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FY 04 GEM INVITATION

Issued May 1, 2003

The FY 04 Invitation was issued in electronic format on the Trustee Council's web page. This paper copy of the invitation was prepared simply to provide documentation for the permanent files.

Exxon Valdez Oil Spill Trustee Council
441 W. 5th Ave., Suite 500, Anchorage, AK 99501-2340
907-278-8012 800-478-7745 (in Alaska) 800-283-7745 (outside Alaska)
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Exxon Valdez Oil Spill Trustee Council

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GULF ECOSYSTEM MONITORING & RESEARCH PROGRAM INVITATION BOOKLET FOR FFY 04

Issued May 1, 2003

DESCRIPTION

A. Purpose

The *Exxon Valdez* Oil Spill Trustee Council has dedicated approximately $100 million from its settlement with Exxon Corp. to endow a program of long-term monitoring and ecosystem-based research within the area affected by the 1989 oil spill. The program is called GEM (Gulf of Alaska Ecosystem Monitoring and Research Program), and its mission is to:

> *Sustain a healthy and biologically diverse marine ecosystem in the northern Gulf of Alaska and the human use of the marine resources in that ecosystem through greater understanding of how its productivity is influenced by natural changes and human activities.*

Each year the Trustee Council invites proposals for projects to be included in the annual GEM work plan. This invitation is for federal fiscal year 2004 (October 1, 2003-September 30, 2004). All proposers should be familiar with the GEM Program Document and GEM Science Plan, which are available on the web at http://www.oilspill.state.ak.us/gem/documents.html.

B. Proposals are Invited in the Following Categories

Additional detail on each category below is provided in a document entitled *Invited Proposals by Category*, available from the Trustee Council Office or on the web at http://www.oilspill.state.ak.us/pdf/invitation/inv_proposal_category.pdf .

Synthesis. Proposals are invited to provide a synthesis of scientific literature and existing data gathering programs.

Data Management and Information Transfer. Proposals are invited to construct a database of metadata describing marine-related databases from the northern Gulf of Alaska relevant to GEM, and to develop a pilot project demonstrating how to make existing biological data accessible via OBIS (Ocean Biogeographical Information System).

Modeling. Proposals are invited to address development of a whole-ecosystem natural resource model as an adaptive management tool for guiding monitoring under GEM, and to describe the process of further developing or implementing existing models that could serve as components of the whole-ecosystem model.

Community Involvement. Proposals are invited to develop products that will provide a service to communities and stakeholders in the GEM region related to marine ecosystem health and sustainability.

Lingering Oil Effects. Proposals are invited that address the fate and effects of *Exxon Valdez* oil, the bioavailability of lingering oil in Prince William Sound, and the status of subsistence activities in oil spill-affected areas.

Alaska Coastal Current. Proposals are invited to investigate and describe a time-sequenced approach that would extend and enhance the Volunteer Observing Ship (VOS) data acquisition program based in the northern Gulf of Alaska. Proposals are also invited to analyze the information needed to support resource management decisions for human activities in the Alaska Coastal Current.

Nearshore. Proposals are invited to analyze the information needed to support resource management decisions for human activities in the nearshore.

Watersheds. Proposals are invited to identify and show how and where to measure the best indicators of marine related biological production in watersheds, including within an existing water quality sampling program now used for monitoring the effects of human activities.

Projects Continuing from FY 03. Proposals that were funded by the Trustee Council in FY 03, and that proposed work in FY 04 as well, must be resubmitted for FY 04. Effective with the FY 04 funding cycle, the Council has approved a multiple-year funding policy—which means multiple-year projects funded in FY 04 will not need to resubmit in future years.

C. Program Structure

Amount Available for Award. The Trustee Council has set a funding "cap" of $5 million for FY 04. The science management and committees, public outreach and information, and administrative components of the program are expected to cost roughly $1.5 million, leaving $3.5 million for projects. Of the $3.5 million, approximately $1 million is earmarked for continuation of projects begun in FY 03, which leaves approximately $2.5 million for new projects. Cost guidelines/limits for new proposals are provided in the *Invited Proposals by Category* document for each category in B above.

All principal investigators (PIs) currently receiving funding from the Trustee Council for FY 03, who wish to continue their projects in FY 04, must submit a complete proposal package by June 16, 2003. Beginning with the FY 04 funding cycle, the Council is expected to approve projects for multiple years (up to three years duration). Although funds will continue to be released on an annual basis as they are now, proposals will not need to be resubmitted each year.

Eligibility Criteria. Individuals, private industry, government agencies, and other interested parties are eligible to submit proposals.

Public Availability of Proposals. All proposals submitted to the Trustee Council are considered public documents and will be available for public review.

Statement of Non-discrimination. The Trustee Council conducts all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The Council administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972. If you believe you have been discriminated against in any program, activity, or facility, or if you desire further information, please write to: EVOS Trustee Council, 441 West 5th Avenue, Suite 500, Anchorage, Alaska 99501-2340; or O.E.O. U.S Department of the Interior, Washington, D.C. 20240.

D. Proposal Review Process

Policy and Legal Review. To be eligible for funding, proposals must be designed to restore, replace, enhance, or acquire the equivalent of natural resources injured as a result of the oil spill or the reduced or lost services provided by such resources. The GEM program is one aspect of restoration, which includes long-term observations and ecosystem-based research designed to improve understanding of the marine and coastal ecosystems that support the resources of the spill region. Trustee Council staff will review each proposal for completeness and for adherence to the requirements of this invitation.

Technical and Programmatic Review. All proposals will undergo independent (and anonymous) technical peer review, conducted by nationally or regionally recognized experts. Proposals will be evaluated on the following technical aspects. You may be asked to respond to technical review comments on your proposal, or to revise your proposal to address concerns of the technical reviewers.

1. Understanding of the problem.

2. Soundness of the technical approach.

3. Innovation and uniqueness of the proposal.

4. Feasibility.

5. Capabilities, experience, and past performance of the proposer(s) and key personnel, as well as whether facilities or other factors integral to the proposal's success are available to support the proposal.

6. Cost effectiveness of the proposal.

7. In addition, proposals related to the lingering effects of oil will be evaluated on the extent to which the proposal will help achieve the restoration objectives identified by the Trustee Council for a given injured resource. The Council's restoration objectives, and the current status of injury, are available at http://www.oilspill.state.ak.us/pdf/injupdate02.pdf.

In addition, proposals will be reviewed by the Trustee Council's Scientific and Technical Advisory Committee (STAC) and appropriate subcommittees for both scientific rigor and programmatic suitability. The programmatic criteria applied by the STAC include:

1. Responsiveness of the proposal to the invitation.

2. The extent to which the proposal will contribute to meeting the GEM program's goals, hypotheses, and questions.

3. How the proposal will contribute to meeting the implementation goals and strategies of the Council. These include promoting community involvement, developing resource management applications, and leveraging funds from other sources.

Budget Review. Trustee Council staff will examine each proposal's budget for consistency with its proposed objectives, and for adherence to the budget instructions contained in this invitation. You may be asked to respond to budget review questions, or to revise your budget to address budgetary concerns.

Public Advisory Committee Review. Proposals will be reviewed by the Trustee Council's Public Advisory Committee (PAC), a 20 member group representing a cross section of interests affected by the oil spill.

Public Comment and Funding Decision. The Trustee Council's Executive Director will develop a funding recommendation based on the reviews described above. The recommendation will be circulated for public comment as the *FY 04 Draft Work Plan*. The Council will then decide which proposals will be funded. Unanimous agreement of all six Council members is required to fund a proposal.

E. Selection Schedule

May 1, 2003	FY 04 invitation issued
June 16, 2003	FY 04 proposals due
Aug. 4-5, 2003 (tent.)	STAC meets to review proposals
Aug. 13, 2003 (tent.)	PAC meets to review proposals
Aug. 18, 2003	Executive Director circulates recommendation for public comment
Early Oct. 2003	Trustee Council meets to approve projects
Mid-Oct. 2003	Successful proposers notified

F. Proposal Submission Address

All proposals must be received by **5:00 p.m. Monday, June 16, 2003** at the following address:

Exxon Valdez Oil Spill Trustee Council
441 West 5th Avenue, Suite 500
Anchorage, AK 99501-2340
Phone 907-278-8012
1-800-478-7745 toll free within Alaska
1-800-283-7745 toll free outside Alaska

PROPOSAL PACKAGE

A. General Instructions

Number of Copies. Three paper copies and one electronic copy of the proposal package must be submitted. Proposals will not be accepted by fax. The electronic copy may be submitted on an IBM-compatible disk or e-mailed to projects@oilspill.state.ak.us. Electronic copies of the narrative sections of the proposal must be in Microsoft Word 2002 (XP) or lower or WordPerfect 9.0 or lower, with any figures or tables imbedded (be advised that color figures or photographs may be reproduced in black and white). Electronic copies of the proposal budget must be in Excel.

Format of Proposals. The proposal package should be paper-clipped (not stapled) in the upper left-hand corner but otherwise unbound, and have 1-inch margins at the top, bottom and sides. The type size must be 12-point Times New Roman font. The required summary page (page 1) must be a stand-alone page. All copies must be printed on one side of each sheet only. Extraneous cover sheets that often accompany applications from universities are allowed, but must not be integrated into the proposal package.

Multiple-year Projects. All proposals must be presented by federal fiscal year (October 1-September 30). Effective with the FY 04 funding cycle, the Trustee Council is expected to approve projects for multiple years—which means that, through this invitation, funds may be requested for up to three years (FY 04, FY 05 and FY 06). Funds will continue to be released on an annual basis as they are now, but the amount of funds to be released for each of the three allowable years (FY 04-06) will be determined by the Trustee Council this year. Therefore, the research plan must describe all project years and a completed budget form must be submitted for each fiscal year for which funding is requested. Proposers are encouraged to be thoughtful and thorough in their budget development, as the Council expects to consider revisions to future-year budgets only in the case of unforeseen or unanticipated events or in response to ongoing scientific/technical review. Be advised that multiple-year projects will be allowed to "carry forward" any unspent funds from one fiscal year into the next, so budgeting flexibility will be enhanced under this new policy.

B. Sections of the Proposal Package

The proposal consists of the following sections in the following order:
- Proposal Summary Page
- Research Plan (including references and literature cited)
- Resumes
- Current and Pending Support Form
- Detailed Budget Form
- Budget Justification
- Data Management and Quality Assurance/Control Statement, including MetaLite metadata file
- Signature Form
- Proposal Classification Form
- Possible Peer Reviewers Form

Proposal Summary Page *(at* http://www.oilspill.state.ak.us/nonpdf_docs/invitation/prop_sum_page.doc *)*
The summary page includes project title, project period, proposer(s)' name and affiliation, study location, key words, a project abstract (a summary of the proposed work in 150 words or less), the amount of EVOS funding requested, and the amount of non-EVOS funds to be used.

