about how the Center can best serve EVOS Trustee Council outreach needs. The City has initiated a strong partnership between members of related institutions including the Prince William Sound Science Center, United States Forest Service, Native tribe of Eyak, Community College, public schools, federal agencies, nonprofit Cordova Historical Society, service and civic groups and the community as a whole to collaborate on the planning and implementation of the Cordova Center project. A letter to the Native Village of Eyak elicited a positive response of tribal interest in using the facility for meetings, and the Center will facilitate activities, which foster the sharing of traditional ecological knowledge.

Through an inclusive public planning process, the community designed the Cordova Center to implement a shared vision to create physical infrastructure offering educational, cultural, civic and economic opportunities and improving quality of life. The project is structured to continually reinforce this collaboration as the interrelated services provided at the new facility complement and build upon each other. Serving as an EVOS Trustee Council outreach and public information center, the Cordova Center will be a valuable local and regional asset.

The intensive community planning process determined this facility to be the most effective way to deliver a variety of vital services in an efficient and sustainable manner. The Cordova Center project exemplifies municipal leadership in a cooperative effort. Continual public planning to identify new ways in which the facility can creatively be utilized to serve EVOS Trustee Council, the region and the state will enable the Cordova Center to maintain its role of disseminating information on restoration to the broadest audience possible. This is an investment that will have long-term and far-reaching outcomes for EVOS Trustee Council while providing an array of benefits to the community of Cordova and the Prince William Sound region.

SCHEDULE

Project Milestones: Focused planning for the project began in January 2002. Earliest projected project completion date is 2006.

The City of Cordova is currently negotiating to purchase the preferred property for the Cordova Center.

The firm of Minch Ritter Voelckers, Inc. was retained as project architects in February 2002. More detailed programming analysis of spaces was initiated, along with parallel studies on the possibilities for other building functions, including small convention use during the following months. Community forums on site selection, materials and features were organized to build broad support for the project and to provide information to the design team as ideas were formulated. Design goals include energy efficiency, low operating expenses and pleasant interior environment. Conceptual and schematic designs are complete.

Detailed analysis and integration of engineering systems is scheduled for May 2004 – April 2005, and development of *Construction Documents* is scheduled for May 2005 – October 2005.

Measurable Project Goals:

FY'05, 1st quarter (October 1, 2004-December 31, 2004)
- Project funding sought from Trustee Council
- Input from Trustee Council on outreach and information dissemination needs
- Design Development ongoing
- Ongoing fundraising
- Grant applications to foundations, corporations and government sources
- Requests for state and federal appropriations

FY'05, 2nd quarter (January 1, 2005-March 31, 2005)
- Design Development documents completed
- Ongoing fundraising
- Grant applications to foundations, corporations and government sources
- Funding requests for state and federal appropriations

FY'05, 3rd quarter (April 1, 2005-June 30, 2005)
- Ongoing fundraising for Phase I
- Construction documents ongoing
- Begin fundraising for Phase II landscaping, furnishings, etc.

FY'05, 4th quarter (July 1, 2005-September 30, 2005)
- Construction documents completed
- Prepare RFP's and Bid documents
- Ongoing fundraising for Phase II landscaping, furnishings, etc.

FY'06, 1st quarter (October 1, 2005-December 31, 2005)
- Construction Bids
- Ongoing fundraising for Phase II landscaping, furnishings, etc.

FY'06, 2nd quarter (January 1, 2006-March 31, 2006)

- Construction begins
- Ongoing fundraising for Phase II landscaping, furnishings, etc.
- Annual GEM Workshop

FY'06, 3rd quarter (April 1, 2006-June 30, 2006)

- Construction continues

RESPONSIVENESS TO KEY TRUSTEE COUNCIL STRATEGIES

Community Involvement: Since January 2002, six public meetings have been held to gather ideas and share information about the Cordova Center project. All community members are invited to contribute their input to the planning process. The Eyak Native Village has responded with suggestions of tribal uses for the Center. The City's Director of Information Services keeps all stakeholders informed of public meetings and project progress through emails, newsletters, box holder mailings and posters in public locations. This continual information sharing will remain a function of the Cordova Center once it is constructed.

Cordova Center Partners: The **City of Cordova** offers the many varied public services that municipal governments are responsible for in small rural communities including museum, library, water, sewer, road maintenance, public health and safety.