Research Plan *(at* http://www.oilspill.state.ak.us/nonpdf_docs/invitation/research_plan.doc *)*
The research plan must completely describe the work to be performed, including a statement of the problem the proposal is designed to address, relevance to the GEM program goals and scientific priorities, project objectives, procedural and statistical methods, description of study area, coordination with other efforts, schedule, responsiveness to key Trustee Council strategies, and expected publications, reports and conference participation. **The research plan is limited to 15 consecutively numbered pages formatted as required in A. above.** The page limit is inclusive of figures and tables. References and literature cited should be attached to the research plan, but do not fall within the 15-page limit.

Resumes
The resumes of all principal investigators and other senior personnel involved in the proposal must be provided. **Each resume is limited to two consecutively numbered pages** and must include the following information:

1. A list of professional and academic credentials, mailing address, and other contact information (including e-mail address).

2. A list of up to five of your most recent publications most closely related to the proposed project and up to five other significant publications. Do not include additional lists of publications, lectures, etc.

3. A list of all persons (including their organizational affiliations) in alphabetical order with whom you have collaborated on a project or publication within the last four years. If there have been no collaborators, this should be indicated.

Current and Pending Support Form

(at http://www.oilspill.state.ak.us/nonpdf_docs/invitation/current_pending_support.doc*)*

Any current and pending financial resources that are intended to support research related or similar to that included in the proposal, or that would consume the time of the proposer(s), must be identified for each principal investigator and other senior personnel involved in the proposal.

Detailed Budget Form *(at* http://www.oilspill.state.ak.us/admin/invitation/budgetform_instruction_page.html*)*

A separate budget form, which outlines probable expenditures to implement the objectives described in your proposal, must be submitted for each fiscal year for which funding is requested from the Trustee Council. This form will be reviewed in conjunction with the budget justification (see below). In order to ensure wise and proper use of GEM funds, Council staff will review each budget for consistency with the objectives contained in the proposal. Proposers may be asked to respond to budget review questions or to revise their budgets to address budgetary concerns.

Budget Justification

This narrative section is in addition to the detailed budget form which is also required (see above). For each fiscal year, and for each budget category (personnel, travel, contractual, commodities, and equipment), this section must list the total amount requested and explain the basis for the request in terms of specific project objectives and activities. Funds from non-EVOS sources, including in-kind contributions, must also be described. In addition, if you are employed by a government agency that has a legislative mandate for the type of work you propose to do, you must explain why the proposed costs are not being covered by your agency's budget. If you are employed by a non-Trustee agency, you must include an explanation of how the indirect costs were calculated. **This justification must not exceed two consecutively numbered pages.**

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

Any project involving collecting or processing data, conducting surveys, taking environmental measurements, and/or modeling must provide a statement describing the data management and quality assurance/control processes that will be used to ensure the integrity of the data and match data types to project objectives. This statement must present the information listed below, reference the specific page and paragraph number of the research plan containing the information, or state that the item does not apply to the proposed research. If you are employed by an entity that has published its QA/QC procedures, please cite where the information may be obtained in lieu of a statement. **This statement must not exceed three consecutively numbered pages.**

1. Describe the study design, including sample type(s) and location requirements, all statistical analyses that were or will be used to estimate the types and numbers of physical samples required, or equivalent information for studies using survey and interview techniques. Include a description of the metadata essential to interpretation of the results of your work. For example see 3 below.

2. Discuss criteria for determining acceptable data quality in terms of the activities to be performed or hypotheses to be tested.

3. Discuss the characteristics of the data that your project is going to be producing. This section is broken into two parts. Part (a) describes the production of a minimally compliant FGDC metadata record which needs to be submitted by all proposers. Part (b) is specific to projects producing quantitative data and provides specifications for categorizing quantitative data into one of three data groups: physical measurements, species specific measurements, and taxonomic sampling.

   (a) Metadata about your project which meets the minimum requirements dictated by the Federal Government Data Committee (FGDC) must be provided. Free software to facilitate the creation of a minimally compliant FGDC metadata record can be downloaded at http://edcnts11.cr.usgs.gov/metalite/. The software--titled MetaLite--requires 26 fields to be registered and then automatically generates the associated FGDC metadata record. You must submit a copy of the metadata file produced by MetaLite with your proposal. In addition to minimal FGDC metadata requirements, proposers must submit more extensive metadata descriptor requirements for project data which have a quantitative characteristic. See (b) below.

   (b) Quantitative datasets can generally be grouped into three categories: physical measurements, species specific measurements and taxonomic sampling. Physical measurements pertain to non-biological oceanographic readings harvested from devices. Species specific datasets are composed of biological analyses limited to a predefined species group or inclusive hierarchical taxonomic structure. Taxonomic sampling datasets consist of information which attempts to characterize various flora and fauna captured/observed during a sampling project. If your proposal would collect quantitative data, you must categorize, with justification, your data by one of the following types--physical measurements, species specific measurements or taxonomic sampling--and then produce a list of fields associated with your quantitative dataset.

4. Define each algorithm to be used to convert signals from sensors to observations. Examples of algorithms of interest would be the conversion of pressure to depth and the conversion of integrated voltages to biomass at depth. When conversion algorithms are lengthy (i.e., computer programs) substitute a source location, such as an ftp site, for the full text. In the case of proprietary conversion algorithms, identify the proprietor and describe how the accuracy of conversion is verified under calibration (see #6 below).

5. Describe the procedures for the handling and custody of samples, including sample collection, identification, preservation, transportation and storage.

6. Describe the procedures that will be used in the calibration and performance evaluation of all analytical instrumentation and all methods of analysis to be used during the project.

7. Discuss the procedures for data reduction and reporting, including a description of all statistical methods, with reference to any statistical software to be used, to make

inferences and conclusions. Discuss any computer models to be designed or utilized with associated verification and validation techniques.

Signature Form *(at* http://www.oilspill.state.ak.us/nonpdf_docs/invitation/signature_form.doc)
A signed form indicating willingness to abide by the Trustee Council's data and report requirements must be submitted with the proposal.

Proposal Classification Form
(at http://www.oilspill.state.ak.us/nonpdf_docs/invitation/classification_form.xls)
A form that provides information specific to the context, locality and specialties associated with the proposal must be submitted with the proposal. This form will assist Trustee Council staff in identifying peer reviewers for the proposal.

Possible Peer Reviewers Form
(at http://www.oilspill.state.ak.us/nonpdf_docs/invitation/poss_peer/reviewers_form.doc)
A form that provides the names and contact information for three persons qualified to review your proposal, and identifies each person's area of professional expertise from the classification list available at http://www.oilspill.state.ak.us/nonpdf_docs/invitation/classification_form.xls, must be submitted with the proposal. These persons must not be current co-workers or collaborators of the proposer(s), major former professors of the proposer(s), or former graduate students of the proposer(s).

C. Additional Instructions for Private Organizations, Non-profits, and Universities from States other than Alaska

If you represent a private organization, a non-profit group, or a university from a state other than Alaska, you should submit your proposal through the Broad Agency Announcement (BAA) process, as well as to the Trustee Council. In most instances, requirements of state and federal law preclude Council funds from being awarded directly to such organizations. Rather, a competitive solicitation process is required. This solicitation can occur before the Council approves funding for a project, through a Broad Agency Announcement (BAA) issued by the National Oceanic and Atmospheric Administration (NOAA). Under the BAA approach, if the Council approves funding for your project, you can begin contract negotiations with NOAA without the further competitive solicitation that is required if you do not apply through the BAA.

As part of this invitation, NOAA is issuing a BAA on behalf of the Trustee Council, requesting proposals for any of the topics identified in this invitation. To submit your proposal through the BAA process, submit an electronic copy, as well as three paper copies, of your proposal to NOAA at the address below by 2:00 p.m. Pacific Daylight (Seattle) time on Monday, June 16, 2003. (This is in addition to the copies of the proposal that must be submitted to the Trustee Council.) Include the words "submitted under the BAA" as part of your project's title. Faxed proposals will not be accepted.

More information is contained in the Broad Agency Announcement itself (BAA #AB133F-03-RP-0040) which is available from NOAA:

Ms. Sharon Kent
NOAA, WASC, Acquisition Management Division, WC31
7600 Sand Point Way NE
Seattle, WA 98115-6349
Telephone (206) 526-4499
Fax (206) 526-6025
Sharon.S.Kent@noaa.gov

Proposals submitted to NOAA under the BAA will be evaluated by the Trustee Council at the same time as other proposals submitted to the Council.

GENERAL CONDITIONS

Once the Trustee Council approves project funds, the Council's Executive Director will provide spending authorization on a project-by-project basis. To receive authorization to spend, each project must first address any project-specific conditions spelled out by the Council in their approval motion and be current on the Council's reporting and data requirements. In addition, the Trustee agency assigned to administer the project must document compliance with the National Environmental Policy Act (NEPA). During project implementation, principal investigators (PIs) must do the following:

Develop a data management plan. In collaboration with the Trustee Council's Data Systems Manager, develop a data management plan. This plan will include procedures to process, document and migrate all data to be collected to archives identified by the Data Systems Manager. In addition, the Data Systems Manager will collaborate with PIs on data formats. (For more information, see *Data Policy* at http://www.oilspill.state.ak.us/pdf/admin/datapolicy.pdf.)

Provide quarterly reports on the project's progress. The report must indicate whether the project's major tasks (as identified in the research plan) are being accomplished according to schedule and flag any problems being encountered. The report consists of filling out a brief form supplied by the Trustee Council.

Submit annual and final project reports. Annual reports are required on multiple-year projects by September 1 of each fiscal year for which funding is received. Final reports are required upon project completion (and may consist of manuscripts for publication in the peer-reviewed literature). PIs must revise all final reports to respond to peer review comments, if any; revision of annual reports is not required. Final reports are made available to the public through the Alaska Resources Library and Information Services (ARLIS) and on the Trustee Council's web page; annual reports are made available only on the Council's web page. In addition, PIs are encouraged to post reports on their own web pages. (For more information, see *Procedures for the Preparation and Distribution of Reports* at http://www.oilspill.state.ak.us/pdf/admin/reportguidelines.pdf). PIs are expected to publish results of their work in the peer-reviewed literature as well.

Attend the Annual EVOS Workshop. The Trustee Council's FY 04 workshop is tentatively scheduled for the week of January 12, 2004 in Anchorage. All PIs are expected to attend the workshop and some may be asked to present a poster or a talk.

Possibly attend a technical workshop. In some years, the Trustee Council's Science Director schedules intensive workshops on specific topics. These workshops are usually held in Anchorage, but may occur at other locations. Selection of the dates of the technical workshops takes into account PIs' schedules.

Comply with the Trustee Council's TEK protocols. Protocols for including traditional ecological knowledge in the restoration process were adopted by the Trustee Council in December 1996. These protocols provide guidelines designed to facilitate collaboration between Alaska Natives and EVOS scientists in meeting the Council's restoration goals. (For more information, see *Protocols for Including Indigenous Knowledge in the EVOS Restoration Process* at http://www.oilspill.state.ak.us/pdf/admin/protex.pdf .)