Established in 1967 as a centennial museum by the Cordova Historical Society, the **Cordova Museum** is operated under the auspices of the City of Cordova while the Cordova Historical Society owns the collection. The museum offers exhibitions, programs, publications and other activities that engage, enlighten, educate and entertain both community residents and visitors of all ages.

The **Cordova Public Library** provides services to patrons throughout the community of Cordova and surrounding areas from Icy Bay to hatcheries in remote areas of Prince William Sound. The library also serves as the elementary school library for 200 pre-kindergarten to sixth grade children.

The U.S. Forest Service in partnership with the Prince William Sound Science Center provides the **Science Discovery Program,** offering a variety of education programs and demonstrations for youth. These programs provide an important connection to the marine environment for people of all ages and are directly related to EVOS Trustee Council concerns.

Summary: The Cordova Center will be an active partner to help the EVOS Trustee Council achieve a number of its goals in the Prince William Sound region. The needs to support research disseminate EVOS-related information, and to reach out to people

around the world and inform them of the research findings and progress to date will be met through the variety of interdisciplinary programs and services provided in this new multi-use facility. Together, the partners will be able to increase access to information, educational opportunities, and the overall understanding of the effects of oil spills and the best practices of response. The GEM program is resulting in an increase in knowledge about the Gulf ecosystem that can be applied to other large marine ecosystems, and advances in management tools for natural resource managers that can be shared worldwide. The Cordova Center will provide the means for transmitting this information to all those who find it interesting, valuable, or crucial to their work.

Budget Narrative: The proposed Cordova Center offers economies of operation by locating several functions within a single new facility. The building is being designed to stress energy efficiency and low operating expenses. Several features have been incorporated to minimize mechanical system expenses. The entire center will be ADA accessible, and will use sustainable design precepts.

Of the $14,676,000 needed estimated project cost, approximately $2.69 million has been secured. Funding is complete for design and construction drawings ($0.7 million). The municipality has pledged funding for land ($0.17 million). Federal funding is committed for construction ($2 million).

Of the Cordova Center's numerous aspects, approximately 47% of the space for the facility will be used for EVOS related functions. The areas identified are equivalent to $6,897,720 of the assumed total project cost.

Square footages of Cordova Center spaces to be used to meet EVOS Trustee Council objectives:

Square feet	EVOS Space Use Designation
4,075	Conference Center: A venue for sharing of GEM produced and other EVOS region research
1,225	Library: Providing access to EVOS related information and research support
1,040	Science Discovery Room: Educating environmental stewards
1,700	Museum: Documenting the past and looking to the future
3,410	Oil Spill Response Center: Oil Spill Prevention and Response Training and emergency communication center
3, 205	Visitors' Center: Restoration and development of regional outdoor recreation, tourism and commercial fishing industries

Funds awarded to date:

Source	Amount
Economic Development Administration	$ 200,000
Federal Financial Assistance Grant USFS	$ 300,000
Appropriations Bill FY'03, S.2708	$1,000,000
Appropriations Bill FY'04	$1,000,000
Municipality	$ 167,000
State of Alaska	$ 25,000
Total	$2,692,000

PROJECT EXPENSES			PROJECT REVENUES	
Land	$167,000		Municipal to date (pledged)	$ 167,000
Architect & Engineering fees	$700,000		State & Federal to date	$2,525,000
Administration/Inspection	$320,000		**Total Funding Secured**	**$2,692,000**
Construction	$10,000,000		Municipal Projected	$500,000
Exhibit Design/Installation	$700,000		State & Federal Projected	$2,584,000
Equipment/Furnishings/Art	$642,000		Foundations/Corporations Projected	$2,500,000
Landscaping	$56,000		Local Fundraising Projected	$100,000
Contingency & Inflation Proofing	$2,091,000		**Total Funding Projected**	**$6,709,000**
Total Funding Needs	**$14,676,000**		**Total Secured & Projected**	**$9,376,000**
$14,676,000 - $9,376,000	*equals*		**Total Funding Gap**	**$5,300,000**

The remainder of the funds for this project will be raised from a public/private fundraising partnership made up of local contributions, government appropriations and grants from foundations, corporations and government agencies.