Maintain samples and data taken during the course of the project. Because the Trustee Council's program is funded by a court-approved settlement with Exxon Corp., it is still subject to potential litigation. Certain requirements have been imposed by state and federal courts regarding destruction of samples and documents related to EVOS. There are significant legal consequences if items are destroyed other than as prescribed by the courts. (For more information, see *Procedures for Destroying Documents or Physical Evidence Related to EVOS* at http://www.oilspill.state.ak.us/pdf/admin/prosample.pdf).

If possible, maintain a web site on the project. The web site should include the project's annual and final reports and any additional information that would help inform the public about the project. The web site must include the following statement: "This project was supported by the *Exxon Valdez* Oil Spill Trustee Council. However, any findings and conclusions presented on this web site are the investigators' own and do not necessarily reflect the views or position of the Trustee Council." A link to the project's web site will be provided on the Trustee Council's web site.

INVITED PROPOSALS BY CATEGORY FOR FFY 04
GULF ECOSYSTEM MONITORING AND RESEARCH PROGRAM

NOTE TO PROPOSERS

Invited Proposals by Category for FY 04 invites proposals in sections that describe:
... the parts of the GEM program under development at this time

- A. Synthesis
- B. Data Management and Information Transfer
- C. Modeling
- D. Community Involvement
- E. Lingering Oil Effects

... opportunities in the GEM habitat types targeted for new projects in FY 04

- F. Alaska Coastal Current
- G. Nearshore
- H. Watersheds

... projects funded through GEM in FY 03

- I. Continuing Projects

Each section has three parts: (1) an explanatory introduction that establishes context (definition and uses or objectives); (2) a general description or what is invited; and (3) specific examples of what is invited. References to the GEM Science Plan and GEM Program Document in the text below indicate where further information may be found on the GEM Program (both documents available at http://www.oilspill.state.ak.us/gem/documents.html).

Note that few new proposals are invited in the nearshore (intertidal/subtidal) habitat type because it is already under active development with projects initiated in FY 03. New projects in the offshore habitat type await direction from studies yet to be completed by other efforts, such as GLOBEC (see GEM Science Plan) and the Alaska Coastal Current habitat. In addition, new proposals for remote sensing are not invited, but the potential for applying remote sensing to individual projects will be examined through the Trustee Council's review process.

INVITED PROPOSALS

A. Synthesis

Definition and Uses of Synthesis within the GEM Program. The required scientific guidance for implementing the GEM program is based on putting together ideas, pieces of information from the scientific literature, and the potential relations among existing data gathering programs, including GEM (see Chapter 3 of the GEM Program Document for further information), to form a larger picture. Synthesis is the entry point to the cycle of monitoring and research.

Synthesis builds on past experience to update the current understanding of the northern Gulf of Alaska marine ecosystems. It brings together existing data and information from any number of disciplines, times and regions to evaluate different aspects of the GEM Program's conceptual foundation, central hypotheses and related ideas, working from the perspective of a habitat type. Synthesis has three broad uses. First, it is used to provide direction for developing and refining hypotheses to be tested and, combined with research and monitoring, to update and refine the GEM Science Plan. In this respect, synthesis is an ongoing evaluative process throughout the life of the GEM Program and will help ensure that the program is meeting its goals and objectives. Second, synthesis is intended to produce communication tools such as publications, 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. Third, synthesis may be used to identify opportunities to solve resource management problems, by showing how to match existing data from GEM and other sources with practical resource management problems.

The primary purposes of the synthesis activities in FY 04 are to (1) fully develop the introduction to the habitat types in the GEM Science Plan and (2) point out options for projects that might be implemented in FY 06 and beyond.

What is Invited. Proposals are invited to provide a synthesis of scientific literature and existing data gathering programs to serve as the introduction to the GEM Science Plan sections for three of the four GEM habitat types: Alaska Coastal Current, nearshore and watersheds. Bearing in mind that the boundaries of habitats are not rigidly drawn (Chapter 2, GEM Program Document), proposals should concentrate on one habitat type. However, each proposal must address linkages of its habitat type with the other habitat types. In addition, proposals should demonstrate how the synthesis would proceed from the primary source documents for GEM--the GEM Program Document, the GEM Science Plan, and the National Research Council's GEM review book (*A Century of Ecosystem Science,* 2002), and *Exxon Valdez* Oil Spill Restoration Plan - Update on Injured Resources and Services (August 2002), all found at http://www.oilspill.state.ak.us/gem/documents.html)--to incorporate scientific literature and data gathering activities not addressed in the source documents. In addition, synthesis documents should incorporate, to the extent they are available, the results of Restoration Program research, as developed in the three-year EVOS Restoration Project /600 (Synthesis of the Ecological Findings from the EVOS Damage Assessment and Restoration Program). Methods should include consultation with EVOS staff and contractors, GEM committees and relevant working groups (if any), state and federal resource agencies and concerned members of the public. At a minimum, the results of the synthesis are to be presented orally at a public meeting and should be suitable for publication as a review article, as well as incorporation into the relevant sections of the GEM Science Plan and the Gulf of Alaska section of a North Pacific Ecosystem Status Report now under development by the North Pacific Science Organization (PICES; see Modeling section of this document).

Examples of Responses to the Synthesis Invitation.

1. Alaska Coastal Current (ACC) Synthesis: The proposed synthesis document(s) would address recent advances in biology and physical sciences relevant to the ACC, discuss

how recent advances might change existing concepts, point out leading and emerging hypotheses and describe how these might support or change the GEM Science Plan's working concepts for the habitat type. It would identify and synthesize major monitoring and research efforts located in the northern Gulf of Alaska, demonstrating a working knowledge of these projects and listing examples, such as FOCI, NDBC moorings, GLOBEC/PMEL moorings and cruises, OCC cruises, and NASA/NESDIS remote sensing. It would point out how these information types may relate to GEM Science Plan working concepts and selection of GEM monitoring projects and the GEM contribution to a Gulf of Alaska section in a North Pacific Ecosystem Status Report now under development by PICES. Possible linkages of the ACC to the nearshore, offshore, and watershed habitat types based on recent and historical literature would be examined. It would identify and prioritize gaps in knowledge relative to the GEM Science Plan's working concepts. Methods would include consultation with appropriate parties identified in the above section, as well as substantial coordination and cooperation with existing GEM ACC projects. Amount of proposals should be in vicinity of $60,000 per year, and proposals may cover up to three years of work.

2. Nearshore (Intertidal/Subtidal) Synthesis: Recognizing that substantial synthesis work in relation to GEM has already been accomplished for the nearshore, a proposed synthesis document would build on the GEM Science Plan and the design work of Schoch, et al. (2002; see GEM Science Plan) to address recent advances in biology and physical sciences relevant to the nearshore and point to the opportunities and needs for establishing a geographically distributed network of monitoring sites during FY 06. In addition, the synthesis would discuss how recent advances in scientific knowledge might relate to existing concepts, point out leading and emerging hypotheses, and describe how these might support or change the GEM Science Plan's working concepts for the habitat type. It would identify and synthesize major monitoring and research efforts located in the nearshore habitat types, such as the monitoring sites of Kachemak Bay National Estuarine Research Reserve, Prince William Sound and Cook Inlet Regional Citizens' Advisory Councils, Alaska Department of Environmental Conservation's Environmental Monitoring and Assessment Program/Southcentral Alaska Coastal Survey, and the Mussel Watch program. Building on results from GEM Project 030687 (Nearshore Decision Process), it would point out how existing and emerging information types may relate to GEM Science Plan working concepts, selection of GEM monitoring projects, and the GEM contribution to a Gulf of Alaska section in a North Pacific Ecosystem Status Report now under development by PICES. It would identify and prioritize gaps in knowledge relative to the GEM Science Plan's working concepts. Methods would include consultation with appropriate parties identified above, as well as substantial coordination and cooperation with existing GEM nearshore projects. Amount of proposals should be in vicinity of $60,000 per year, and proposals may cover up to three years of work.

3. Watershed Synthesis: Recognizing that substantial work toward synthesis needs to be accomplished for the watershed habitat type, a proposed synthesis document would build on the watershed sections of the GEM Science Plan and GEM Program Document to incorporate recent advances in biology and physical sciences. It would address opportunities and needs for establishing watershed monitoring sites during FY 06. In

addition, the synthesis document would discuss how recent advances in scientific knowledge might relate to existing concepts, point out leading and emerging hypotheses, and describe how these might support or change the GEM Science Plan's working concepts for the habitat type. The document would identify and synthesize major monitoring and research efforts located in the watershed habitat type, including work undertaken or funded by state and federal resource agencies, tribes and native corporations. Building on results from GEM Project 02612 (Kenai River Watershed), it would point out how existing and emerging information types might relate to GEM Science Plan working concepts, selection of GEM monitoring projects, and the GEM contribution to a Gulf of Alaska section in a North Pacific Ecosystem Status Report now under development by PICES. It would identify and prioritize gaps in knowledge relative to the GEM Science Plan's working concepts. Methods would include consultation with appropriate parties identified above, as well as substantial coordination and cooperation with existing GEM nearshore (intertidal/subtidal) projects. Amount of proposals should be in vicinity of $60,000 per year, and proposals may cover up to three years of work.

B. Data Management and Information Transfer

Definition and Uses of Data Management and Information Transfer within the GEM Program. The Data Management and Information Transfer component of GEM includes the following functions: data receipt, quality control (QC), storage and maintenance, archiving and retrieval, administrative support, and the systems necessary to automate as many of these procedures as possible. This component also includes programs needed to create the custom data and information products that will be provided to the modeling and applications components, and to the users of this information. Data Management and Information Transfer provides the essential function of extracting the full scientific and societal benefits from GEM projects (NRC 2002; GEM Program Document, Chapter 9).

Data generated by GEM projects need to be converted into useful information that is 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. In addition, data sets and information regarding other research and monitoring activities in the GEM region must be readily accessible to EVOS staff and contractors, GEM committees and working groups (if any), state and federal resource agencies, and concerned members of the public in order to facilitate gap analysis during project selection and implementation, and maximize the use of all data collected (GEM Program Document, Chapter 3).

What is Invited. Proposals are invited to construct a database of metadata describing marine-related databases from the northern Gulf of Alaska relevant to GEM. Working from past and present efforts of GEM, PICES, NPRB, UAF/IMS, PMEL and others, projects would compile a list of databases related to the physical and biological features of the northern Gulf of Alaska and assess and analyze their potential relevance to GEM. Meta descriptions of existing datasets would include thematic and semantic descriptors (i.e., study context such as PI, funding source and locality, species study association, listing of physical/biological measurements performed by study, and quantity and quality of measurements performed). In addition, a syntactic metadata description will be required which would include, but may not be limited to, file format, file size,

and storage mechanism and location. The successful proposal would create a comprehensive, web accessible georeferenced database of the marine-related physical and biological databases of the northern Gulf of Alaska, building on standards and systems already in place, such as the State of Alaska's Cooperatively Implemented Information Management System (CIIMMS) and the STORET database. The successful proposal would describe an approach that assigns priorities for inclusion of databases based on a combination of factors such as length of time series, use in existing physical or biological models, and relevance to GEM. PIs of the successful proposal will be expected to work with GEM staff to create a list of predefined criteria which assigns a quantitative value summarizing the importance of the dataset to specific GEM efforts. Cost efficiencies through cooperation, coordination, and integration with similar efforts covering related geographic areas are expected. Ways and means of insuring close coordination with GEM modeling efforts should be described. Essential requirements are ease of web access and export of information to other systems. Consult GEM Program Document Chapters 8 and 9 and NRC Chapter 7 for further background.

Examples of Responses to the Data Management and Information Transfer Invitation.

1. Adaptation of Existing Metadatabase: The proposal would adapt for GEM purposes the North Pacific marine metadatabase now under development through the North Pacific Research Board. The proposal would show how to filter existing metadata to make them specific to the GEM region, habitat types, and subject areas defined by the working concepts of the GEM Science Plan. The methods would provide for annual filtering and distribution to GEM users. Annual amount of proposal should be in vicinity of $75,000-$90,000. One year of funding is anticipated. However, proposals for annual or other periodic updating may be invited in FY 05.

2. Pilot Project to Apply Ocean Biological Information System (OBIS) within the GEM Region: The proposal would show how to set up a regional OBIS node by deploying an instance of the OBIS database structure. In addition, the proposal would create a plan to facilitate the absorption into the regional OBIS node of past, present and future marine taxonomic data collection efforts. Information on OBIS can be accessed via the web at http://marine.rutgers.edu/OBIS/. Working with a resource management agency, the proposal would identify a manageable data and information system to host the pilot demonstration and provide an implementation schedule and plan for the OBIS software. A successful proposal would define a method to isolate candidate historic datasets which have characteristics which lend themselves to be easily absorbed into the OBIS database structure. Preference should be given to datasets that span multiple agencies. The data system chosen for the pilot project is expected to have scientific relevance to themes presented in the GEM Program Document and GEM Science Plan. Annual amount of proposal should be in vicinity of $60,000. One year of funding is anticipated. However, proposals for annual or other periodic updating may be invited in FY 05.

C. Modeling

Definition and Uses of Modeling within the GEM Program. One of the top overall priorities for the GEM Program is to develop a whole-ecosystem natural resource model as an adaptive management tool for guiding the GEM monitoring program (see GEM Program Document,

Chapter 8, and NRC 2002, Chapter 7). An interdisciplinary biophysical modeling effort is essential to developing monitoring efforts in all of the habitat types, as well as the data management and information transfer component of the program. Modeling helps to understand the limitations on what can be learned from sampling in different time and space scales through simulations based on data from the projects. The ultimate long-term purpose of the model is to describe, in relation to biological and physical variables, the abundance through time of seabird, marine mammal and fish species that are selected for relevance to management interests. Modeling is also used to identify and refine measures, such as time series of biological or physical measurements that are best suited to communicate publicly the current status of the ecosystem for the GEM contribution to a Gulf of Alaska section in a North Pacific Ecosystem Status Report now under development by PICES and others.

What is Invited. Proposals are invited that address how an interdisciplinary biophysical model of the northern Gulf of Alaska would be developed in the short-term. As envisioned, building the model would start from existing physical and biological models; hence, the means of cooperation, coordination, integration, and achieving cost efficiencies with existing modeling efforts must be emphasized in a successful proposal. Ways and means of communicating the contents, functions and outputs from the model to a variety of different disciplines and across a variety of common operating systems should also be carefully described, as well as data assimilation strategies for selecting time and space scales for biological and physical monitoring.

Examples of Responses to the Modeling Invitation.

1. Building the Infrastructure Necessary to Create, Develop and Maintain the GEM Model: The proposal would assemble an interdisciplinary team with experience in biological and physical modeling in the Gulf of Alaska. Team members should have experience in, or knowledge of, existing biological and physical modeling programs, such as SEA, FOCI and GLOBEC. Methods would address all aspects of interdisciplinary cooperation and partnerships, software development, hardware acquisition, use of existing products, and data management and information transfer with respect to all GEM projects and activities, as well as other relevant data acquisition activities. Annual amount of proposal should be in vicinity of $100,000. Three years of funding should be proposed, as the initiation of a long-term GEM activity.

2. Implementation of Components of the GEM Model: The proposal would describe a one-year planning effort to develop a plan for implementing one of the smaller, but critical, components of the GEM model, such as the SEA (Restoration Project /320) pink salmon survival model, over a three-year period starting in Spring 2005. The proposal would show how to address all aspects including assembling an interdisciplinary team of implementers, staging and scheduling field sampling, estimating parameters from data, acquiring and developing essential software and hardware, and data management and information transfer. A one year proposal in vicinity of $70,000 is expected. A follow-on proposal for implementation of the three-year plan may be invited during FY 05 depending on the outcome of the planning effort.

D. Community Involvement

Definition and Uses of Community Involvement within the GEM Program. Meaningful public and community participation has long been an essential part of the Trustee Council's process and an essential strategy for implementing the GEM Program (GEM Program Document, Chapters 1 and 3; NRC 2002). Current and future GEM monitoring projects are encouraged to have a strong community involvement component whenever possible. Comprehensive strategies for incorporating community involvement in GEM projects are being developed now under GEM Project 030575 (GEM Program Community Involvement/Community-Based Monitoring Plan) for the Council's consideration in the fall of 2003. Until that plan is developed, reviewed, and adopted by the Council, no new specific community involvement projects are being solicited with the exception noted below.

What is Invited. Proposals are invited to develop specific products such as targeted workshops, databases, maps, publications, and community science symposia that provide services to communities and stakeholders in the GEM region related to marine ecosystem health and sustainability. Proposals will be evaluated on their relevance to community needs, potential to develop community resources of potential use to other GEM projects, and their link to the goals of the GEM Program.

Examples of Responses to the Community Involvement Invitation.

1. Science Symposium for Smaller Communities: Proposal would develop a small-scale scientific symposium for coastal communities to serve those who are not able to travel to Anchorage for the annual EVOS-sponsored symposia. Annual amount should be in vicinity of $10,000-20,000.
2. Coastal Mapping: Proposal would produce GIS maps of resources for specific coastal communities, building on mapping efforts already completed and underway by organizations such as NOAA, the Cook Inlet Regional Citizens' Advisory Council, Alyeska Pipeline Service Co., and others. Annual amount should be in vicinity of $10,000-20,000.

E. Lingering Oil Effects

Objectives for Lingering Oil Effects in FY 04. The Trustee Council continues to be concerned about *Exxon Valdez* oil remaining in the marine environment and any effects it may be having on injured resources. Injured resources are identified and their current status described on the Trustee Council's web site at http://www.oilspill.state.ak.us/facts/status.html. Current objectives for the Lingering Oil Effects component of the Council's program are focused on examining the fate and effects of the remaining oil on injured resources and services and especially populations of two species in western Prince William Sound, harlequin ducks and sea otters. These populations have shown continuing exposure to hydrocarbons in localities where potentially toxic forms of oil from the *Exxon Valdez* are known to persist. Objectives for FY 04 also include learning about the status of subsistence uses of the injured resources in the spill affected areas for comparison to an earlier survey in 1998.

The reasons that some populations of injured species in Prince William Sound have not met the criteria established for their recovery in the nearly 14 years since the oil spill are still not clear. For some species it has not been possible to clearly separate the possible toxic effects of oiling from the possible effects of natural causes such as climate change and predation. For this reason, GEM projects that address injured species and ecosystems are designed to understand the effects of natural forces on populations and their productivity. The knowledge gained may permit at least a retrospective understanding of oil injury versus other impacts for species injured by *Exxon Valdez* oil, and provide the background on natural forces necessary to understand effects of oiling in future oil spills.

What is Invited. Proposals are invited to examine the fate and effects of *Exxon Valdez* oil in western Prince William Sound. Proposals specifically addressing these effects on populations of sea otters and harlequin ducks are of interest. Proposals are also requested to examine the status of subsistence activities in the spill affected areas. In addition to the objectives and examples described here, proposers may use this invitation to suggest other approaches to aid the recovery of other resources and services that were identified by the Trustee Council as having been injured by the oil spill. However, the Trustee Council's emphasis in FY 04 will be on development of the GEM Program as its primary restoration activity.

Examples of Responses to the Lingering Oil Effects Invitation.

1. Bioavailability of Lingering Oil in Prince William Sound: Research conducted in Prince William Sound in 2001 estimated that about 28 acres of intertidal beach remain contaminated from spilled *Exxon Valdez* oil. The Trustee Council is interested in evaluating the bioavailability of this oil to sea otters and harlequin ducks in the Prince William Sound area. Proposals are invited to evaluate foraging activities of sea otters in oiled areas; collect sea otter mortality, emigration and population data; and monitor harlequin duck recovery. Annual amount of combined proposals should be in vicinity of $150,000. One year of funding is anticipated.

2. Monitoring of Presence of Lingering Oil: The Trustee Council is interested in establishing a strategy for monitoring persistence of *Exxon Valdez* oil, and its relationship to other sources of contamination in Prince William Sound. Annual amount of proposal should be in vicinity of $40,000. One year of funding is anticipated.

3. Subsistence Uses in Spill Affected Areas: The last complete survey of the status of subsistence uses in spill-impacted communities was conducted in 1998. FY 04 is six years later, and the Trustee Council will consider proposals to evaluate the status of subsistence uses by collecting, analyzing, and reporting information about current subsistence uses in a subset of oil spill area communities using methodology that is comparable with previous research results. The evaluation should be a collaborative effort in which the study communities are partners in each phase of the study. Annual amount of proposal should be in vicinity of $300,000. One year of funding is anticipated.

F. Alaska Coastal Current (ACC)

Objectives for ACC in FY 04. The top priority for GEM in the ACC starting in FY 04 is to initiate the process that leads to collecting basic physical (temperature and salinity) and biological observations (optical measures, such as fluorescence) from a vessel of the Alaska Marine Highway System (AMHS) or other ship of opportunity operating in the waters of Prince William Sound, outer Kenai Peninsula, lower Cook Inlet, Kodiak and the Alaska Peninsula. Observations on these basic variables will be of use to a range of scientists, resource managers, and public members for multiple purposes and are fundamental to the future GEM modeling program. As part of this objective, continued development of the vessel-of-opportunity projects deploying the continuous plankton recorder and thermosalinograph into long-term projects is desirable. Another priority is to begin applying monitoring results to management of development activities in the ACC.