EVOS Trustee Council funding is a critical component to project success. As well as providing valuable financial support, it will allow Cordova to leverage funds from other sources to make the Project a reality.

FRANK H. MURKOWSKI
GOVERNOR

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STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

July 6, 2004

The Honorable Tim Joyce, Mayor
City of Cordova
P.O. Box 1210
Cordova, AK 99574

Dear Mayor Joyce:

I was pleased to finally meet you in Juneau earlier this year. Your willingness to work for your community and address some of the economic problems it is now facing is commendable. I was glad to offer the aid of my office and my special assistant, Alan Austerman, in the effort that led to successfully securing a lease with a new processor for the upcoming season in the old North Pacific processing plant. Hopefully, the fishermen as well as the folks who are employed in the industry in Cordova and Prince William Sound will enjoy a fruitful fishing season.

I would also like to commend you on the work your community has completed to date on the Cordova Center. I know this multi-purpose economic development and community facility has been a priority of the city for many years and continues to occupy a prominent role in the economic diversification plan for Cordova. The 1989 oil spill put Cordova at "the economic and emotional ground zero of the spill." I am glad to see the community come together behind a project like the Cordova Center. This facility can serve as an economic, cultural, and quality-of-life stimulus for your community, which has struggled through so much in recent years.

This also may be the perfect time to secure funding from the Exxon Valdez Oil Spill (EVOS) Trustee Council. As I said in my meeting with you, I feel the trustees should begin re-focusing their efforts from primarily restoration and habitat acquisition to community and economic restoration projects and facilities in the communities of the EVOS affected region. The Cordova Center could be the first of the 'brick and mortar' projects I've referred to in the past, which can be partially constructed by these funds. I understand you have had a series of positive meetings with the trustees, and I wish you great luck in that effort.

I also support your efforts to secure funds from other sources including federal, private foundations, and the state. I realize that the Cordova Center, in conjunction with the new fast vehicle ferry, the *M/V Chenega*, will play a major role in the economic rejuvenation, diversification, and development of a sustainable economy in Cordova.

Please let me know if my administration can be of further assistance as you develop this community project.

Sincerely yours,

Frank H. Murkowski
Governor

United States Department of Agriculture | Forest Service | Region 10 Chugach National Forest Cordova Ranger District | 612 Second Street P.O. Box 280 Cordova, Alaska 99574

File Code: 1560

Date: January 23, 2004

Cordova Center Committee
PO Box 391
Cordova, AK 99574

Dear Committee Members,

I am writing to express the strong support of the Forest Service for the Cordova Center. We have been active in securing the initial federal funding for planning, design and construction, and members of my staff have participated on the planning committee for the Center. We can clearly see the benefits that such a facility will bring to the community, and look forward to using it for Forest Service sponsored events.

The community of Cordova will greatly benefit from the construction of the Cordova Center. This project will become the heart of the community on Main Street. This facility will be a key destination for visitors with the inclusion of a museum and the stylishness in its design. The people of Cordova will gravitate to this facility because of the inclusion of the city library and City Hall, and the natural connection between the harbor and Main Street.

The Cordova Center will be able to provide facilities for educational services such as the science-based Discovery Room program for elementary school children. This is a joint Forest Service/Prince William Sound Science Center program that is currently housed in very inadequate space elsewhere in town.

The local grade school will only be one block from the Cordova Center offering easy access for library services as well. High school and elementary school students will have an auditorium and a stage to conduct performances instead of the current elementary school lunch room or the high school gym. The local community theater group will also be able to use this auditorium.

The Cordova Center will help to revitalize and diversify the economy in Cordova. The inclusion of ADA accessible meeting rooms and auditorium will allow for small conventions, meetings and receptions to take place in a community that up until its construction has not had such facilities. Many organizations and agencies, including the Forest Service, have expressed an interest in holding meetings in Cordova if we had the facilities to accommodate such events. The Cordova Center will provide those facilities. Hosting events during the winter months in Cordova that 100 to 200 people attend would fill the hotel rooms and the restaurants. Visitor business in the wintertime is a necessity for many vendors to stay profitable. The Cordova Center could help provide that business.