What is Invited. Proposals are invited to investigate and describe a time-sequenced approach that would be implemented over three years to establish a Voluntary Observing Ship data acquisition program based in the northern Gulf of Alaska. The Alaska Marine Highway System (AMHS) would be a likely candidate for this effort. The first step would be to explore and present the options on routes, choices of variables (temperature, salinity, etc.) in relation to capabilities of current instruments, sampling frequencies, data management and information transfer, and incremental costs for each of these activities. The design should envision adding instruments to monitor other variables in the future, as needs for them are identified by the GEM process. Capitalizing on existing community assets, such as scientists and interested lay people in the communities served by the ferries or other possible vessels, is an important consideration in system design. In addition, capitalizing on existing scientific assets on the AMHS, such as the U.S. Forest Service interpretive program, is highly desirable.

The second step in the sequence would be to explore installing equipment on the seawater intake system of a vessel operating in the waters of the northern Gulf of Alaska to record temperature, salinity and fluorescence at known times from an estimated average depth. If the AMHS appears to be appropriate, the successful proposal would address in detail all aspects of the deployment, including contact and relations with the AMHS administration, vessel master and crew; the selection, installation, testing and maintenance of equipment; the data process including acquisition, retrieval, quality control and assurance, and transmittal to GEM; and development of community-based support for logistics. Proposers should demonstrate knowledge of other ferry box and VOS data acquisition systems in the U.S., Europe and Japan, and of published coordination and cooperation efforts within the PICES MONITOR Task Team. Consult GEM Program Document, Chapter 9. *Note: Proposers wishing information from the Alaska Marine Highway System should first contact Phil Mundy, EVOS Science Director (phil_mundy@oilspill.state.ak.us), for referral to the appropriate authority at AMHS.*

Proposals are also invited to analyze the information needed to support resource and environmental management decisions for human activities in the ACC.

Examples of Responses to the ACC Invitation.

1. Collecting Physical and Biological Observations from the Alaska Marine Highway System (AMHS): The proposal would offer to assemble a team of experts capable of planning and implementing an observing system that takes underway measurements relevant to the GEM model (e.g., salinity, temperature and optical measures) from AMHS ferries. Over a three-year period, the proposal would develop the feasibility of installing specific instruments to collect temperature, salinity and optical measures of primary productivity on AMHS vessels and present those options (year one), initiate a pilot project (year two), and develop a fully operational real-time data acquisition and delivery program (year three). Community involvement in port areas is expected. Annual amount of first year should be in vicinity of $100,000, with subsequent years' levels of funding dependent on findings during the first year. A one-year proposal should be submitted with the understanding that consideration for subsequent years of funding would be dependent on findings and performance during year one. *Note: Proposers wishing information from the Alaska Marine Highway System should first contact Phil Mundy, EVOS Science Director (phil_mundy@oilspill.state.ak.us), for referral to the appropriate authority at AMHS.*

2. Collecting Physical and Biological Observations from Non-AMHS Ships-of-Opportunity. The proposal would continue the current GEM ship-of-opportunity activities that deploy the continuous plankton recorder, thermosalinograph and fluorometer on tanker vessels and provide a three-year plan for making them into an operational monitoring program for the ACC and offshore habitat types. Community involvement in port areas is expected to continue, and the possibility of partnerships with NPRB should be explored. Annual amount should be in vicinity of $130,000. Three-year proposals should be submitted.

3. Identify the Potential Mechanisms and Approaches for Monitoring Currents in Prince William Sound: Building on the results of the SEA project (Restoration Project /320), the proposal would identify the potential mechanisms for understanding current flows into and out of Prince William Sound for the ultimate purpose of contributing physical data to models of the relationships between currents and productivity. The proposal should assemble a team of scientists capable of designing and implementing a solution, provide an overview of data collection activities currently underway and being planned in Prince William Sound (with particular emphasis on Hinchinbrook Entrance and Montague Strait), identify variables needed to understand currents in relation to productivity, and develop a complete plan for implementing an observing program in collaboration and cooperation with other ongoing efforts. Annual amount should be in vicinity of $75,000. A one-year proposal is expected. However, consideration for subsequent years of funding would be dependent on findings and performance during year one.

4. Applications of Monitoring to Management of Human Activities in the Alaska Coastal Current: Building on the GEM Program Document (see especially Chapter 7.14-15), the proposal would analyze the information needed to support resource and environmental management decisions for a range of human activities (oil and gas development, seafood

processing, tourism and recreation, etc.) in the ACC in one of the major geographic regions of the GEM area (Prince William Sound, Cook Inlet or Kodiak-Afognak). Working in close cooperation with state and federal agencies actively engaged in resource and environmental management activities and reviewing the current scientific literature, the analysis would identify gaps by comparing information needed by managers to that actually available. The analysis would address all aspects of the suitability of past, current and future data and information products needed to support resource and environmental management decisions. Annual amount should be in vicinity of $80,000. Up to three years of funding may be proposed.

G. Nearshore

Objectives for Nearshore in FY 04. Most of the objectives for the nearshore in FY 04 will be met by projects underway in FY 03. However, another objective is to begin applying monitoring results to management of human activities in the nearshore.

What is Invited. Proposals are invited to analyze the information needed to support resource and environmental management decisions for human activities in the nearshore.

Examples of Responses to the Nearshore Invitation.

1. Applications of Monitoring to Management of Human Activities in the Nearshore: Building on the GEM Program Document (see especially Chapter 7.14-15), the proposal would analyze the information needed to support resource and environmental management decisions for a range of human activities (oil and gas development, seafood processing, tourism and recreation, etc.) in the nearshore in one of the major geographic regions of the GEM area (Prince William Sound, Cook Inlet or Kodiak-Afognak). Working in close cooperation with state and federal agencies actively engaged in resource and environmental management activities and reviewing the current scientific literature, the analysis would identify gaps by comparing information needed by managers to that actually available. The analysis would address all aspects of the suitability of past, current and future data and information products needed to support resource and environmental management decisions. Annual amount should be in vicinity of $80,000. Up to three years of funding may be proposed.

H. Watersheds

Objectives for Watersheds in FY 04. The primary objective for watersheds in FY 04 is to begin learning how to measure marine effects in watersheds. In including the watersheds as part of a marine monitoring program, the Trustee Council recognized that marine ecosystems do not stop at the shoreline or other arbitrary geographic boundaries. Measuring marine-related phenomena in watersheds, as well as terrestrial-related phenomena in the nearshore, is fundamental to the GEM monitoring program in these two habitat types. Even though all available evidence supports the concept that freshwater food webs in anadromous watersheds in the northern Gulf of Alaska and elsewhere are likely to be dependent to some extent on inputs of marine derived

nutrients, there are no systematic monitoring programs for them in the GEM region and very few observations in total.

What is Invited. Proposals are invited to identify and show how and where to measure the best indicators of marine-related biological production in watersheds, including within an existing water quality monitoring program. The proposal would address and discuss available approaches to measuring marine-related responses of biological production, such as marine isotopes of the elements carbon, nitrogen and sulfur. The proposal would explore the degree to which such isotopic elements would be useful as indicators of marine linkages and their possible variation in various types of watersheds. The proposal would also address possible proxy indicators of isotopes, such as nitrates and ammonium, as well as other possible suitable proxies for marine-related indicators. Essential auxiliary information, such as escapement estimates of anadromous species and seasonal runoff, should be identified. Key questions in sampling should be explored, such as, "What is the variability of marine-related indicators in bodily tissues among species within watersheds? Which species or species guilds are best suited to measuring marine linkages? How do suitable species vary among contrasting types of watersheds (e.g., heavily forested vs. recently glaciated, anadromous vs. non-anadromous, and heavy human development vs. pristine)? Is there an existing water quality sampling program that could be adapted to include monitoring of marine related variables?"

Examples of Responses to the Watershed Invitation.

1. Detection of Marine-Related Indicators: The proposal would describe a three-year program to identify, evaluate and implement statistically rigorous sampling strategies for detecting marine signals from plants and animals in the marine watersheds and nearby nearshore areas. The successful proposal would show how to establish the degree of annual variation in levels of the carbon, nitrogen and sulfur isotopes common in the marine environment, as measured in the tissues of plants and animals in watersheds. A statistical sampling strategy leading to establishment of monitoring stations capable of detecting annual changes in marine-related variables over a period of years would be described. Annual amount should be in vicinity of $150,000. A three-year proposal is expected with annual renewal dependent on performance.

2. Community Based Sampling Strategies for Sampling Marine-Related Indicators. The proposal would describe a three-year program to identify, evaluate and implement cost effective, statistically defensible community based sampling strategies for monitoring marine-related variables in watersheds and nearby nearshore areas. The successful proposal would incorporate proven approaches to community based monitoring of the aquatic environment, including QA/QC of citizen monitoring data. It would also show how to establish the degree of annual variation in levels of the isotopes of carbon, nitrogen and sulfur common in the marine environment, as measured in the tissues of plants and animals in watersheds. Annual amount should be in vicinity of $100,000. Proposals for up to three years may be considered with annual renewal dependent on performance.

3. Including Marine Related Variables in an Existing Water Quality Monitoring Program. The project would demonstrate how to leverage GEM funding in the water quality area

by adapting an existing water quality sampling program now used for monitoring the effects of human activities to address GEM questions regarding marine related substances in watersheds (or terrestrial related substances in estuaries/nearshore). The project would work with managers of the existing program and GEM staff to demonstrate how to obtain the required environmental monitoring information for both programs at lower cost than would otherwise be possible by working individually. Demonstration must include maintenance of quality control and assurances and the existing management applications of the data. Annual amount should be in vicinity of $50,000. Up to three years of funding may be proposed.

I. Continuing Projects

Beginning with the FY 04 funding cycle, the Trustee Council is expected to approve projects for multiple years (up to three years duration). The following FY 03 projects proposed multiple-year timeframes, but were funded in FY 03 prior to adoption of the multiple-year policy and hence for one year only. Proposals and budgets for the remaining years of these projects (up to three years total) must be submitted in response to this invitation in order to be considered for continued funding. If you have any questions regarding the submission requirements, please contact the Trustee Council Office. Please note that the Council is not obligated to continue funding for these projects. A decision to continue funding will be based on review of the project in accordance with the review criteria described elsewhere in this invitation.

030012	Photographic Monitoring of Resident Killer Whales
030052	Tribal Natural Resource Stewardship and Meaningful Tribal Involvement in GEM
030210	Youth Area Watch (Prince William Sound/Lower Cook Inlet)
030290	Hydrocarbon Database
030340	Toward Long-Term Oceanographic Monitoring of the Gulf of Alaska Ecosystem
030600	Synthesis of the Ecological Findings from the EVOS Damage Assessment and Restoration Programs
030610	Youth Area Watch (Kodiak)
030620	Lingering Oil and Predators: Pathways of Exposure and Population Status
030635	Trophic Dynamics of Intertidal Soft-sediment Communities: Interaction between Bottom-up and Top-down Processes
030647	Investigating Relative Roles of Natural and Shoreline Harvest in Altering Kenai Peninsula's Rocky Intertidal
030649	Reconstructing Sockeye Populations in the Gulf of Alaska over the Last Several Thousand Years
030654	Surface Nutrients over the Shelf and Basin in Summer: Bottom-up Control of Ecosystem Diversity
030666	Alaska Natural Geography in Shore Areas: Initial Field Project for Census of Marine Life
030670	Monitoring Dynamics of ACC and Development of Applications for Management of Cook Inlet Salmon

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

GEM PROPOSAL SUMMARY PAGE

(To be filled in by proposer)

Project Title:	Maximum 80 characters
Project Period:	Federal fiscal years--October 1st to September 30th--for which funding will be requested from the Trustee Council; for example "FY 04-FY 05"
Proposer(s):	Name and affiliation of proposer
Study Location:	General area in which field work will be conducted; e.g., Prince William Sound, Kodiak, Kenai Peninsula
Abstract:	A brief (150 words or less) summary of the project. Include what question(s) the project will address, what products the project will produce, and where and when the work will be done. The abstract may be edited for clarity, brevity, and readability by Trustee Council staff.

Funding:	EVOS Funding Requested:	FY 04	$	
		FY 05	$	
		FY 06	$	TOTAL:
	Non-EVOS Funds to be Used:	FY 04	$	
		FY 05	$	
		FY 06	$	TOTAL:
Date:	Date proposal prepared			

(NOT TO EXCEED ONE PAGE)

GEM RESEARCH PLAN

I. NEED FOR THE PROJECT

A. Statement of Problem

Identify the problem the project is designed to address. Describe the background and history of the problem. Include a scientific literature review that covers the most significant previous work history related to the project.

B. Relevance to GEM Program Goals and Scientific Priorities

Discuss how the project will evaluate the hypotheses or questions posed in the GEM Program Document and the GEM Science Plan. Describe the results you expect to achieve during the project, the benefits of success as they relate to the topic under which the proposal was submitted, and the potential recipients of these benefits. Discuss the utility of the research proposed for addressing the objectives described in the invitation.

II. PROJECT DESIGN

A. Objectives

List the objectives of the proposed research, the hypotheses being tested during the project, and briefly state why the intended research is important.

B. Procedural and Scientific Methods

For each objective listed in A. above, identify the specific methods that will be used to meet the objective. In describing the methodologies for collection and analysis, identify measurements to be made and the anticipated precision and accuracy of each measurement and describe the sampling equipment in a manner that permits an assessment of the anticipated raw-data quality.

If applicable, discuss alternative methodologies considered, and explain why the proposed methods were chosen. In addition, projects that will involve the lethal collection of birds or mammals must comply with the Trustee Council's policy on collections, available at http://www.oilspill.state.ak.us/pdf/admin/collectionspolicy.pdf.

C. Data Analysis and Statistical Methods

Describe the process for analyzing data. Discuss the means by which the measurements to be taken could be compared with historical observations or with regions that are thought to have similar ecosystems. Describe the statistical power of the proposed sampling program for detecting a significant change in numbers. To the extent that the variation to be expected in the response variable(s) is known or can be approximated, proposals should demonstrate that the sample sizes and sampling times (for dynamic processes) are of sufficient power or robustness to adequately test the hypotheses. For environmental measurements, what is the measurement error associated with the devices and approaches to be used?

D. Description of Study Area

Where will the project be undertaken? Describe the study area, including if applicable decimally-coded latitude and longitude readings of sampling locations or the bounding coordinates of the sampling region (e.g., 60.8233, -147.1029, 60.4739, -147.7309 for the north, east, south and west bounding coordinates). The formula for converting from degree minute seconds to decimal degrees is: degrees + (minutes/60) + (seconds/3600) so 121°8'6" = 121. + (8/60) + (6/3600) = 121.135

E. Coordination and Collaboration with Other Efforts

Indicate how your proposed project relates to, complements or includes collaborative efforts with other proposed or existing projects funded by the Trustee Council, or with other relevant projects in progress in the northern Gulf of Alaska. Describe any coordination that has taken or will take place (with other Council funded projects, ongoing agency operations, activities funded by other marine research entities, etc.) and what form the coordination will take (shared field sites, research platforms, sample collection, data management, equipment purchases, etc.). If the proposed project requires or includes collaboration with other agencies, organizations or scientists to accomplish the work, such arrangements should be fully explained and the names of agency or organization representatives involved in the project should be provided. If your proposal is in conflict with another project, note this and explain why.

III. SCHEDULE

A. Project Milestones

For each project objective listed above (II.A.), specify when critical project tasks will be completed. Project reviewers will use this information in conjunction with annual project reports to assess whether projects are meeting their objectives and are suitable for continued funding. Please format your information like the following example.

Objective 1. Develop sediment-core chronologies in lake-productivity indicators.
To be met by September 2004

Objective 2. Compare sediment data corresponding to the past few decades to salmon population statistics.
To be met by December 2004

Objective 3. Reconstruct time-series of lake productivity, input of marine-derived nutrients, and salmon escapement.
To be met by April 2005

B. Measurable Project Tasks

Specify, by each quarter of each fiscal year, when critical project tasks (for example, sample collection, data analysis, manuscript submittal, etc.) will be completed. This information will be

the basis for the quarterly project progress reports which are submitted to the Trustee Council Office. Please format your schedule like the following example.

FY 04, 1st quarter (October 1, 2003-December 31, 2003)
October: Project funding approved by Trustee Council

FY 04, 2nd quarter (January 1, 2004-March 31, 2004)
January 12-16 (tentative): Annual GEM Workshop

FY 04, 3rd quarter (April 1, 2004-June 30, 2004)
April 30: Core Upper Russian Lake
May 30: Core Delight Lake

FY 04, 4th quarter (July 1, 2004-September 30, 2004)
September 1: Core Hidden Lake

FY 05, 1st quarter (October 1, 2004-December 31, 2004)
December 15: Finish lab analyses of all three lakes

FY 05, 2nd quarter (January 1, 2005-March 31, 2005)
(dates not yet known) Annual GEM Workshop

FY 05, 3rd quarter (April 1, 2005-June 30, 2005)
April 15 Submit final report (which will consist of draft manuscript for publication) to Trustee Council Office

IV. RESPONSIVENESS TO KEY TRUSTEE COUNCIL STRATEGIES

A. Community Involvement and Traditional Ecological Knowledge (TEK)

Although not every proposal will have circumstances that allow involvement with local communities and incorporation of local knowledge, reviewers will give additional consideration to proposals that demonstrate meaningful community involvement and/or make use of traditional ecological knowledge (TEK). Use this section to address the following questions, if applicable: How will affected communities be informed about the project and be given an opportunity to provide their input? How will research findings and other project information be communicated to local communities? To what extent will local hire be used for the acquisition of such things as vessels, technicians, and equipment? To what extent will traditional and local knowledge be incorporated into the project? Do not simply provide a statement that a proposal is expected to benefit a community without demonstrating that one or more representatives of the community have been contacted prior to proposal submission and have agreed to work with the proposers in developing the community involvement components of the proposal. Community contacts should be identified in this section.

If you would like assistance in developing a community involvement or traditional knowledge component for your proposal, contact the Trustee Council Office. Please note that in December

1996 the Trustee Council adopted protocols for including traditional knowledge in EVOS projects. See *Protocols for Including Indigenous Knowledge in the EVOS Restoration Process* available at http://www.oilspill.state.ak.us/pdf/admin/protex.pdf .)

B. Resource Management Applications

Reviewers will give additional consideration to proposals that have resource management applications. One of the goals of GEM is to "solve", which is defined in the GEM Program Document as development of tools, technologies and information that can help resource managers and regulators improve management of marine resources and address problems that may arise from human activities. Use this section to describe how your proposal might result in knowledge or products that would contribute to meeting this goal. Do not simply provide a statement that a proposal is expected to have resource management applications without demonstrating that one or more representatives of a resource management agency have been contacted prior to proposal submission and have agreed to work with the proposers in developing the resource management components of the proposal. Resource management agency contacts should be identified in this section.

V. PUBLICATIONS AND REPORTS

If you are requesting funding for publication of project results in a peer-reviewed journal, provide the subject/title of each manuscript, the name of the peer-reviewed journal(s) to which you plan to submit it, and when the manuscript will be submitted. The Trustee Council expects publication of project results in peer-reviewed journals as soon as scientifically appropriate and logistically possible. The Council has adopted a policy regarding an acknowledgment and disclaimer to be used in publishing results of projects it has supported. For more information, see *Procedures for the Preparation and Distribution of Reports* available at http://www.oilspill.state.ak.us/pdf/admin/reportguidelines.pdf.

In addition to publications, annual reports are required on multi-year projects by September 1 of each fiscal year for which funding is received; final reports are required upon project completion. With approval of the Science Director, the publications discussed above may satisfy a portion of the report requirements. For more information, see *Procedures for the Preparation and Distribution of Reports* at http://www.oilspill.state.ak.us/pdf/admin/reportguidelines.pdf.

VI. PROFESSIONAL CONFERENCES

The Trustee Council encourages presentation of project results at professional conferences (in addition to the annual GEM workshop), and may provide limited travel support for particularly important opportunities. If you are requesting travel funds for conference attendance, provide in this section the name and sponsor of the conference, when and where the conference will be held, and your anticipated role in the conference.

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:

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: FY04 FY 05 FY 06 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: FY 04 FY 05 FY 06 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: FY04 FY 05 FY 06 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: FY 04 FY 05 FY 06 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)

GEM DETAILED BUDGET INSTRUCTIONS

The required budget form, detailing the amount of funding requested from the Trustee Council for each federal fiscal year, must be submitted as part of the proposal package. The form is in addition to the budget justification that is also required as part of the proposal package. An electronic copy of the budget form (created in Excel) is available at http://www.oilspill.state.ak.us/admin/invitation/budgetform_instruction_page.html:

Funds may be requested for up to three years (FY 04, FY 05 and FY 06). Proposers are encouraged to be thoughtful and thorough in their budget development, as the Trustee Council expects to consider revisions to future-year budgets only in the case of unforeseen or unanticipated events or in response to ongoing scientific/technical review. Be advised that projects will be allowed to "carry forward" any unspent funds from one fiscal year into the next.

Each budget will be reviewed for consistency with the objectives contained in the proposal and for adherence to the budget instructions that follow. Proposers may be asked to respond to budget review questions, or to revise their budgets to address budgetary concerns.

Fiscal Year. The Trustee Council awards funds on the federal fiscal year (October 1-September 30). As noted above, your budget must address all fiscal years for which funds are requested.

Project Number. For projects that received funding in FY 03, use the last three digits of the FY 03 project number preceded by "040" (for example, project 030290 would become 040290). For new projects, leave the number blank.