The new building will replace two aging sheet metal buildings. These old buildings are expensive to operate because of poor construction and age. The new Cordova Center will provide an environmentally controlled space for museum displays, traveling exhibits and storage,

which would allow the museum to pursue accreditation. The community is willing to accept the responsibility of operating this new energy efficient facility especially since the old structures are planned to be removed from the city property roles.

The Cordova Center will be a source of pride for this community and provide all the benefits mentioned above. We support the construction of the Cordova Center and we hope to see the federal investment pay off with the completion of the Center.

Sincerely,

Rebecca S. Nourse

REBECCA S. NOURSE
District Ranger

PRINCE WILLIAM SOUND
SCIENCE CENTER
CORDOVA ALASKA

P. O. Box 705
Cordova, Alaska 99574
(907)424-5800 (ph.)/(907)424-5820 (fax)

October 28, 2003

Cordova Center Committee
P.O. Box 391
Cordova, AK 99574

Dear Cordova Center Committee:

I am representing the Prince William Sound Science Center's education department in support of the development of the Cordova Center. The Cordova Center is a dream for Cordovans and the benefits of this proposed building are endless. My professional interest lies in the Cordova Center's education room being available to house the Discovery Room and other community education projects.

The Discovery Room science education program serves all the elementary students in Cordova from kindergarten through sixth grade. It is a partnership program run by the US Forest Service/Cordova Ranger District and the Prince William Sound Science Center. Each month every student (nearly 300 total) visits the Discovery Room to explore a new science topic. They proceed through a series of three rooms in small groups, each room with a different instructor from either the Forest Service or the Science Center and a different type of activity that relates to a common theme for the month. Currently these rooms are provided through an in-kind donation by the Prince William Sound Community College. Two rooms in the college are available for year-round use and storage and one more room is available on an as-need basis during the school year.

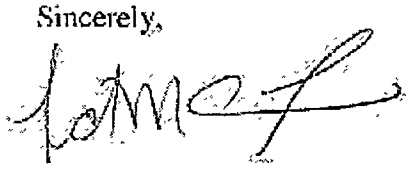
The Science Center is also pleased to offer a Community Education program series that offers weekly presentations on a variety of topics from October through May. The programs usually involve an indoor presentation complete with hands on activities and artifacts as well as an outdoor field trip component. Most recently, 22 participants gathered in the front atrium of the Science Center to learn about wolves and coyotes. This year Science Center educators are making an effort to relate Community Program topics with Discovery Room topics in order to provide enhanced learning opportunities for the elementary students in yet another setting.

Housing the Discovery Room in the Cordova Center will provide an invaluable opportunity for the above education programs to become more closely linked with the local community as well as visitors to Cordova. Not only will the proposed design provide an increased space for education programs and material storage, but it will be more accessible to all members of the community. The centralized location will allow passer-bys a glance at the projects and activities taking place in the Discovery Room. The larger educational space will also provide a better area for Community Program gatherings. Furthermore, when the topics of a community presentation and the Discovery Room are related, materials used by the elementary students or projects they create could directly benefit the community as a whole by being incorporated into the presentation or put on display.

Finally, the Cordova Center will provide a venue for the Science Center educators to create semi-permanent displays on our local region that can be visited by both community members and visitors to Cordova. It will enable resources collected by researchers and educators at the Science Center to be shared and viewed by a wider audience and help educate visitors about this wonderful place we call home.

Thank you for the opportunity to express my interest and support in the Cordova Center Project. Please contact me if I can provide any further information or assistance.

Sincerely,



Kate Alexander
Education Specialist
Prince William Sound Science Center
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Native Village of Eyak

10,000 years in our Traditional Homeland, Prince William Sound, the Copper River Delta, & the Gulf of Alaska

April 15, 2004

Cordova Center Committee
City of Cordova
Box 1210
Cordova, Alaska 99574

Cordova Center Committee

The Native Village of Eyak would like to express its support of the Cordova Center Project. Of particular interest is the conference center and meeting facility. When Cordova has the capacity, the Native Village of Eyak would like to plan a regional conference.

We support the need of facilities for the Cordova Museum and Library. These services have endured and been kept a high standard in spite of the poor condition of their present facilities.

The Cordova Center as planned would accomplish much to lift the standard of life for Cordovans and provide a sparkling centerpiece for tourism.

The Traditional Council of the Native Village of Eyak

Robert J Henrichs

President Robert Henrichs