Rules for Numbers. Show costs in thousands of dollars. For example, show $86,423 as $86.4. When the number "5" follows the digit to be rounded, round to the higher amount. For example, round $26,752 to $26.8.

Indirect Costs. Indirect costs are costs incurred for common or joint purposes that cannot be specifically identified with a particular project. Examples of indirect costs are lease costs, copying, phones, faxes, internet access, equipment maintenance, vehicle leasing, training, payroll and personnel functions, clerical support, administrative supervision, accounting, auditing, and mail and messenger services. These items should be budgeted for separately only if they are incurred because of a specific project and documentation of the expense is maintained.

- Trustee agencies (Alaska Department of Environmental Conservation, Alaska Department of Fish and Game, Alaska Department of Natural Resources, National Oceanic and Atmospheric Administration, US Forest Service, and US Department of the Interior) should cover these costs through the Trustee Council's general administration (GA) formula. The GA rate is 9% of each project's total direct costs.
- Non-Trustee organizations should cover these costs through their indirect cost rate. These rates will be reviewed on a project-by-project basis. However, proposers affiliated with the University of Alaska must use the indirect rate agreed to by the University for Trustee Council-funded projects. The agreement provides for an indirect cost rate of 25 percent of total direct costs (TDC). TDC includes all direct costs except (1) equipment

for which ownership resides with the University and (2) subcontract costs in excess of $25,000. Regarding subcontracts, the indirect rate is 25 percent of the first $25,000 of each subcontract, plus 5 percent of each subcontract's costs in excess of $25,000 and less than $250,000, plus 2 percent of each subcontract's costs in excess of $250,000.

Direct Costs. Direct costs are costs specifically identified with a particular project. Examples of direct costs are compensation of employees for the time spent executing the project, acquisition of materials or equipment for purposes outlined in the research plan, project-specific travel, and contractual services specified in the research plan. For most projects, the following direct costs should be included:

1. NEPA (National Environmental Policy Act) Compliance: All projects funded by the Trustee Council must comply with NEPA. Due to their research nature, most projects receive a categorical exclusion (CE) from NEPA. However, for a few projects, an environmental assessment (EA) may be required. If a project will likely require an EA, include the costs for preparing it in the project budget.

2. Workshop Attendance: All principal investigators are required to attend the Annual GEM Workshop. In FY 04, the workshop has tentatively been scheduled for Anchorage during the week of January 12, 2004. Unless you reside in Anchorage, include funds in your budget for travel and per diem for the PI (and co-PI, if appropriate) to attend this workshop.

3. Report Writing: Annual reports are required on multiple-year projects and must be submitted by September 1 of each fiscal year for which funding is received; annual reports on projects funded for FY 04 will be due September 1, 2004. Final reports are required upon project completion. Identify in the description field on the appropriate budget forms any funds that have been included for report writing and preparation. (For more information, see *Procedures for the Preparation and Distribution of Reports* at http://www.oilspill.state.ak.us/pdf/admin/reportguidelines.pdf.)

Many projects will also include the following direct costs:

4. Manuscript Preparation and Publication: The Trustee Council may contribute a maximum of $1,000 in page costs per project and 1.5 months of personnel time per manuscript toward publication of study results in the peer reviewed literature. Specify in your research plan the subject/title of each manuscript, the name of the peer reviewed journal(s) to which you plan to submit it, and when the manuscript will be submitted.

5. Professional Conferences: The Trustee Council may fund attendance at one professional conference (in addition to the Annual GEM Workshop) per year for each PI (and co-PI, if appropriate). Specify in your research plan the name and sponsor of the conference, when and where the conference will be held, and your anticipated role in the conference.

Budget Forms. One set of forms is for Trustee agencies; a separate set of forms is for non-Trustee organizations. Sample forms and instructions for completing them follow. The budget

form must be completed for each fiscal year (FY 04-06) for which funding is being requested from the Trustee Council. Electronic copies of the forms (created in Excel) are available at http://www.oilspill.state.ak.us/admin/invitation/budgetform_instruction_page.html or from the Trustee Council Office (on an IBM disk or by e-mail).

Trustee Agency Form
Multi-Trustee Agency Summary (Form 2A)

This form is used when multiple Trustee agencies are cooperating on a project. If only one Trustee agency is involved, this form is not required.

How to Complete the Form...

1. *Proposed Funding (FY 04, 05, 06, TOTAL)* - No input required. All the information is linked to the individual agency forms.
2. *Proposed Trustee Agency Totals* - Total requested by each agency. These fields are not linked and the information must be entered manually.
3. *Project Identification Field* - Enter the project number (if known), title, and lead agency.
4. *Date Prepared* - Enter the date this budget was prepared.

	PROPOSED TRUSTEE AGENCY TOTALS (FY 04 - 06)					
	ADEC	ADF&G	ADNR	USFS	DOI	NOAA
	-2-					
Budget Category:	Proposed FY 04	Proposed FY 05	Proposed FY 06	TOTAL PROPOSED		
	-1-	-1-	-1-	-1-		
Personnel						
Travel						
Contractual						
Commodities						
Equipment						
Subtotal						
General Administration (9% of subtotal)						
Project Total						

FY 04-06

Project Number:
Project Title: -3-
Lead Agency:

FORM 2A
MULTI-
TRUSTEE
AGENCY
SUMMARY

Date Prepared: -4-

Trustee Agency Form, page 1 of 4
Summary (Form 3A)

This form summarizes the proposed expenditures contained on the Trustee Agency Detail forms.

How to Complete the Form...

1. *Proposed Funding (FY 04, 05, 06, TOTAL)* - No input required. All the information is linked to the Detail forms.
2. *Cost-share Funds* - Enter the amount of funds from other sources that the project leverages and any agency contribution.
3. *Project Identification Field* - Enter the project number (if known), title, and your agency.
4. *Data Prepared* – Enter the date this budget was prepared.

Budget Category:	Proposed FY 04	Proposed FY 05	Proposed FY 06		TOTAL PROPOSED
	-1-	-1-	-1-		-1-
Personnel					
Travel					
Contractual					
Commodities					
Equipment					
Subtotal					
General Administration (9% of subtotal)					
Project Total					

Cost-share Funds: -2-
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.

FY 04-06

Project Number:
Project Title: -3-
Agency:

FORM 3A
TRUSTEE
AGENCY
SUMMARY

Date Prepared: -4-

Trustee Agency Form, page 2 of 4
Personnel & Travel Detail (Form 3B)

"Personnel" means compensation of employees, including benefits, for the time and effort devoted to the execution of the project. "Travel" means the cost of transportation by public conveyance and per diem. All travel must be budgeted at round-trip economy rates.

How to Complete the Form...

1. *Name* - Enter the first initial and last name of each person budgeted.
2. *Position Description* - Enter the position title.
3. *GS/Range/Step* - Enter the appropriate general schedule (GS) and step, or range and step.
4. *Months Budgeted* - Enter the number of months for each position.
5. *Monthly Costs* - Enter the monthly sum of salary and benefits for each position.
6. *Overtime* - Enter the estimated overtime cost for each position, if any.
7. *Personnel Sum* - The form automatically calculates: (Months Budgeted x Monthly Costs) + Overtime
8. *Travel Description* - Include name of traveler, destination, and trip purpose.
9. *Ticket Price* - Enter the round trip economy-rate ticket price.
10. *Round Trips* - Enter the number of round trips.
11. *Total Days* - Enter the total number of days in travel status.
12. *Daily Per Diem* - Enter the daily per diem rate.
13. *Travel Sum* - The form automatically calculates: (Ticket Price x Round Trips) + (Total Days x Daily Per Diem)
14. *Project Identification Field* - Enter the project number, title, and your agency.

Personnel Costs:		GS/Range/	Months	Monthly		Personnel
Name	Description	Step	Budgeted	Costs	Overtime	Sum
-1-	-2-	-3-	-4-	-5-	-6-	-7-
	Subtotal					
					Personnel Total	

Travel Costs:	Ticket	Round	Total	Daily	Travel
Description	Price	Trips	Days	Per Diem	Sum
-8-	-9-	-10-	-11-	-12-	-13-
				Travel Total	

FY 04

Project Number:
Project Title: -14-
Agency:

FORM 3B
Personnel
& Travel
DETAIL

Trustee Agency Form, page 3 of 4
Contractual & Commodities Detail (Form 3B)

"Contractual" covers such items as vessel charters, equipment rental or lease, professional services, communications, and printing. "Commodities" are expendable supplies with an estimated life of less than one year and a unit value of less than $1,000.

How to Complete the Form...

1. *Contractual Description* - List the items or services to be purchased. If a significant portion of the project will be performed under contract, and the likely contractor is known, the Non-Trustee Organization forms are also required.
2. *Contractual Sum* - Enter the proposed contractual cost.
3. *Commodities Description* – List the items to be purchased.
4. *Commodities Sum* - Enter the proposed commodities cost.
5. *Project Identification Field* - Enter the project number, title, and your agency.

Contractual Costs:	Contract Sum
Description	
- 1 -	- 2 -
If a component of the project will be performed under contract, the 4A and 4B forms are required. **Contractual Total**	
Commodities Costs:	Commod. Sum
Description	
- 3 -	- 4 -
Commodities Total	

FY 04	Project Number: Project Title: - 5 - Lead Agency:	FORM 3B Contractual & Commodities DETAIL

Trustee Agency Form, page 4 of 4
Equipment Detail (Form 3B)

"Equipment" means non-expendable items having an estimated life of more than one year and a unit value greater than $1,000. Equipment previously purchased by the Trustee Council should be used to the maximum extent possible. Before requesting funds for new equipment, contact your Trustee Agency project manager to determine if suitable equipment is already available. Equipment items with an original per unit cost of $5,000 or more belong to the acquiring Trustee agency on behalf of the Council. At the end of the project, the Council's Executive Director shall determine if such equipment shall be used for another Council project or if the item shall remain with the acquiring agency. (For further information, see *EVOS Financial Procedures* at http://www.oilspill.state.ak.us/pdf/admin/profinancial.pdf.)

How to Complete the Form...

1. *New Equipment Description* - List the equipment and how the cost estimate was obtained.
2. *Number of Units* - Enter the number of units to be purchased.
3. *Unit Price* - Enter the unit price.
4. *Equipment Sum* - The form automatically calculates: Number of Units x Unit Price
5. *Existing Equipment Description* - Describe existing equipment which will be used.
6. *Number of Units* - Enter the number of existing units which will be used.
7. *Inventory Agency* - Enter the agency which currently has the equipment on inventory.
8. *Project Identification Field* - Enter the project number, title, and your agency.

New Equipment Purchases: Description		Number of Units	Unit Price	Equipment Sum
-1-		-2-	-3-	-4-
			New Equipment Total	

Existing Equipment Usage: Description	Number of Units	Inventory Agency
-5-	-6-	-7-

FY 04

Project Number:
Project Title: -8-
Agency:

FORM 3B
Equipment
DETAIL

Non-Trustee Organization Form, page 1 of 4
Summary (Form 4A)

This form summarizes the proposed expenditures contained on the Non-Trustee Organization Detail forms.

How to Complete the Form...

1. *Proposed Funding (FY 04, 05, 06, TOTAL)* - No input required. All the information is linked to the Detail forms.
2. *Indirect* – Enter the proposed indirect project cost.
3. *Trustee Agency GA* – No input required; the form automatically calculates: Project Total x .09. (Each project is administered by one of the Trustee agencies; the approved administrative fee is 9% of total project cost.)
4. *Cost-share Funds* - Enter the amount of funds from other sources that the project leverages and any organization contribution.
5. *Project Identification Field* - Enter the project number (if known), title, and your organization.
6. *Date Prepared* – Enter the date this budget was prepared.

Budget Category:	Proposed FY 04	Proposed FY 05	Proposed FY 06		TOTAL PROPOSED
	-1-	-1-	-1-		-1-
Personnel					
Travel					
Contractual					
Commodities					
Equipment					
Subtotal					
Indirect (rate will vary by proposer)	-2-				
Project Total					
Trustee Agency GA (9% of Project Total)	-3-				
Total Cost					

Cost-share Funds: -4-
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.

FY 04-06

Project Number:
Project Title: -5-
Proposer:

FORM 4A
NON-
TRUSTEE
SUMMARY

Date Prepared: -6-

Non-Trustee Organization Form, page 2 of 4
Personnel & Travel Detail (Form 4B)

"Personnel" means the compensation of employees, including benefits, for the time and effort devoted to the project and includes tuition for students. "Travel" means the cost of transportation by public conveyance and per diem. All travel must be budgeted at round-trip economy rates.

How to Complete the Form...

1. *Name* - Enter the first initial and last name of each person budgeted.
2. *Position Description* - Enter the position title.
3. *Months Budgeted* - Enter the number of months for each position.
4. *Monthly Costs* - Enter the monthly sum of salary and benefits for each position.
5. *Overtime* - Enter the estimated overtime cost for each position, if any.
6. *Personnel Sum* - The form automatically calculates: (Months Budgeted x Monthly Costs) + Overtime
7. *Travel Description* - Include name of traveler, destination, and trip purpose.
8. *Ticket Price* - Enter the round trip economy-rate ticket price.
9. *Round Trips* - Enter the number of round trips.
10. *Total Days* - Enter the total number of days in travel status.
11. *Daily Per Diem* - Enter the daily per diem rate.
12. *Travel Sum* - The form automatically calculates: (Ticket Price x Round Trips) + (Total Days x Daily Per Diem)
13. *Project Identification Field* - Enter project number, title, and your organization.

Personnel Costs:			Months Budgeted	Monthly Costs	Overtime	Personnel Sum
	- 1 -	- 2 -	- 3 -	- 4 -	- 5 -	- 6 -
		Subtotal	0.0	0.0	0.0	
					Personnel Total	

Travel Costs:		Ticket Price	Round Trips	Total Days	Daily Per Diem	Travel Sum
	- 7 -	- 8 -	- 9 -	- 10 -	- 11 -	- 12 -
					Travel Total	

FY 04	Project Number: Project Title: - 13 - Proposer:		FORM 4B Personnel & Travel DETAIL

Contractual & Commodities Detail (Form 4B)

"Contractual" covers such items as vessel charters, equipment rental or lease, professional services, communications, and printing. "Commodities" are expendable supplies with an estimated life of less than one year and a unit value of less than $1,000.

How to Complete the Form...

1. *Contractual Description* - List the items or services to be purchased.
2. *Contractual Sum* - Enter the proposed contractual cost.
3. *Commodities Description* – List the items to be purchased.
4. *Commodities Sum* - Enter the proposed commodities cost.
5. *Project Identification Field* - Enter project number, title, and your organization.

Contractual Costs:	Contract Sum
Description	
- 1 -	- 2 -
Contractual Total	

Commodities Costs:	Commodity Sum
Description	
- 3 -	- 4 -
Commodities Total	

FY 04	Project Number: Project Title: - 5 - Proposer:	FORM 4B Contractual & Commodities DETAIL

Non-Trustee Organization Form, page 4 of 4
Equipment Detail (Form 4B)

"Equipment" means non-expendable items having an estimated life of more than one year and a unit value greater than $1,000. Equipment previously purchased by the Trustee Council should be used to the maximum extent possible. Before requesting funds for new equipment, contact the project manager at your administering Trustee agency to determine if suitable equipment is already available. All equipment purchased remains the property of the Trustee agency until the end of the project, at which time the agency may, under certain circumstances, transfer the equipment title to the contractor. If the original per unit cost of the equipment was $5,000 or more, the Council's Executive Director has the authority to direct that the equipment be transferred to another Council-funded project, rather than remaining with the Trustee agency or being transferred to a contractor.

How to Complete the Form...

1. *New Equipment Description* - List the equipment and how the cost estimate was obtained.
2. *Number of Units* - Enter the number of units to be purchased.
3. *Unit Price* - Enter the unit price.
4. *Equipment Sum* - No input necessary. The form automatically calculates: Number of Units x Unit Price
5. *Existing Equipment Description* - Describe existing equipment which will be used.
6. *Number of Units* - Enter the number of existing units which will be used.
7. *Project Identification Field* - Enter project number, title, and your organization.

New Equipment Purchases: Description		Number of Units	Unit Price	Equipment Sum
-1-		-2-	-3-	-4-
			New Equipment Total	

Existing Equipment Usage: Description		Number of Units
-5-		-6-

FY 04

Project Number:

Project Title: -7-
Proposer:

FORM 3B
Equipment
DETAIL

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: _____

Printed Name of PI: _____

Signature of PI: _____ Date _____

Printed Name of co-PI: _____

Signature of co-PI: _____ Date _____

Printed Name of co-PI: _____

Signature of co-PI: _____ Date _____

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

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

GEM PROPOSAL CLASSIFICATION FORM (p. 1)

Use the following chart (2 pages) to select entries which describe your proposal. You may select multiple entries per topic area if applicable.

Name: _____ Title of Proposal: _____

Species

- ☐ Phytoplankton
- ☐ Zooplankton
- ☐ Macro Algea/Marine Vascular
- ☐ Pollock
- ☐ Rockfish
- ☐ Flatfish
- ☐ Other Groundfish
- ☐ Halibut
- ☐ Herring
- ☐ Forage Fish
- ☐ Salmon
- ☐ Crab
- ☐ Shrimp
- ☐ Bivalves
- ☐ Cephalopods
- ☐ Seabirds
- ☐ Sea Ducks
- ☐ Sea Geese
- ☐ Steller Sea Lions
- ☐ Fur Seals
- ☐ Ice Seals
- ☐ Harbor Seals
- ☐ Whales Sperm
- ☐ Whales Right
- ☐ Whales Killer/Ocra
- ☐ Whales Bowheads
- ☐ Whales Humpbacks
- ☐ Sea Otters
- ☐ Polar Bears
- ☐ Other

_____

Technologies

- ☐ Acoustics/Hydroacoustics
- ☐ ADCP/Moored arrays
- ☐ Automated Plankton Samplers
- ☐ AUVs/ROVs/Submersibles
- ☐ Data/Information Mgmt
- ☐ Drifters
- ☐ GIS
- ☐ Mapping
- ☐ Other:
- ☐ Paleo/core studies
- ☐ Remote sensing/Realtime data
- ☐ Spectrometry
- ☐ Tagging/radiotelemetry
- ☐ Tissue sampling/biopsy
- ☐ Volunteer Observing Ships
- ☐ Other

_____

Modeling

- ☐ Biological/Process
- ☐ Bio-Physical
- ☐ Ecological
- ☐ Economic
- ☐ Physical
- ☐ Other

_____

Location

- ☐ Aleutian Islands
- ☐ Arctic Ocean
- ☐ Bering Sea
- ☐ Cook Inlet
- ☐ Gulf of Alaska
- ☐ Kodiak
- ☐ Prince William Sound
- ☐ Watersheds:
- ☐ Other

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GEM PROPOSAL CLASSIFICATION FORM (p. 2)

Use the following chart (2 pages) to select entries which describe your proposal. You may select multiple entries per topic area if applicable.

Name: _____ Title of Proposal: _____

Physical Science/Math

- ☐ Atmos. Science/Climate
- ☐ Chemical Oceanography
- ☐ Chemistry
- ☐ Contaminants/Persist. Organics
- ☐ Geological Oceanography
- ☐ Geology
- ☐ Hydrology
- ☐ Ice Dynamics
- ☐ Ice Edge/Pack Ice Studies
- ☐ Oil Spills
- ☐ Physical Oceanography Coastal
- ☐ Physical Oceanography Offshore
- ☐ Physics
- ☐ Statistics/Mathematics
- ☐ Other

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Biological Science

- ☐ Age Studies
- ☐ Benthic Ecology
- ☐ Biochemistry
- ☐ Biological Geo. Distribution
- ☐ Biological Migration
- ☐ Biological Oceanography
- ☐ Biology
- ☐ Community Ecology
- ☐ Conservation Biology
- ☐ Diseases
- ☐ Ecology
- ☐ Evolution
- ☐ Genetics
- ☐ Habitat mapping/ecology
- ☐ Intertidal Ecology
- ☐ Metabolic/Food Stress
- ☐ Microbiology
- ☐ Morphology/Physiology
- ☐ Paral. Shellfish Poison
- ☐ Population Dynamics
- ☐ Stock Identification
- ☐ Toxicology/Contaminants
- ☐ Trophic Dynamics
- ☐ Veterinary medicine
- ☐ Other

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Socio/Econ Management Issues

- ☐ Anthropology
- ☐ Aquaculture/Hatcheries
- ☐ Bycatch Reduction
- ☐ Capacity Reduction
- ☐ Coastal Management
- ☐ Community-Based Science
- ☐ Economics
- ☐ Fisheries/Fish Management
- ☐ Fishing Gear Disturbance
- ☐ Harvest Strategy
- ☐ Logging
- ☐ Social Sciences
- ☐ Subsistence
- ☐ TEK/Local Knowledge
- ☐ Vessel Noise Disturb.
- ☐ Other

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☐

GEM POSSIBLE PEER REVIEWERS FORM

Provide the names and contact information for 3 persons qualified to review your proposal, and identify each persons' area(s) of professional expertise from the classification list available at www.oilspill.state.ak.us/nonpdf_docs/invitation/classification_form.xls. These persons must not be current co-workers or collaborators of the proposer(s), major former professors of the proposer(s), or former graduate students of the proposer(s).

PROJECT TITLE:

1st Name:

Contact Information:

Area(s) of Expertise:

2nd Name:

Contact Information:

Area(s) of Expertise:

3rd Name:

Contact Information:

Area(s) of Expertise: