11.19.04

# Exxon Valdez Oil Spill Trustee Council

May 27, 2008 teleconference

#### Womac, Cherri G (EVOSTC)

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From:	Baffrey, Michael (DFG sponsored)	
Sent:	Monday, May 19, 2008 4:56 PM	
То:	Lloyd, Denby S (DFG); Jim Balsiger (jim.balsiger@noaa.gov); Joe Meade (jmeade@fs.fed.us); Hartig, Lawrence L (DEC); Randall Luthi (randall.luthi@mms.gov); Colberg, Talis J (LAW); Ann_Jurva@ios.doi.gov; Carol Schirmer (Carol.Schirmer@NOAA.gov); Fishwick, Claire (DEC); Dee Little (dlittle01@fs.fed.us); Schlosser, Mary A (DFG); Michael Barre (Michael.Barre@mms.gov); Korting, Nancy A (LAW)	
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Subject:	Background Packet for May 27 Trustee Council Meeting	

Attachments: Draft Agenda 5-27-08.doc; Restoration Program - Future Direction 5-17-08.doc; Integrated Herring Workshop-Final Minutes CWB.doc; Japanese Herring Enhancement Expert Tour -May 11-15.doc; DRAFT - FY09 Invitation.pdf; Barrow Goldeneye petition.doc; Draft May 1 Trustee Council Meeting notes.doc; Motions for Action Items 5-27-08.doc

Hello Council Members, attached are the:

- meeting agenda,
- future focus statement for the restoration program,
- summary of the Integrated Herring Restoration Program workshop held in Cordova April 28-May 2,
- summary of the May 11-15 tour with the Japanese herring enhancement experts,
- draft FY09 Invitation for Proposals,
- petition for listing the Barrow's goldeneye as an injured resource,
- notes from the May 1 Trustee Council meeting in Cordova, and
- draft motions for action items on the May 27 meeting agenda.

To increase our efficiency and reduce administrative cost we are sending these files electronically. Please have your respective administrative staff make hard copies if you are planning to participate in the May 27 meeting.

Also, in my May 9 e-mail to Craig O'Connor I provided you with additional briefing material on the integrated herring program. I also provided materials regarding the establishment of a pool of science/restoration experts that I can draw from on an ad hoc basis to replace the science panel as a standing committee. In my May 17 e-mail to Craig Tillery I provided you with briefing material specific to the draft FY09 Invitation. In a separate e-mail, I will provide you with briefing material regarding my recommendation on the petition to include Barrow's goldeneye on the Injured Resources and Services List.

Michael Baffrey Executive Director Exxon Valdez Oil Spill Trustee Council Voice: (907) 265-9330 Mobile: (907) 351-1852 michael\_baffrey@alaska.gov

5/20/2008



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# Exxon Valdez Oil Spill Trustee Council

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



DRAFT AGENDA

DRAFT 5/19/08

Trustee Council Members:

TALIS COLBERG Attorney General Alaska Department of Law

LARRY HARTIG Commissioner Alaska Department of Environmental Conservation

DENBY S. LOYA

JAMES BALSIGER Administrator, Alaska Region National Marine Fisheries Service

RANDALL LUTHI Director U.S. Minerals Management Service

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

Meeting in Anchorage, Trustee Council Office 441 West 5<sup>th</sup> Avenue, Suite 500 Teleconference number: 800.315.6338. Code: 8201

#### State Chair

- 1. Call to Order 8:30 a.m.
- 2. Consent Agenda
  - Approval of Agenda\*

Federal Trustees U.S. Department of the Interior U.S. Department of Agriculture National Oceanic and Atmospheric Administration  Approval of Meeting Notes\* May 1, 2008

- 3. Public Advisory Committee comments
- 4. Public comment 8:45 a.m. (3 minute per person)
- 5. Cordova Center Project Management\*
- 6. Integration of Herring\*
- 7. FY 09 Invitation for Proposals\*
- 8. Communication Planning Update
- 9. Barrow's Goldeneyes\*

Michael Baffrey

Restoration Specialist

Michael Baffrey Executive Director

Rebecca Talbott Communication and Outreach Coordinator

Catherine Boerner

Adjourn

\* Indicates action items

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# Exxon Valdez Oil Spill Trustee Council

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



## Cordova, Alaska May 1, 2008 DRAFT 05/15/08 DRAFT Chaired by: Randall-Luthi Trustee Council Member Trustee Council Members Present: Steve Zemke, USFS\* Talis Colberg, ADOL •Randall Luthi, USMMS Denby S. Eloyd, ADF&G Craig O'Connor, NOAA \*\* Larry Hartig, ADEC Chair Steve Zemke alternate for Joe Meade Craig O'Connor alternate for James Balsiger The meeting convened at 6:35 p.m., May 1, 2008 in Cordova at the Mount Eccles Elementary School Auditorium. 1. Approval of the Agenda **APPROVED MOTION:** Motion to approve the draft agenda dated April 28, 2008 Motion by Lloyd, second by O'Connor 2. Approval of March 17, 2008 meeting notes **APPROVED MOTION:** Motion to approve the March 17, 2008 meeting notes

TRUSTEE COUNCIL MEETING NOTES

**Federal Trustees** U.S. Department of the Interior U.S. Department of Agriculture National Oceanic and Atmospheric Administration Public comment period began at 7: 50 p.m.

#### Thirty public comments were received.

Public comment closed at 10:20 p.m.

Off the record - 10:21 p.m. On the record - 10:38 p.m.

#### 3. Cordova Community Center

**APPROVED MOTION:** 

Motion to authorize the expenditure of an amount from the Exxon Valdez Oil Spill Trustee joint settlement funds, equal to \$7 million or one-third the cost of construction of the Cordova Center, whichever is less, for the construction of the Cordova Center as described in the City's January 19, 2007 proposal to the EVOS Council, provided that:

(1) a portion of the facility be used as described in the January 19, 2007 proposal, to educate the public and build scientific knowledge relating to the impacts of the 1989 *Exxon Valdez* oil spill and restoration of those impacts and further restoration goals;

(2) the City provide, before any expenditure of EVOS funds, documentation demonstrating to the satisfaction of Department of Law and NOAA that the city has firm commitments for the funding of all the anticipated costs of construction of the Cordova Center, and that the Cordova Center will be used for the EVOS-related purposes, as described in the January 19, 2007 proposal; and

(3) the City provide a written commitment that it will fund all operation and maintenance costs of the Cordova Center and not request those funds from the EVOS Trustee Council. Motion by Hartig, second by O'Connor

APPROVED MOTION:

Motion to approve \$8,393 G&A to the appropriate state agency for management of the Cordova Center project

Motion by Hartig, second by Colberg

Meeting adjourned at 12:10 a.m.

APPROVED MOTION:

Move to adjourn

Motion by Lloyd, second by O'Connor

#### Comments to EVOS Trustee Council May 27, 2008 From Stacy Studebaker - PAC Chair

Good Morning Members of the Trustee Council,

Since we haven't had a PAC meeting since March 5<sup>th</sup> I don't have many comments this morning.

I do want to talk about the FY09 Invitation and express the PAC's concern over the many delays especially since we skipped last year's invitation. At our March 5<sup>th</sup> meeting we reviewed and discussed the FY09 Invitation and were in support of the document with the emphasis on the integrated approach to research and restoration for not only herring but for birds, near shore, and everything else. We think that Michael and his staff have done a great job in preparing the document and making some important changes in the way we approach restoration.

The shot-gun approach of stand- alone projects that has been the mode of operation in the past is clearly not working to get us any closer to restoration. We clearly need a new paradigm and better approach that encourages more collaboration among scientists and communities. The bottom line is that we want good science that will get us closer to restoration.

The PAC is in support of the FY09 Invitation document as it stands and wants to emphasize the importance of community-based involvement in restoration. Local ownership and local buy-in is essential for a successful restoration program that has any lasting value and sustainability.

We are concerned that there seems to be no cap on spending down the restoration funds. The PAC has been unanimous about keeping the annual budget as close as possible to the interest earned on the restoration reserve account. That has been our guiding principal and the basis of our funding recommendations to you. Presently, there appears to be an effort to spend down the remaining funds as fast as possible. The PAC recognizes that the natural resources of particularly Prince William Sound are far from recovered and therefore want to see the public's funds last long enough to see us through to a full recovery.

Lastly, we want to thank Michael and his staff for the great work they do.

Thanks and I'd be happy to take any questions.

Stacy Studebaker

Future Focus

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#### Focus Areas for Future Restoration Trustee Council for the Exxon Valdez Oil Spill May 17, 2008

In March 2008, nineteen years after the spill, the Trustee Council for the *Exxon Valdez* Oil Spill reviewed the past performance of the restoration program and identified focus areas to address remaining restoration needs and guide the program forward with the following priorities:

**Implement an integrated approach to restoration:** The Council recognizes the limitations of what can be learned, what is still unknown, and what may never be known about resources and services injured in the spill. The Council is committed to implementing an integrated approach to restoration that views the ecosystem as a whole and not as individual parts. Integrated programs will emphasize PWS herring stock, lingering oil (especially as it affects the nearshore ecosystem and subsistence use), and the reduction of marine pollution. These programs will be created in consultation with researchers, local interest groups, and native community leaders and will emphasize measurable restoration goals.

**Develop a monitoring program:** The success of any integrated program cannot be measured without a comprehensive monitoring program. The Council will continue to refine and improve its monitoring program in a way that coordinates and supplements, but does not duplicate existing programs. This program will provide the most current data available on the health of the spill-impacted ecosystems.

Address human service losses: The Council will examine human service losses and identify how further actions including increased community involvement, outreach, and education can further restore injured human services. Goals and methods will be identified for responding to human service losses and criteria developed to identify a sufficient nexus between human service losses and specific restoration proposals.

**Refine the community involvement plan:** The Council will continue to involve the community in its research, monitoring, and restoration processes. The Council will also refine its methods for gathering and including information from citizens and the community. Sources for this valuable information include citizen and community-based research, monitoring and restoration, local and traditional knowledge, environmental education, and community outreach.

**Continue the habitat protection program:** The Council's extensive habitat acquisition program has preserved hundreds of thousands of acres that provide critical habitat for resources and services injured by the spill. The Council is committed to maintaining the program, focused on parcels of critically important habitat.

Integrated Herring Restoration Program

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## Integrated Herring Restoration Program Workshop Meeting Minutes Pioneer Igloo – Cordova, Alaska

April 29 – May 2, 2008

Workshop Goal: To develop an integrated herring restoration program.

Workshop Objectives:

- Define the goal of an integrated herring restoration plan
- Define the characteristics of an integrated herring restoration program
- Define the organizing principles and guiding hypothesis for a new, integrated herring restoration program
- Determine where program gaps exist (in both existing and for new projects)
- Discuss how to engage the local and native communities
- Discuss the reporting processes, data management, deliverables and rfp processes and make suggestions for alternative methods

Facilitated by: Taylor Brelsford, URS Corporation

**Introduction of Attendees:** 

Bruce Cain, Executive Director, Native Village of Eyak Tim Joyce, Mayor of Cordova Patience Anderson Faulkner, President, PWSRCAC, Tribal Council member, Native Village of Eyak Doug Hay, Consultant, Nearshore Research Mark Carls, NOAA Fisheries Research Biologist, NMFS Auke Bay Laboratory Rob Bochanek, Trustee Council funded PI RJ Kopchak, Fisherman, Trustee Council PAC Member Nate Bickford, Trustee Council funded PI Dick Thorne, Trustee Council funded PI Evelyn Brown, Trustee Council funded PI Paul Hershberger, Trustee Council funded PI Vince Patrick, Trustee Council funded PI Dale Kiefer. Trustee Council funded PI Steve Moffitt, Trustee Council funded PI Nancy Bird, President and Executive Director, PWSSC Neil Dawson, Avian Biologist PWSSC Rick Crawford, Marine Biologist, PWSSC Ken Adams, Trustee Council funded PI Steve Smith, Fisherman, Cordova Dave Janka, Skipper/owner of the Auklet, research charter vessel, Cordova Tom Kline, Biological Oceanographer, PWSSC Rob Campbell, Zooplankton Specialist, PWSSC Scott Pigau, OSRI Research Program Manger, PWSSC Dan Bilderback, Fisherman, Cordova Barat LaPorte, Attorney, Patton Boggs Pete Hagen, Trustee Council Project Liaison/Manager, NOAA Jeep Rice, Trustee Council funded PI Brenda Norcross, Trustee Council funded PI

Following is a summary of the workshop proceedings. A complete audio will be available of these proceedings at our website: <u>www.evostc.state.ak.us/</u>.

#### **Goal Statement:**

Restore a (fishable/sustainable/harvestable) herring population in Prince William Sound:

- Develop a collaboration between science and impacted communities
- Determine the reasons for the lack of recovery of the PWS herring population
- Determine the social, economic and ecological feasibility of intervention
- Monitor and evaluate the success of restoration efforts

#### INTRODUCTION TO THE WORKSHOP AND IDENTIFICATION OF WORKSHOP GOALS

Michael Baffrey opened the workshop with a brief overview of the goals of the workshop. He discussed the Trustee's new goals that were identified in the Council's March retreat including an integrated herring program that would provide a cooperative, multi-disciplinary community-based program designed to collect information across a spectrum of subject areas hypothesized as limiting the production of herring in PWS as a step toward determining whether intervention of the herring stock is warranted. PIs will plan and work together from the onset and information on two levels will be the result: 1) individual project findings; and 2) most important - the immediate application of these findings to understanding the broader ecosystem-level processes defining the limitations on herring production presently observed in PWS.

#### CURRENT STATUS OF HERRING – ADF&G CORDOVA OFFICE PRESENTATION

Steve Moffitt from the ADF&G Cordova office gave a presentation that provided an overview of the history and current status of herring management in PWS. The herring fishery will be closed in 2008 and they are predicting that it will also be closed in 2009 due to the existing biomass not reaching its management threshold.

#### STATUS OF THE CURRENT HERRING RESTORATION PLAN

Catherine Boerner gave a brief history of the Council's herring program from its beginning in April 2006 to the release of the Herring Restoration Plan in January 2008.

#### ONGOING HERRING PROJECT UPDATES

Currently funded PI's gave a brief history and a current update of their individual herring projects. This information helped frame the ongoing work in the context of an integrated plan. Most PI's are actively working with and collaborating with other funded projects across agencies and institutions which gave us the opportunity to discuss other potential avenues for collaboration.

#### DISCUSSION OF THE CHARACTERISTICS OF AN INTEGRATED PROGRAM

(presented by Ted Cooney):

- Built around agreed upon goals identified by the PI's and community members.
- Identifies a "red thread" that pulls a program and the projects together.
- Develops a framework. What does the data in an integrated sense mean?
- Each person takes responsibility for the program. Individual PI's have a responsibility to do their own work but to also contribute to the analysis of the collaborative work. It would be a synthesis activity, probably every year in order to advance this work in a timely way. It takes into account what the Trustee Council and the stakeholders want.

- Scientifically rigorous. We need to understand what everyone is doing and why. We are not following a roadmap so we need to challenge each in a rigorous manner, come to consensus and make advances.
- Integration of a herring program cannot be "declared." It is a verb, not a static state.
- Defined structure and management. Care must be taken. Can be tricky with individual agencies and money issues.

Ted also stated that much was learned from the SEA program. SEA encountered a complex, non-linear system and had to go beyond correlation. SEA needed to look at the mechanisms. Shared work was very beneficial. In some ways this workshop is an extension of SEA. Simplifying assumptions will lead to simple and not very useful information. THIS IS NOT A SIMPLE ISSUE. There is significant work to be done. We need a "red thread." Consensus is of major importance.

#### ORGANIZING PRINCIPLES AND GUIDING HYPOTHESES FOR THE NEW PROGRAM

This section of the agenda generated much discussion. Many questions were raised yet a clear picture of the organizing principles/hypotheses was not developed. It was suggested at the beginning of this discussion that the life cycle model be used for organization purposes. Examining the life cycle model and asking the question "where can we increase survival?' received support. Additionally it was thought that enhancement could occur alongside studies. In summation, Ted Cooney talked about a conceptual model that we would inform and it would inform us. This model (Kiefer, et al.) would be the framework to organize our work around.



# DISCUSSION OF INTERNAL GOVERNANCE, SYNTHESIS ACTIVITIES, AND SHARED LOGISTICS

The group discussed a potential organization for the program that would allow for the maximum amount of information to be shared with a minimum amount of effort. The team leaders and the team coordinator would come from the funded PI's.



#### ENGAGING THE LOCAL AND TRIBAL COMMUNITIES

The fishing community has been hopeful in the past that they would see some "real" projects on the ground. They do not see a need to keep studying herring. Some low impact, small scale experiments would be well-received in the community. The idea of a three-tiered impact to the environment approach was suggested. The first level would be short term/fast track/low risk (e.g. rescue eggs). The second level would be medium speed/medium risk (e.g. winter Pollock fishery). The third level would be long term/likely require NEPA compliance (e.g. reduce hatchery production of spp. that feed on herring or feeding herring in winter nursery bays). It was proposed here to develop a spreadsheet that incorporates this structure with projects. Some experiments or pilot studies done in the near future could build confidence in this integrated herring restoration effort and increase support from the local communities. The roundtable discussion that followed generated the following enhancement ideas:

- Recover and move eggs loosened by wave action.
- Increase winter pollock fishery to relax predation.
- Address disease by developing immunity.
- Provide artificial substrate in open pounds to enhance egg survival.
- Consider experimental juvenile pollock removal in herring nursery bays.
- Reduce hatchery production/remote release of chum was example.
- Adjust management threshold and areas.
- Seeding (feeding) juvenile nursery bays.
- Mark/re-capture pilot project.
- Characterize bottlenecks in life cycle stage in geographic range.
- Pilot project sci-ed hatchery in empty Tatitlek oyster facility.
- Increase juvenile survey effort in nursery bays.
- Initiate herring permit buy-back program to reduce fishing effort.
- More access to data among projects, meta-analysis, data salvage.
- A system for compiling local knowledge and observations.
- Survey habitat and juvenile distribution, characterize habitat in spring, summer, fall and winter.
- Split Beam, low frequency multi-beam and/or acoustic buoy technology for sampling.

- Marking technologies (adequate for pilot now).
- Zooplankton vertical net tow with local fishermen.
- Epidemiology model for diseases and new technologies.
- Genetics re:enhancement.
- Characterize fish predation
- Provide adequate resources for assessment.
- Develop and utilize physical models, including a larval drift model with validation.
- Design herring enhancement facilities (learn from Japanese)

#### **IMPLEMENTING THE NEW INTEGRATED PROGRAM**

We are in agreement that we are doing research and intervention at the same time. We can start with small scale/pilot studies which will inform the group and lead towards more projects. Discussion on how to form the implementation committee led to questions on how to reach consensus and how to bring in local participants.

The conversation centered on ways to improve the "deliverable" process. From the Trustee Council point of view, the reports come in very slow. From the PI's point of view the peer review process is much too slow. The Trustee Council needs the level of accountability found in having the final report peer-reviewed. It was suggested that if, in terms of accountability, peer-review is important then hire an editor. This session identified four concerns:

- How to "tighten up" the final report process.
- It's a lengthy process for the results to actually be published.
- Sharing data raises a security issue.
- Current peer review process is slow and unhelpful.

Discussion on the sharing of data generated the following diagram (Kiefer):

The workshop ended at 11:00 am on Friday, May 2. Ted Cooney said in closing, "This has exceeded my expectations. We came here familiar with our own work and wondering what Michael was asking us to do. Now we have embraced the idea of integration/process. This is just a start. We need to have our annual meeting in Cordova. You should feel good about this. Each integrated project is unique."



#### NEXT STEPS

At the conclusion of the meeting, the participants agreed that a smaller group of nominated PI's should be convened to begin the writing of the integrated herring plan based on the discussion of the past days. Nominations for the writing group are still being considered and the team will be limited to no more than 5 members representing each discipline and the local community. There was consensus that we would continue to meet once a year for a multi-day workshop for the presentation of results and the continued integration of data.

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#### Herring Project Site Visits - Summary

May 12 – May 15, 2008

#### MONDAY, MAY 12 - USGS MARROWSTONE FIELD STATION

Attendees:

Michael Baffrey, EVOSTC Catherine Boerner, EVOSTC Tim Linley, MariCal Hiroyuki Okouchi, Fisheries Research Agency, Japan Takahiro Matsubara, Hokkaido National Fisheries Research Institute, Japan Doug Hay, Nearshore Consulting

#### **Projects Visited:**

Project 070819 - PWS Herring Disease Program (Lead PI: Paul Hershberger, USGS) Project 080806 - Are Herring Energetics a Limiting Factor? (Lead PI: JJ Vollenweider, NOAA)

Dr. Paul Hershberger provided an in-depth tour of their herring rearing facility and their wet and dry herring disease labs. This project raises herring in a pathogen-free environment for use in disease trials to determine the biological effects and mechanisms of infection for PWS herring. Herring are raised in large tanks from egg through adult phases and are fed commercially available diets at each life stage including rotifers, artemia, and pelleted foods. Raising herring in a disease free environment and then exposing them to both water and food-borne diseases gives a clearer picture of how hatchery herring released into the currently diseased PWS herring population. The project's laboratory work seeks to determine the pathways for exposure to *Ichthyophonus*, viral hemorrhagic septicemia (VHS), and the causative virus VHSV.



We also spent time with Wyatt Fournier who is conducting research as part of JJ Vollenweider's herring energetics work at NOAA's Auke Bay lab. Herring are being fed varying diets that simulate the overwintering period of PWS herring and are tested to determine the effect on whole body energy content.

Drs. Okouchi and Matsubara presented their work on herring enhancement in Hokkaido and Miyako Bay which included a history of herring in both areas and the captive breeding program.

#### TUESDAY, MAY 13 - USGS SEATTLE FIELD OFFICE

Attendees: Michael Baffrey, EVOSTC Catherine Boerner, EVOSTC Tim Linley, MariCal Hiroyuki Okouchi, Fisheries Research Agency, Japan Takahiro Matsubara, Hokkaido National Fisheries Research Institute, Japan

#### **Projects Visited:**

Project 070819 - PWS Herring Disease Program (Lead PI: Paul Hershberger, USGS)

The group toured the wet and dry labs at the facility including the new laboratory that Dr. Hershberger will be using for the more virulent disease strains. Drs. Okouchi and Matsubara presented their work on herring enhancement in Hokkaido and Miyako Bay as well as some new information on reproductive endocrinology that have been pioneered by Dr. Matsubara.

#### WEDNESDAY, MAY 14 - SHELLFISH HATCHERY, TATILEK, AK

Attendees: Michael Baffrey, EVOSTC Catherine Boerner, EVOSTC Tim Linley, MariCal Hiroyuki Okouchi, Fisheries Research Agency, Japan Takahiro Matsubara, Hokkaido National Fisheries Research Institute, Japan Rebecca Talbot, EVOSTC Gary Fandrei, Cook Inlet Aquaculture Association

The group met with Susan Johnson, President of the Native Village of Tatilek to tour a defunct shellfish hatchery as a potential site for herring enhancement. The two-floor facility has existing seawater pumps, an unfinished floor plan that would allow for a build-out to suit our needs, and a nearby sheltered bay that would provide a suitable area for ocean acclimation for juvenile herring. The ferry dock is immediately adjacent to the facility and the village has recently purchased a landing craft that would make bringing materials to the lab easier. Drs. Okouchi and Matsubara presented an abbreviated summary of their work on herring enhancement.

#### THURSDAY, MAY 15 – ALASKA SEALIFE CENTER & ALUTIQ PRIDE SHELLFISH HATCHERY

#### Attendees:

Catherine Boerner, EVOSTC Tim Linley, MariCal Hiroyuki Okouchi, Fisheries Research Agency, Japan Takahiro Matsubara, Hokkaido National Fisheries Research Institute, Japan Rebecca Talbot, EVOSTC

The group met with Ned Smith, President and CEO and Lee Kellar, Director of Husbandry for the SeaLife Center. We toured the existing salmon rearing facility (this program will be ending soon) and the available wet and dry laboratory facilities. The facility already has hot and cold seawater intakes, pathogen-free rearing pens, water filtration facilities, and existing wet and dry labs. A main shortcoming would be the lack of an appropriate area for the ocean acclimation. Moving the juveniles to a more sheltered location in PWS would be preferable and could be easily accomplished. The existing Alutiq

Pride Shellfish Hatchery is immediately adjacent to the SeaLife Center and materials could be easily moved between the facilities. The shellfish hatchery is currently rearing Alaskan king crab, sea cucumbers, and geoducks. The Japanese researchers felt that the facility would adequalty meet the needs of a pilot scale project for herring enhancement.

Drs. Okouchi and Matsubara presented their work on herring enhancement in Hokkaido and Miyako Bay which included a history of herring in both areas and the captive breeding program to a large group of researchers at the Center.



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Exxon Valdez Oil Spill Trustee Council



# Federal Fiscal Year 2009





Exxon Valdez Oil Spill Trustee Council 441 W. 5<sup>th</sup> Avenue, Suite 500 Anchorage, AK 99501 907-278-8012 / fax: 907-276-7178 www.evostc.state.ak.us

## Exxon Valdez Oil Spill Trustee Council

## Implementation of the Exxon Valdez Oil Spill Restoration Plan

## FY 2009 Invitation for Proposals

Exxon Valdez Oil Spill Trustee Council 441 West 5th Avenue, Suite 500 Anchorage, AK 99501 907-278-8012 phone/907-276-7178 fax 1-800-478-7745 www.evostc.state.ak.us

May 9, 2008

## Notice

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department 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 please write:

- ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526.
- The department's ADA Coordinator can be reached via phone at the following numbers: (VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648, (Juneau TDD) 907-465-3646, or (FAX) 907-465-6078.
- U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington, VA 22203.
- Office of Equal Opportunity, U.S. Department of the Interior, Washington DC 20240.

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#### **APPENDIX A - COMMUNITY CONTACT INFORMATION**

## I. Schedule

The schedule for the receipt, review and approval of FY09 proposals is shown below.

June 2, 2008	.Invitation for Proposals issued
June 30, 2008	FY09 Pre-Proposals Due by 5:00pm
July 14 2008	.Notification sent requesting full proposals
September 2, 2008	Full proposals due
September 19, 2008	.Peer review completed
October 17, 2008	.Funding decision made by Trustee Council

The *Exxon Valdez* Oil Spill Trustee Council operates on a federal fiscal year. The FY09 fiscal year begins on October 1, 2008 and ends on September 30, 2009.

## II. Background and Purpose

In 1989, the *T/V Exxon Valdez* spilled 11 million gallons of crude oil into Prince William Sound (PWS). In 1991, the U.S. District Court approved a civil settlement that required Exxon to pay the United States and the State of Alaska \$900 million to restore the resources injured by the spill and the reduced or lost services, or human uses, the resources provide. A Trustee Council (Council) of three federal and three state members administers this Joint Trust Fund.

A **Restoration Plan** was adopted by the Council in 1994 that provides long-term guidance for restoring the resources and services injured by the oil spill. It contains policies for making restoration decisions, describes how restoration activities will be implemented, and includes an Injured Resources and Services (IRS) list that provides a focus for restoration. The IRS list has been updated several times since 1994 and the most recent update took place in **2006**.

The Council sets restoration priorities and annually determines what projects will be funded. Restoration projects are solicited through this Invitation for Proposals (Invitation). The Invitation is open to individuals, private industry, government agencies and other interested parties interested in submitting proposals for restoration work identified in the Invitation.

For FY09, the Council has determined that an integrated program that actively engages the effected communities should be the focus for projects submitted. Projects that are received from inter-disciplinary teams that build on past and ongoing work will be given the highest consideration. Stand alone projects that do not provide a clear nexus to restoration are discouraged.

## **III. Introduction to the FY09 Invitation for Proposals**

The Council recognizes that a tremendous amount of work had been accomplished over the nineteen years of research, monitoring and restoration activities directed at addressing the goals of the 1994 Restoration Plan. However, the Council has determined that an integrated, synthesized approach is necessary to determine the current status of the Prince William Sound ecosystem. Instead of focusing on individual resources and services that were injured by the oil

spill, this invitation seeks proposals from interdisciplinary teams that will focus on systems and their interaction in interdisciplinary teams. Section XII of this Invitation specifically addresses the necessity of community involvement in proposal design and implementation.

Specific requests are outlined below and are based upon previous Council-sponsored work. Information on the status of Council-funded projects is available on the Council's **website** as it becomes available, or you can contact the Council office directly for more information at (907)278-8012. The Council does not wish to duplicate efforts and encourages the use of existing materials and collaboration with other ongoing efforts. **Pre-proposals and proposals should explicitly state how the project could lead to the** *restoration* of injured resources.

The FY09 Invitation for Proposals has been separated into two distinct sections – Injured Resources and Injured Services. Scientific studies, monitoring, and general restoration projects will be addressed in the Injured Resources section and responses to that section should utilize the proposal form with "Injured Resources" in the title. The Injured Services section addresses the restoration of the human services including commercial fishing, subsistence, tourism, recreation, and passive use and respondents should use the proposal form with "Injured Services" in the title. Selection criteria and policies and procedures for each project type are contained in their respective section.

### **IV.** Community Involvement

All proposals in all program areas are expected to declare the extent to which local communities are involved and all successful proposals will be required to develop a community involvement plan.

Meaningful community involvement is defined as a substantive role for individuals, communities, and community-based organizations in the design and conduct of research, monitoring, and general restoration activities, in the analysis and application of the results, and in information-sharing in ways that ensure the information is both timely and easily understood. It may also be direct participation in environmental education, community outreach, and/or the inclusion of local or traditional ecological knowledge (LTEK). Community-based organizations, tribal and municipal governments, and school groups are particularly encouraged to apply in this category, alone or in partnership with scientists where appropriate.

#### The Council seeks projects in several categories:

*Citizen-based or community-based research, monitoring and general restoration*— Also termed "citizen science" projects, these projects involve the collection of data and direct participation in these activities in addition to other aspects such as project design, data interpretation, and information sharing. Priority will be given to projects that address the research, monitoring, and general restoration categories included in the Invitation.

*Local or Traditional Ecological Knowledge (LTEK)* – projects that involve the collection, interpretation, and application of knowledge derived by experience with the environment and possessed by reliable non-scientists. "Traditional" refers to knowledge that is inter-

generational and within a context of aboriginal or indigenous peoples. Any collection or use of traditional knowledge should follow the Protocols for Including Indigenous Knowledge in the EVOS Restoration Process. Additional guidelines to protect the sensitivity of local knowledge are included in A History of Trustee Council Tribal and Community Involvement.

*Environmental education* – projects that produce and/or deliver school curriculum and structured educational programs that aim to teach people about the natural world and particularly about the structure and function of ecosystems. The focus is on understanding the interrelationships of natural and human systems and the ways in which they impact and influence one another.

*Community outreach* – projects that employ media, public events, and other methods to disseminate information and foster sustained involvement of both traditional and underrepresented communities and stakeholders in the oil spill-affected area in the vision, mission, accomplishments and/or challenges of the restoration program.

## V. Project Invitation – Injured Resources

#### MONITORING

In some instances, new research on specific resources and services may not aid in resolving questions regarding continuing injury. Nonetheless, long-term evaluation of injured resources, human services, and ecosystems should occur to determine when populations in oiled and unoiled areas can be declared recovered, or until it is determined that further remediation or enhancement activities are warranted.

Monitoring is also important for resources and human services whose recovery status is currently difficult to assess. For example, recovery status for intertidal communities is challenging because monitoring in both oiled and unoiled areas has not been conducted consistently since the spill. Several sources, including state and federal agencies and spill area programs are currently monitoring a variety of resources that were affected by the spill. There is little overlap between these monitoring programs and dissemination of this information is not consistent.

The Council is seeking projects from an individual or team who will provide a comprehensive final report that will assess and analyze all resource, human service, and ecosystem monitoring that is ongoing in the spill area and provide guidance to the Trustee Council in designing a new monitoring program.

#### **MONITORING - OCEANOGRAPHIC**

Detectable changes in the abundance or species composition of mesozooplankton may reflect fundamental changes in the ocean environment affecting phytoplankton. In turn, because zooplankton are eaten by larger animals, some of which are of commercial importance, changes in zooplankton communities can provide early indications of imminent changes in the food conditions for fish, birds and mammals. Because many zooplankton are relatively short-lived and are capable of high growth rates, they respond quickly to environmental perturbations that influence diversity, such as point-source pollution and predation pressure.

The Council is seeking projects that will provide information on the current levels of mesozooplankton available to the resources in the Sound.

#### INTEGRATED NEARSHORE PROGRAM

An effective and efficient restoration program must be based on a fundamental understanding of the ecosystem, the injured resources within the ecosystem that were injured, potential mechanism of injury and impediments to recovery, and linkages between resources. The nearshore is geographically distinct in that it is largely restricted to the intertidal zone and relatively shallow coastal waters and has a food web that is largely dependent on energy derived from benthic algae and sea grasses.

The Trustee Council has decided to take an integrated approach to the nearshore system that will consist of separate, yet coordinated projects with a single point of contact. All proposed projects should focus on research, monitoring, and general restoration activities as well as strategies for protecting the injured resources, services, and their habitats. The integrated nearshore program will build on and incorporate projects that are currently funded (see **Project 070808-A, 070750**) to fill gaps, eliminate duplication, establish funding priorities, and provide integration of both logistical and scientific efforts. The pre-proposals and proposals will show the proposed synthesis of related research and restoration efforts and appropriate partnerships with marine research organization, NGOs, and spill area communities.

The Council is seeking projects that provide an integrated look at nearshore resources, including human services, and take a broader view of the nearshore habitat.

#### **INTEGRATED HERRING PROGRAM**

The Council has classified the Prince William Sound stock of Pacific herring (*Clupea pallasi*) as a resource that has not recovered from the effects of the spill. The PWS herring stock was increasing prior to 1989 with record harvests reported just before the spill. The 1989 year class was one of the smallest cohorts of spawning adults recorded, and by 1993, the fishery had collapsed with only 25% of the expected adults returning to spawn. The PWS herring fishery was closed from 1993 to 1996 but reopened in 1997 and 1998 based on an increasing population. Numbers again declined and the fishery has been closed since 1999. Reasons for the population collapse and failure to recover remain largely unknown.

The Council funded a **PWS Herring Restoration Plan** to determine what, if anything can be done to successfully recover Pacific herring in Prince William Sound from the effects of the spill. The Plan examined the reasons for the continued decline of herring in the Sound, identified and evaluated potential recovery alternatives, and established a course of action for achieving restoration. The Plan also identified knowledge gaps needed to understand the science, management and enhancement of the PWS Herring stock.

The Council is seeking projects that serve to fill the following data gaps to build on the work already underway as part of the Herring Restoration Plan:

- 1. Are there credible ways, other than cumulative distance (spawn miles and mile-days) that herring spawn may be quantified, or made into an index, that would be biologically realistic?
- 2. Can retrospective analysis of growth during the first and second years of life, estimated from analyses of archival collections of herring scales, be used to comment on inter- and intra-annual variation in growth and survival of herring in PWS? Could such retrospective analyses be used to explain more about the biological events that occurred during the last two decades?
- 3. What are the key competitor species of herring and how do they affect each life stage?
- 4. What effects are oceanographic changes in PWS having on each life stage of herring?
- 5. What is the distribution of larvae and juveniles and the factors that are quantitatively important to determining year class strength?
- 6. What parameters are significant to herring recruitment?
- 7. Is disease causal and impacting the population, or is it symptomatic and reflecting poor body condition?
- 8. Could there potentially be a relationship between larval release and disease effects in the general population?
- 9. Are the herring in PWS genetically distinct from populations in Kodiak, Sitka Sound, and Lynn Canal?

#### 10. If the populations are genetically distinct, has each population been stable over time?

It may be possible to restore herring populations in Prince William Sound through the use of direct restoration or intervention methods such as the moving of fertilized eggs to habitats more favorable for survival or the release of juveniles reared in hatcheries. However, the efficacy of these or other direct restoration methods has not yet been proven and may be technically infeasible or too costly. Furthermore, the use of direct restoration activities may cause unintended adverse environmental outcomes such as the increase in incidence of disease to herring or other fishes.

Several key steps were identified to determine the initial feasibility of a herring enhancement program in PWS. The Council is seeking proposals that can provide answers to and guidance on the following questions:

1. Are there any suitable mass marking techniques for Pacific herring eggs, larvae or juveniles in PWS that are feasible, practical and affordable?

- 2. What ranges of marked herring must be released in order to have sufficient recaptures to evaluate success?
- 3. Can criteria or reference points be established that can be used to govern potential enhancement activity of herring in Prince William Sound? Specifically, what criteria would be used to initiate, suspend or stop enhancement activities?
- 4. What permitting would be required for an enhancement program?
- 5. Is egg translocation a viable alternative to a hatchery program?

The Council has fostered an integrated approach to herring research and restoration by initiating an April 2006 workshop of herring scientists and effected fishermen and two subsequent workshops (November 2006 and October 2007) of Council-funded herring Principal Investigators (PIs). As a result, the PIs have integrated their respective study designs and shared findings. However, despite the success of this collaboration, herring projects funded in FY07 and FY08 continue to be stand-alone projects. For future herring research and restoration to be a comprehensive collaborative effort, the Council will solicit pre-proposals and proposals that meet the needs for the herring program. Potential PIs are strongly encouraged, and in some cases may be directed, to collaborate to maximize the benefits to the herring program.

#### **INTEGRATED SEABIRD PROGRAM**

Five seabird species, black oystercatchers, harlequin ducks, Kittlitz's murrelets, marbled murrelets, and pigeon guillemots, remain unrecovered from the effects of the spill. Other seabirds (common loons, common murres, and cormorants) have been categorized as recovered. For FY09, the Trustee Council has selected an integrated approach to the restoration of seabirds in the Sound which will build on and incorporate projects that are currently funded (see Projects 070751, 080759, 070816) to fill gaps, eliminate duplication, establish funding priorities, and improve both logistical and scientific efforts. The pre-proposals and proposals will show the proposed synthesis of related research and restoration efforts and appropriate partnerships with marine research organization, NGOs, and spill area communities.

The Council is seeking projects that will provide an integrated seabird program that will include research, monitoring, and direct restoration activities. Projects should seek to build on past and ongoing work to provide a clear picture of the health of seabirds in the spill-area and adjacent ecosystems.

#### SALMON ENHANCEMENT "LESSONS LEARNED"

Extensive research, management, and enhancement were incorporated into the recovery of sockeye and pink salmon after the spill. As the Council considers the next steps toward herring enhancement, it is valuable to synthesize the lessons learned from salmon and its applicability to herring. In addition to the steps leading to the successful recovery of salmon from the effects of

the spill, it is useful to determine if there were aspects of salmon recovery that directly benefited or negatively impacted the resource.

The Council is seeking projects from an individual or team to provide a synthesis of "lessons learned" from salmon enhancement in the Sound. At a minimum, the following questions should be addressed:

- 1. What is the impact of fishery enhancement on local ecosystems?
- 2. What was the interaction between the enhanced salmon and other spill impacted resources?

#### LINGERING OIL

Nineteen years after the spill, lingering oil continues to persist in intertidal zones of the shorelines impacted by EVOS. At the time of the spill, it was assumed that beach-trapped oil remaining after clean-up activities would disappear from the environment after a few years. However, as of 2005, it was estimated that as much as 200 tons of lingering oil was distributed across some of the intertidal areas within Prince William Sound. The reported oil was often only slightly weathered and extended into the biologically productive middle and lower intertidal areas.

Currently, the Council has funded two studies that will provide information on the distribution and processes affecting lingering oil. **Project 070801** (Assessment of the Area Distribution and Amount of Lingering Oil in PWS and GOA) by Michel will provide the best estimate of amount and distribution of lingering oil in the spill area. **Project 070836** (Factors Limiting the Degradation Rate of EVOS Oil) by Boufadel will provide information about the factors influencing the degradation of oil in PWS.

The Council seeks projects that will build on this ongoing work and provide information to help determine if remediation for specific, oiled shoreline segments would protect or restore injured resources and/or human services. They also seek proposals that will remove, reduce, or manage lingering oil in compliance with the State laws governing the characterization, removal, cleanup, and closure of oil contaminated soils (18 AAC 75), and water quality (18 AAC 70).

#### FORAGE FISH

Forage fish play a critical role in the healthy function of an ecosystem. Forage fish of all life stages are central components of the PWS marine food web and a key dietary constituent for humpback whales, harbor seals, diverse bird species, invertebrates, and many fishes. The Council funded the APEX projects which studied the effects of forage fish populations on seabirds in the Sound, but an updated study may be needed to determine if fluctuating forage fish populations are limiting the restoration of several injured resources. Forage fish are also being investigated under Alaska Department of Fish and Game's Aquatic Resources Implementation Plan and are a part of Trustee Council Project 070805 (Lindeberg - ShoreZone Mapping for

Prince William Sound). The forage fish data was funded by sources other than the Council and can be found at http://www.fakr.noaa.gov/habitat/fishatlas/default.htm.

The Council is seeking projects that will provide a comprehensive survey of the forage fish available in the Sound to determine if a lack of high quality forage fish could be a limiting factor in the restoration of several injured resources and services.

#### HABITAT PROTECTION AND ACQUISITION

The 1994 Restoration Plan provides general guidance for habitat protection and acquisition activities and more detailed guidance is given in the *Comprehensive Habitat Protection and Acquisition Process: Large Parcel Evaluation and Ranking (November 1993)*. This document outlines criteria and procedures for evaluating and ranking large parcels of private lands for protection and acquisition. Further Trustee Council policy is provided in the Trustee Council Resolution to Proceed with Habitat Protection Program (January 31, 1993).

According to the *Exxon Valdez Oil Spill Restoration Habitat Protection & Acquisition Catalog*, approximately \$370 million of Joint Trust Fund have been used to acquire over 647,000 acres. In an effort to address the success of this program to promote the restoration of injured resources and services throughout the spill area, **the Council is seeking projects that will provide the following information:** 

- 1. A comparison of the recovery success of injured resources in areas of habitat protection and acquisition to those spill areas not protected, especially when general restoration activities have been undertaken.
- 2. An assessment of the contribution of habitat protection and acquisition to the recovery of designated wilderness areas. Wilderness lands are federal lands that have been designated as part of the National Wilderness Preservation System by Congress and are managed by the Bureau of Land Management, Fish and Wildlife Service, Forest Service and National Park Service under the Wilderness Act of 1964, and subsequent Wilderness laws. It is important to compare the shoreline units of effected designated wilderness, both state and federally designated, to those protected and acquired using Joint Trust Funds. For the purposes of this comparison, acquired lands managed similar to designated wilderness, i.e., passive use under state jurisdiction, should be evaluated as wilderness.
- 3. A comparison of the recovery success of injured services in areas of habitat protection and acquisition to those spill areas not protected.

#### ADDITIONAL INJURED RESOURCES

While proposals addressing specific topics are being requested, the Council understands that there may be project ideas that would assist in moving injured resources, services, and ecosystems toward restoration. Please refer to the **2006 Update of the Injured Resource and Services List** to learn more about the restoration objectives for each individual resource and




service. While the Council welcomes these proposals, the highest consideration will be given to integrated, multi-disciplinary projects.

The Council seeks proposals that will provide information or opportunities for direct restoration of the injured resources and services contained in the 2006 Update of the Injured Resource and Services List.

# 1. Policies and Procedures – Injured Resources

In order to design the most integrated program possible, the Council has elected to utilize a two stage proposal process. Pre-proposals will be solicited for the first stage of consideration which will allow a greater opportunity for feedback and discussion. The second stage will consist of a request for a full proposal from *only* the highest rated pre-proposals. The schedule for this process can be found under I. Schedule of this invitation. Please note an updated data and reporting policy that requires 10% of the total project cost to be withheld until all project data and all print copies of the project's final report are received and accepted by the *Exxon Valdez* Oil Spill Trustee Council's Executive Director.

# a. Selection Criteria for Pre-Proposals

Each pre-proposal will be reviewed using the same criteria and those proposals with the highest score will receive a request for a full proposal.

- 1. **Responsiveness to this Invitation (10%):** Evaluation of whether or not pre-proposals respond to this invitation.
- 2. **Project Design/Conceptual Soundness (20%):** Evaluation of applicant's understanding of the problem and the project's feasibility; how well a project builds on past or ongoing research.
- 3. Project Management (15%): Qualifications and past performance of key personnel.
- 4. Cost Effectiveness of the Proposal (15%): Evaluation of the appropriateness of the project's cost versus the scope identified. Funding from other sources will be considered.
- 5. Collaboration/Coordination Efforts (20%): Because of the multitude of resources and services in Prince William Sound and the inter-relatedness of many of these resources and services, coordination/collaboration partnerships are highly encouraged.
- 6. Capacity Building (20%). Determination if the proposer has demonstrated initial progress toward appropriate consultations with local communities.

# b. Selection Criteria for Full Proposals

Full proposals will only be requested from highest rated pre-proposals.

- 1. **Project Design/Conceptual Soundness (20%)**. Evaluation of applicant's understanding of the problem and the project's feasibility; how well a project builds on past or ongoing research.
- 2. **Timeline and Milestones (15%).** Evaluation of the project's timeline and milestones in relation to the scope submitted. Projects with detailed timelines and milestones will be rated higher than those with vague or unclear timelines and milestones.

- 3. **Project Management Plan (15%).** Evaluation of the organization chart and management of the project.
- 4. Cost Effectiveness of the Proposal (10%). Evaluation of the appropriateness of the project's cost versus the scope identified. Funding from other sources will be considered.
- 5. Collaboration/Coordination Efforts (20%). Evaluation of how well the proposal integrates with both past and ongoing work and provides an interdisciplinary approach.
- 6. Capacity Building (20%). Determination if the proposer has demonstrated substantial progress toward appropriate consultations with local communities.

## c. Data Policy

All investigators are required to work with the Council's Data Management staff to identify and permanently archive datasets (data and metadata) that may be useful for future scientific analysis, and to submit metadata for such datasets to the Council's data archive. As with the acceptance of any public funding source, all data collected in the course of a Council-funded project is the property of the *Exxon Valdez* Oil Spill Trustee Council and must be provided at the conclusion of the project. A copy of the current data policy can be found at: <u>http://www.evostc.state.ak.us/Policies/data.cfm</u>

## d. Reporting Policies

All projects will be required to provide quarterly, annual, and final reports. Detailed reporting procedures can be found at: <u>http://www.evostc.state.ak.us/Policies/reporting.cfm</u>

*Quarterly Reports* – Quarterly reports must be provided to the assigned agency Project Manager within 30 days of the end of the quarter. A quarterly report will include the tasks identified in the proposal for each quarter with a summary of the progress made on each. Quarter 1: Oct. 1 - Dec. 31

Quarter 2: Jan. 1 - March 31 Quarter 3: April 1 - June 30 Quarter 4: July 1 - Sept. 30

*Annual reports* – Annual reports are due no later than September 1 of each year for which a project receives funding to determine if continuing funding is appropriate. If a project is multi-year, PIs should prepare a brief annual report each year until the project is completed. The annual report will provide a summary of the work completed over the fiscal year as well as a discussion of any preliminary findings.

*Final reports* – Draft final reports are due no later than April 15 of the year following the work on a funded project. A final report for a project must be a comprehensive report addressing all the objectives identified over the course of the entire study and shall address the original objectives of the study as identified in the approved proposal and account for any changes in the objectives. All draft final reports are subject to a peer review process.

# e. Project Funding Requirements

Proposals will be accepted for both single year and multi-year projects. Applicants should include project and budget information that accurately reflects the true time commitment

necessary to complete their work. Funding for multi-year projects will be reviewed each fiscal year to ensure that the scope of work is progressing and that the project is still meeting the needs of the Trustee Council. **Regardless of project length, one fiscal year must be budgeted solely for the preparation and writing of the project's final report. Project scope cannot extend into the report writing fiscal year.** In the budget for the report writing year, please include time and resources necessary to prepare data for transfer to the Council's office, incorporation of all peer review comments, printing and binding of the final report, incorporation of all peer review comments, and attendance and presentation at the Alaska Marine Science Symposium held in Anchorage, Alaska. Attendance at the Symposium can only be budgeted for the final year of the project.

# 2. Instructions for Completing Pre-Proposal Forms – Injured Resources

# **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 Data Policy*\*, adopted March 17, 2008) and reporting requirements (*Procedures for the Preparation and Distribution of Reports*\*\*, adopted June 27, 2007).

# PROJECT TITLE: \_\_\_\_\_

Printed Name of PI:	······································
Signature of PI:	Date:
Email:	Phone:
Mailing Address	
City, State, Zip	
Printed Name of PI:	
Signature of PI:	Date:
Email:	Phone:
Mailing Address	
City, State, Zip	
Printed Name of PI:	
Signature of PI:	Date:
Email:	Phone:
Mailing Address	
City, State, Zip	

\* www.evostc.state.ak.us/Policies/data.cfm

\*\* www.evostc.state.ak.us/Policies/reporting.cfm

# FY09 INVITATION PROPOSAL SUMMARY PAGE – INJURED RESOURCES

**Project Title:** 

**Project Timeline:** (Please use the federal fiscal years of October 1 – September 30)

**Primary Investigator(s):** (List each investigator and their affiliation)

Study Location: (Be specific as possible)

Abstract:

**Estimated Budget: EVOS Funding Requested:** (breakdown by fiscal year and must include 9% GA)

Non-EVOS Funds to be used:

(breakdown by fiscal year)

Date:

(NOT TO EXCEED ONE PAGE)

# FY09 INVITATION PROJECT PLAN – INJURED RESOURCES

- 1. Statement of Problem/Hypothesis Please clearly and succinctly state the problem you would like to investigate or the hypothesis you would like to test. Describe the background and history of the problem and include a scientific literature review that covers the most significant previous work history related to the project.
- 2. Objectives Provide a summary of the main objectives of the proposed work.
- 3. **Project Design** Identify the specific methods that will be used to meet the project's objectives. 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 Policy on Collections, which is available on the EVOSTC website. Describe the process for analyzing data and 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.
- 4. Collaboration and Coordination Indicate how your proposed project relates to, complements or includes collaborative efforts with other proposed or existing projects funded by the Trustee Council. 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.
- 5. Capacity Building/Community Involvement Describe appropriate partners and contributions, to the maximum degree possible, to the capacities of local communities, organizations, and residents of the region to participate in research and restoration activities.

# NOTE: Please include a one-page CV for each investigator.

# VI. Project Invitation – Injured Services

The Council has renewed its commitment to addressing the human services injured during and after the *Exxon Valdez* Oil Spill. They encourage local and tribal communities to submit proposals that would provide project ideas that seek to provide compensatory services for those lost. Such projects could include (but are not limited to):

- a. Enhancement, protection, and creation of spawning/nesting/rearing/feeding habitat.
- b. Projects that increase species or prevent their loss from some other cause
- c. Enhancement of human use, such as recreational access projects like fishing piers, boat ramps, mooring facilities, easements for rights of way for recreationists
- d. Educational and historical/cultural awareness projects
- e. Cleanup of abandoned mine, construction, timber and waste disposal sites that are causing ongoing resource injuries where there are no viable "Responsible Parties"
- f. Marine debris removal
- g. Protection of wildlife (including fish) migration routes, including barrier removal, installation of fish ladders, etc
- h. Oil abatement projects, such as bilge socks, subsidized oily-water collection and disposal system

This list is provided to promote discussion of potential projects and is not intended as a definitive list of project ideas or a Council commitment to fund.



# PROJECT COORDINATION

The Council recognizes the need for assistance in developing and implementing a comprehensive program that addresses the human services injured in the spill.

The Council is seeking proposals from an individual, team or organization that can assist with the identification and implementation of projects related to the restoration of human services in the spill area and aid in the coordination of funded projects. The proposer(s) should have an extensive working knowledge of the local and native communities in the spill area and be able to identify and develop relationships with potential project leaders.

Human services injured by the spill are considered to be recovering until the resources on which they depend are fully recovered. Until now, the focus for projects requested under the Invitation process has been directed primarily at injured resources. However, the Council believes that the human population can not be separated from the ecosystem and the components that comprise human use. To fully address injured human services, it is necessary to first understand the current influence that lingering oil, previous contamination and lack of resource recovery have on resumption of activities, such as subsistence use and recreation.

Projects which propose to evaluate or reestablish human services must be linked to injured resources and should be beneficial at the community scale. Proposals in which only individuals personally benefit will not be considered.

The following narrative illustrates the types of projects the Council is interesting in pursuing. This is not an exhaustive list and proposals submitted within this category could include, but are not limited to these specific projects. They are presented here to generate ideas and as a guide for perspective applicants.

#### **COMMERICAL FISHERIES**

Both red and pink salmon injured by the spill have met their respective recovery objectives as defined in the Council's 1994 Restoration Plan. PWS Pacific herring are currently listed as not recovering. Commercial fishing, the human service dependent on these resources, remains recovering from the effects of the spill. The change to the regional economy resulting from the continued collapse of PWS Pacific herring is measurable.

**Project 040471**/Fall - Update of the Status of Subsistence Uses in Exxon Valdez Oil Spill Area Communities provided a perspective of the continuing spill effects on subsistence communities, however, a similar report regarding the economic changes in commercial fisheries has been lacking.

The Trustee Council is seeking projects that seek to fill the following data gaps:

- 1. An analysis profiling this and other spill area fisheries listing the biological/physical and socioeconomic/subsistence factors would guide additional research, management, and possible enhancement activities leading to the recovery of the injured commercial fishing. For trend purposes, the suggested time period for this analysis at a minimum should include 1987 to 2007.
- 2. A comparison of commercial fisheries and related economic activities in the spill area to similar activities outside the spill area, i.e., the changing role of fisheries within the regional economy, and the economic value of the fisheries.
- 3. A comparison of the pre- and post-spill distribution of fisheries revenues from spill-area fisheries.
- 4. A comparison of the socioeconomic effects of the spill to communities and the commercial fishing industry with regards to compensatory restoration, i.e. with providing additional natural resources and services beyond those that were lost to compensate for the interim lost use.

#### SUBSISTENCE

Subsistence use is currently listed as a recovering service contingent on the recovery of important subsistence resources and confidence of subsistence users that the resources are safe to eat. Restoration objectives for subsistence use include returning injured resources used for subsistence to pre-spill levels and restoring the user's confidence in safety of subsistence foods. Restoration strategies for subsistence use include restoring injured resources, removing residual oil, protecting subsistence from further degradation, and monitoring subsistence food safety.

The presence of lingering oil on some beaches in the oil spill area has been documented, and some studies indicate that the oil is persisting, and remaining toxic, in the environment longer than anticipated. The impacts of lingering oil to subsistence food safety continue to limit the harvesting activities of subsistence users in the region. Confidence in the safety of eating intertidal resources remains low due to the presence or perceived presence of residual oil in traditional harvest areas.

The Council seeks projects that provide subsistence users with meaningful information and analysis regarding the effects of lingering oil to subsistence resources, and the safety of consuming traditional foods gathered in the oil spill area. Information on subsistence use patterns, lingering oil locations, and subsistence food safety needs to be consolidated, and effectively communicated to subsistence users.

## **RECREATION & TOURISM**

The oil spill disrupted use of the spill area for recreation and tourism. In the years since the spill, there has been a marked increase in the number of visitors to Alaska and a similar increase in visitation to the spill area. Recreation was also affected by changes in human use in response to the spill. For example, displacement of use from oiled areas to unoiled areas, particularly in the years immediately following the spill, increased management problems and facility use in unoiled areas. The US Forest Service is currently working on several studies to quantify the level and distribution of human use in the Sound. Any proposed work should seek to build upon the knowledge gained through those studies. Details can be found at http://www.fs.fed.us/r10/chugach/pws-framework/index.html.

The Council is seeking projects that will provide a synthesis of the types and locations where recreation is taking place in the Sound and how the Sound is being used to provide opportunities for tourism.

#### **PASSIVE USE**

Passive uses are the services provided by natural resources to people who do not visit, contact, or otherwise use the resources. Examples of passive uses injured by EVOS include the appreciation of aesthetic natural areas and wilderness and the pleasure of knowing natural resources exist at a given level of quality. No data on passive use values or perception in the spill area exists prior to the spill. However, the contingent valuation study estimated damages to passive use values from the spill and provides a baseline for comparison to perceptions following the spill. The efficacy of efforts to inform the public about the status of natural resources following the spill and the effects this information had on public perception were not studied after EVOS.

The Council seeks projects that continue to communicate the progress being made toward recovery of resources and survey public perceptions regarding the return of natural values of the spill area.

# STORMWATER/WASTE WATER

One of the three types of general restoration as stated in the 1994 Restoration Plan is Reduction of Marine Pollution. Reducing marine pollution can remove a source of stress that may delay natural recovery. The public frequently recommended preventive actions to stop ongoing marine pollution. However, expenditures for most activities designed to prevent catastrophic oil spills or to plan for their cleanup are not allowed by the terms of the civil settlement. The Council has funded several projects to prepare waste management plans and a portion of the implementation phase of Projects **02514**/Tuner - *Lower Cook Inlet Waste Management Plan*, **99304**/Stevens - *Kodiak Island Borough Master Waste Management Plan*, **97115**/Winchester - *Sound Waste Management Plan and Restoration*, and **95417**/Roetman - *Waste Oil Disposal Facilities*.

# The Council is seeking projects whose primary emphasis is to reduce marine pollution. Two main selection criteria will be considered and will include:

- 1. Is marine pollution likely to affect the recovery of a part of the injured marine ecosystem, or of injured resources or services?
- 2. Does the project duplicate existing agency activities?

# 1. Policies and Procedures - Injured Services

In order to design the most integrated program possible, the Council has elected to utilize a two stage proposal process. Pre-proposals will be solicited for the first stage of consideration which will allow a greater opportunity for feedback and discussion. The second stage will consist of a request for a full proposal from *only* the highest rated pre-proposals. The schedule for this process can be found under I. Schedule of this invitation. Please note an updated data and reporting policy requires 10% of the total project cost to be withheld until all project deliverables are received and accepted by the *Exxon Valdez* Oil Spill Trustee Council's Executive Director.

# a. Selection Criteria for Pre-Proposals

Each pre-proposal will be reviewed using the same criteria and those proposals with the highest score will receive a request for a full proposal.

- 1. **Responsiveness to this Invitation (10%):** Evaluation of whether or not pre-proposals respond to this invitation.
- 2. Relationship to Injured Resources and Services (10%): Projects that provide a clear link to the restoration of injured resources and services will be given the highest consideration.
- 3. Location of Project (10%): Projects must be located in the spill area.
- 4. **Project Feasibility (10%):** Evaluation of whether the project can be successfully implemented in a reasonable amount of time given the available technology and expertise.
- 5. Cost Effectiveness (10%): The relationship of the project costs to the benefits to the injured resources and services.

- 6. Longevity of Project (10%): Projects that are permanent or have long expected lifespans will be favored over projects with temporary, short-term lifespans/benefits.
- 7. Capacity Building (20%): Determination if the proposer has demonstrated initial progress toward appropriate consultations with local communities.
- 8. Collaboration/Coordination Efforts (20%): Because of the multitude of resources and services in Prince William Sound and the inter-relatedness of many of these resources and services, coordination/collaboration partnerships are highly encouraged.

# b. Selection Criteria for Full Proposals

Full proposals will only be requested from highest rated pre-proposals.

- 1. **Project Design/Conceptual Soundness (20%):** Evaluation of applicant's understanding of the problem and the project's feasibility.
- 2. **Timeline and Milestones (15%):** Evaluation of the project's timeline and milestones in relation to the work submitted. Projects with detailed timelines and milestones will be rated higher than those with vague or unclear timelines and milestones.
- 3. **Project Management Plan (15%):** Evaluation of the organization chart and management of the project.
- 4. **Cost Effectiveness (10%):** Evaluation of the appropriateness of the project's cost versus the amount of work identified.
- 5. Collaboration/Coordination Efforts (20%): Evaluation of how well the project integrates with local and native communities and provides an interdisciplinary approach.
- 6. **Project Design (20%):** Evaluation of the applicant's understanding of the problem and the project's feasibility.
- 7. **Regulatory Compliance:** Projects must comply with federal, state, and local laws and regulations.

# c. Reporting Policies

All projects will be required to provide quarterly, annual, and final reports. Detailed reporting procedures can be found at: <u>http://www.evostc.state.ak.us/Policies/reporting.cfm</u>

*Quarterly Reports* – Quarterly reports must be provided to the assigned agency Project Manager within 30 days of the end of the quarter. A quarterly report will include the tasks identified in the proposal for each quarter with a summary of the progress made on each. Quarter 1: Oct. 1 - Dec. 31

Quarter 1: Oct. 1 - Dec. 31 Quarter 2: Jan. 1 - March 31 Quarter 3: April 1 - June 30 Quarter 4: July 1 - Sept. 30

*Annual reports* – Annual reports are due no later than September 1 of each year for which a project receives funding to determine if continuing funding is appropriate. If a project is multi-year, PIs should prepare a brief annual report each year until the project is completed. The annual report will provide a summary of the work completed over the fiscal year.

*Final reports* – Draft final reports are due no later than April 15 of the year following the work on a funded project. A final report for a project must be a comprehensive report

addressing all the objectives identified over the course of the project and shall address the original objectives of the study as identified in the approved proposal and account for any changes in the objectives.

#### d. Project Funding Requirements

Proposals will be accepted for both single year and multi-year projects. Applicants should include project and budget information that accurately reflects the true time commitment necessary to complete their work. Funding for multi-year projects will be reviewed each fiscal year to ensure that the scope of work is progressing and that the project is still meeting the needs of the Trustee Council.

# 2. Instructions for Completing Pre-Proposal Forms – Injured Services

# **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 Data Policy*\*, adopted March 17, 2008) and reporting requirements (*Procedures for the Preparation and Distribution of Reports*\*\*, adopted June 27, 2007).

PROJECT TITLE:	
Printed Name of PI:	·
Signature of PI:	Date:
Email:	Phone:
Mailing Address	
City, State, Zip	
Printed Name of PI:	
Signature of PI:	Date:
Email:	Phone:
Mailing Address	
City, State, Zip	
Printed Name of DI	
Signature of PI:	Date:
Email:	Phone:
Mailing Address	**
City, State, Zip	

\* www.evostc.state.ak.us/Policies/data.cfm

\*\* www.evostc.state.ak.us/Policies/reporting.cfm

# FY09 INVITATION PROPOSAL SUMMARY PAGE – INJURED SERVICES

**Project Title:** 

**Project Timeline:** (Please use the federal fiscal years of October 1 – September 30)

Project Leader(s): (List each team member and their affiliation)

**Project Location:** (Be specific as possible)

Abstract/Summary:

**Estimated Cost: EVOS Funding Requested:** (breakdown by fiscal year and must include 9% GA)

#### Non-EVOS Funds to be used:

(breakdown by fiscal year)

Date:

(NOT TO EXCEED ONE PAGE)

# FY09 INVITATION PROJECT PLAN – INJURED SERVICES

- 1. Relationship to Injured Resources and Services Please clearly and succinctly state how you feel that the proposed project relates to the resources and services that were injured in the spill.
- 2. Location of Project Please provide a specific area where the project is to occur and what communities are local to the specified area.
- 3. **Project Design** Identify the how the project was conceived and how it might be implemented. This section can contain ideas and does not need to be explicit. A detailed project design will be requested if selected for a full proposal.
- 4. Collaboration and Coordination Describe any coordination that has taken or will take place (with other Council-funded projects, activities funded by other entities, etc.) and what form the coordination will take.
- **5.** Capacity Building/Community Involvement Describe appropriate partners and contributions, to the maximum degree possible, to the capacities of local communities, organizations, and residents of the region to participate in research and restoration activities.

NOTE: Please include a one-page resume or a summary relevant experience for each of the project leaders.

# VII. Instructions for Non-Trustee Council Agency Proposals

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 BAA issued by the National Oceanic and Atmospheric Administration (NOAA). Using 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 Council, and is 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 one paper copy, of your proposal to NOAA at the address below by 5:00 p.m. Pacific Daylight (Seattle) time on Wednesday, April 30, 2009. This is in addition to the copies of the proposal that must be submitted to the 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-08-RP-0107), available from NOAA:

Ms. Sharon Kent NOAA, WASC, Acquisition Management Division, WC31 7600 Sand Point Way NE Seattle, WA 98115-6349 Telephone (207) 526-6035 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.

# VIII. Instructions for Submitting a Proposal

#### How to Submit

We highly encourage the electronic submission of proposals. Please upload a copy of your proposal package at the following website:

# http://www.evostc.state.ak.us/proposals/newproposal.cfm

If you do not have access to the internet, please submit one electronic and one print copy to:

Catherine Boerner *Exxon Valdez* Oil Spill Trustee Council 441 West 5<sup>th</sup> Avenue, Suite 500 Anchorage, AK 99501-2340 dfg.evos.projects@alaska.gov 907-278-8012 phone 1-800-478-7745

#### What to Submit

E-versions of the narrative sections of the proposal must be composed using Microsoft Word 2002 (XP) or lower or WordPerfect 9.x or lower, with figures and tables embedded. Please submit Word or WordPerfect documents in one file, labeling them as follows:

Surname of lead PI\_FY09\_Proposal (e.g., Smith\_FY09\_Proposal)

#### **Pre-Proposal Format Specifications**

- Times Roman, 12-point
- one-inch margins on all sides
- page numbers
- summary page must be a stand alone page.
- extraneous cover sheets (i.e., often included with applications from universities) are allowed, but must not be integrated into the proposal package.

## **APPENDIX A – COMMUNITY CONTACT INFORMATION**

The following contact information is intended to be used by applicants to find initial contacts in the communities:

#### Native Village of Afognak

Nancy Nelson, Chairperson 115 Upper Mill Bay Rd. Suite 201 Kodiak, AK 99615 907-486-6357 melissa@afognak.org

#### Native Village of Akhiok

Rolin M Amodo, President P.O. Box 5030 Akhiok, AK 99615-5030 907-836-2313

## **Chenega IRA Council**

Larry Evanoff, President PO Box 8079 Chenega Bay, AK 99574-8079 (907) 573-5132 chenegaira@aol.com

#### Chignik Lake Village Council

Virginia Aleck, President P.O. Box 33 Chignik Lake, AK 99548 907-845-2212 chigniklakecouncil@yahoo.com

#### **Chignik Bay Tribal Council**

Roderick Carlson, President P.O. Box 50 Chignik Bay, AK 99564 907-749-2445 cbaytc@aol.com

#### Native Village of Chignik Lagoon

Clemens Grunert, President P.O. Box 09 Chignik Lagoon, AK 99565 907-840-2281 clvc101@aol.com

#### **City of Cordova**

Tim Joyce, Mayor P.O. Box 1210 Cordova, AK 99574 907-424-6200 cityclerk@cityofcordova.net

#### Traditional Village of Eyak

Robert Henrichs, President P.O. Box 1388 Cordova, AK 99574-1388 907-424-7738 reception@nveyak.org

#### **City of Homer**

James C. Hornaday, Mayor 491 East Pioneer Ave. Homer, AK 99603 907-235-8121 clerk@ci.homer.ak.us

#### Native Village of Karluk

Alicia Reft, President P.O. Box 22 Karluk, AK 99608 907-241-2218

#### **Kodiak Island Borough**

Jerome Selby, Mayor 710 Mill Bay Road Kodiak, AK 99615 907-486-9301 njavier@kodiakak.us

#### **City of Kodiak**

Carolyn Floyd, City Clerk 710 Mill Bay Road Kodiak, AK 99615 907-486-8636 clerk@city.kodiak.ak.us

#### Larsen Bay Tribal Council

Mary Nelson, President P.O. Box 50 Larsen Bay, AK 99624 907-847-2207/2276

#### City of Larsen Bay

Allen Panamaroff Sr., Mayor P.O. Box 8 Larsen Bay, AK 99624-0008 907-847-2211 cityoflarsenbay@aol.com

#### Nanwalek IRA Council

Emilie Swenning, President P.O. Box 8028 Nanwalek, AK 99603-8028 907-281-2274 nanwalek@yahoo.com

#### **Port Lions Traditional Tribal Council**

Ivan D. Lukin, President P.O. Box 69 Port Lions, AK 99550 907-454-2234 NVOPL@starband.net

#### Native Village of Tatitlek

Lori Johnson, President & CEO P.O. Box 171 Tatitlek, AK 99677 907-325-2311 suejohnson1@starband.net

#### **Old Harbor Tribal Council**

Conrad Peterson, President P.O. Box 62 Old Harbor, AK 99643 907-286-2215 ohtribal@hotmail.com

#### **Ouzinkie Tribal Council**

Daniel Ellanak, President P.O. Box 130 Ouzinkie, AK 99644 907-680-2259

#### ouzclerk@starband.net

#### City of Seldovia

Richard Wyland, Mayor Drawer B Seldovia, AK 99663 907-234-7643 info@cityofseldovia.com

#### City of Seward

Clark Corbridge, Mayor P.O. Box 167 Seward, AK 99664 907-224-4046 clerk@cityofseward.net

#### Seldovia Village Tribe IRA

Crystal Collier, CEO Drawer L Seldovia, AK 99663 907-234-7898 svt@svt.org

#### **City of Soldotna**

David Carey, Mayor 177 North Birch Street Soldotna, AK 99669 907-262-9107 tfahning@ci.soldotna.ak.us

#### City of Valdez

Bert Cottle, Mayor P.O. Box 307 Valdez, AK 99686 907-835-4313 spierce@ci.valdez.ak.us

### City of Whittier

Lester Lunceford, Mayor P.O. Box 608 Whittier, AK 99693 907-472-2327 admin@ci.whittier.ak.us



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#### **Restoration Status of Barrow's Goldeneyes**

#### General Background

Barrow's Goldeneyes (*Bucephala islandica*) are sea ducks that occur in protected nearshore marine waters (like Prince William Sound) during winter (October through April) and breed inland on ponds and lakes (Eadie et al. 2000). Barrow's Goldeneyes are a North American endemic (with the exception of a small number in Iceland) and have a restricted continental range (Figure 1). The vast majority of the global numbers of Barrows Goldeneyes occur in western North America, breeding from central Alaska to Washington state. The extent of the wintering range is similar, with nearly all wintering Barrow's Goldeneyes occurring from Kodiak Island, Alaska through Puget Sound, Washington. Within that restricted wintering range, Prince William Sound is an important area, supporting between 20,000 and 50,000 wintering individuals (McKnight et al. 2006).



Figure 1. North American range of Barrow's Goldeneyes (from U.S. Fish and Wildlife Service; Sea Duck Joint Venture).

On wintering areas, Barrow's Goldeneyes feed in the intertidal zone, consuming mussels (*Mytilus trossulus*) almost exclusively (Koehl et al. 1982). These natural history attributes suggest that Barrow's Goldeneyes are at high risk relative to other birds for direct and indirect, and both acute and chronic, effects of marine oil spills.

Following the sea duck paradigm (Goudie et al. 1994), Barrow's Goldeneyes would be expected to be relatively long-lived and thus their populations would be sensitive to changes in adult mortality. However, detailed work on Barrow's Goldeneye demography is largely lacking. Breeding biology has been well studied at some sites in British Columbia (Eadie 1989, Savard et al. 1991, Evans et al. 2002, Thompson and Ankney 2002), Iceland (Einarsson 1988, 1990), and eastern Canada (Robert et al. 2000), but survival and dispersal rates are not well-known (Lake et al. 2006). Some aspects of wintering ecology, such as diet (Koehl et al. 1982) and habitat selection (Esler et al. 2000a), have been studied, but detailed demographic data are lacking, which constrains full understanding or prediction of effects of the Exxon Valdez oil spill (Esler 2000).

#### Injury

Some acute mortality of Barrow's Goldeneyes was observed in the weeks and months immediately following the Exxon Valdez oil spill in March 1989; sea ducks, generally, were vulnerable to acute mortality and constituted approximately 25% of the carcasses recovered in Prince William Sound (Piatt et al. 1990). Total acute mortality of Barrow's Goldeneyes is difficult to determine, given uncertainty in carcass identification and recovery rates, but given the number of Barrow's Goldeneyes present at the time of the spill, acute mortality was likely in the thousands.

Of more concern are longer-term effects due to either chronic exposure to oil or indirect effects of trophic web disruption. Because Barrow's Goldeneyes occur exclusively in intertidal and shallow subtidal habitats, they would be particularly vulnerable to effects of lingering oil, as these are the habitats in which oil has remained for more than 14 years (Short et al. 2006). Similarly, reliance on intertidal invertebrate prey would suggest that Barrow's Goldeneyes are particularly vulnerable to disruptions of intertidal communities.

As suggested by their habitat choice, Barrow's Goldeneyes have been shown to have higher levels of induction of cytochrome P4501A (CYP1A) in oiled areas compared to unoiled areas. CYP1A induction occurs in response to exposure to certain, specific compounds, and has been used commonly to infer exposure to residual spilled oil for many species, including in the case of the *Exxon Valdez*. Elevated CYP1A induction in Barrow's Goldeneyes from oiled areas of Prince William Sound was documented in 1997 (Trust et al. 2000) and 2005 (Esler, unpubl. data). While these do not necessarily demonstrate subsequent injury, the potential for individual- or population-level effects of exposure to residual oil is significant. Harlequin ducks (*Histrionicus histrionicus*), another intertidal-dwelling sea duck, had lower winter survival rates on oiled areas in conjunction with elevated CYP1A induction (Esler et al. 2000b).

Survey data from the U.S. Fish and Wildlife Service indicated that winter numbers of goldeneyes on oiled areas were stable from 1990-1998, in contrast to significantly increasing numbers on unoiled areas during that same time period (Lance et al. 1999). That was interpreted as evidence of lack of recovery, as the prediction would be that lack of continued injury would result in parallel population trajectories and that recovery would be indicated by more positive trajectories on oiled areas. In the most recent survey (through March 2005; McKnight et al. 2006), slopes were parallel and stable over time, although this was due primarily to a decrease in goldeneye abundance on unoiled areas.

In a study of Barrow's goldeneye habitat use in oiled and unoiled portions of Prince William Sound, Esler et al. (2000a) found that densities of birds in oiled areas were at

expected levels, given the habitat, suggesting that the oil spill had not led to depressed numbers at the time of the study (1996 and 1997).

Interpretation of surveys (McKnight et al. 2006) and habitat selection (Esler et al. 2000a) is constrained by lack of full understanding of Barrow's Goldeneye demography, particularly rates of site fidelity and dispersal (Esler 2000). These values have important implications for understanding the process of population recovery.

#### **Recovery Status**

Given continued induction of CYP1A through March 2005 and only recent lack of difference in slopes between oiled and unoiled areas, there is concern about the recovery status of Barrow's Goldeneyes. Restoration activities, as described below, may be appropriate.

#### Restoration Recommendations and Opportunities

Continued monitoring of population numbers and trends, and CYP1A induction, are warranted under the circumstances.

Also, Barrow's Goldeneyes have some unique features that allow direct restoration with a high likelihood of success. In particular, because Barrow's Goldeneyes are almost exclusively cavity nesters, local populations can be enhanced through provision of additional nesting sites (nest boxes; Savard 1988, Evans et al. 2002). This activity would increase carrying capacity on breeding areas, which is thought to be the limiting factor for the species in general. It is likely that many of the birds wintering in Prince William Sound nest in adjacent watersheds. To benefit the Prince William Sound wintering population, connections between nearby high density breeding areas and birds wintering in the Sound would need to be confirmed. However, a pilot program using satellite telemetry could be used to define breeding areas to target for nest site enhancement. In addition, satellite telemetry could be used to confirm that juveniles produced in nest boxes recruit to the Prince William Sound population.

A satellite telemetry/nest box suite of restoration activities would have considerable side benefits, including participation by local communities and generation of data on demography (dispersal) that would enhance interpretation of survey data.

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#### Womac, Cherri G (EVOSTC)

From: Baffrey, Michael (DFG sponsored)

Sent: Tuesday, May 20, 2008 6:08 PM

To: Lloyd, Denby S (DFG); 'Jim Balsiger (jim.balsiger@noaa.gov)'; 'Jc (jmeade@fs.fed.us)'; Hartig, Lawrence L (DEC); 'Randall Luthi (ra Colberg, Talis J (LAW); 'Ann\_Jurva@ios.doi.gov'; 'Carol Schirmer (Carol.Schirmer@NOAA.gov)'; Fishwick, Claire (DEC); 'Dee Little Schlosser, Mary A (DFG); 'Michael Barre (Michael.Barre@mms.g

Cc: Lawson, Thomas W (DFG); Hoover, Jeff J (DFG); Beason, Laura (Craig.R.O'Connor@noaa.gov)'; Tillery, Craig J (LAW); 'Hans Ne (Hans\_Neidig@ios.doi.gov)'; 'Steve Zemke (szemke@fs.fed.us)'; (DFG); Fries, Carol A (DNR); Boerner, Catherine W (EVOSTC); ' (Dede\_Bohn@usgs.gov)'; 'Jenifer Kohout (Jenifer\_Kohout@fws. K (DEC); Baffrey, Michael (DFG sponsored); 'Peter Hagen (Pete Craig J (LAW); 'Dawn Germain (dawn.germain@usda.gov)'; Hsie (regina.belt@usdoj.gov)'; 'Heningham (Hen) Kennedy (Heningha 'Kathryn Macdonald (Kathryn.Macdonald@usdoj.gov)'; 'Maria Lis 'Ronald McClain (Ronald.McClain@usda.gov)'; Womac, Cherri C douglas\_mutter@ios.doi.gov; 'Ed Zeine (edward@ctcak.net)'; 'G (gfandrei@ciaanet.org)'; jbrune@akrdc.org; 'Kurt Eilo (keilo@gci (Imevanoff@yahoo.com)'; 'Mark King (marking@ctcak.net)'; 'Mari (unungangirl@yahoo.com)'; 'Martin Robards (m.robards@uaf.eou), Fat Lavin, rooscos.

Briefing Paper not in public pht not for public distribution

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Subject: RE: Background Packet for May 27 Trustee Council Meeting

Attachments: Briefing Paper - Barrow's Goldeneyes Petition to IR&S List 5-20-08.doc

Hello all, attached is the briefing paper promised on the Barrow's goldeneye that is updated with comments from FWS.

Michael

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Sent: Monday, May 19, 2008 4:56 PM

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Hello Council Members, attached are the:

- meeting agenda,
- future focus statement for the restoration program,
- summary of the Integrated Herring Restoration Program workshop held in Cordova April 28-May 2,
- summary of the May 11-15 tour with the Japanese herring enhancement experts,
- draft FY09 Invitation for Proposals,
- petition for listing the Barrow's goldeneye as an injured resource,
- notes from the May 1 Trustee Council meeting in Cordova, and
- draft motions for action items on the May 27 meeting agenda.

To increase our efficiency and reduce administrative cost we are sending these files electronically. Please have your respective administrative staff make hard copies if you are planning to participate in the May 27 meeting.

Also, in my May 9 e-mail to Craig O'Connor I provided you with additional briefing material on the integrated herring program. I also provided materials regarding the establishment of a pool of science/restoration experts that I can draw from on an ad hoc basis to replace the science panel as a standing committee. In my May 17 e-mail to Craig Tillery I provided you with briefing material specific to the draft FY09 Invitation. In a separate e-mail, I will provide you with briefing material regarding my recommendation on the petition to include Barrow's goldeneye on the Injured Resources and Services List.

Michael Baffrey Executive Director Exxon Valdez Oil Spill Trustee Council Voice: (907) 265-9330 Mobile: (907) 351-1852 michael baffrey@alaska.gov

# BRIEFING PAPER FOR THE TRUSTEE COUNCIL

## FROM: Michael Baffrey, Executive Director

SUBJECT: Barrow's Goldeneye – Petition for Adding to Injured Resources and Services List

#### PURPOSE OF THE BRIEFING DOCUMENT:

To provide an overview of the history of the Barrow's goldeneye within the Restoration Program in reference to the US Fish & Wildlife Service's petition to add them to the Injured Resources and Services List.

#### **ISSUE:**

Attached is the US Fish and Wildlife Service (FWS) petition to the Trustee Council to add Barrow's goldeneye (BAGO), a seaduck, to the Injured Resources and Services List. Dr. David Irons, a seabird specialist with the FWS, has provided a background document detailing the current status of the BAGO in the spill area.

## **BACKGROUND:**

Acute mortality of Barrow's goldeneye was observed immediately following the Exxon Valdez oil spill. Sea ducks were vulnerable to acute mortality and constituted approximately 25% of the carcasses recovered in Prince William Sound (Piatt et al. 1990). However, total acute mortality of Barrow's goldeneyes is difficult to determine, given uncertainty in carcass identification and recovery rates.

At the time of the creation of the Injured Resources and Services (IR&S) list, BAGO's were not included, but harlequin ducks who occupy a similar ecological niche, were added. In the years following the spill, elevated levels of induction of cytochrome P450FA (CYP1A) in oiled areas compared to unoiled areas in preliminary tests continued in both harlequin ducks and Barrow's goldeneye, which generated a petition in 1999 from the FWS to add Barrow's goldeneye to the IR&S list (Trust 2000). At that time, the Council commissioned a report on the current status of Barrow's goldeneye in the spill area. The report was completed by Dr. Dan Esler in 2000 and concluded that "Based on the weight of evidence from available data, Barrow's goldeneye populations appear to be recovering or recovered..." (Esler 2000). With this information, the Council decided not to add Barrow's goldeneye to the IR&S list at that time.

FWS is again petitioning to have Barrow's goldeneye added to the IR&S list based on their findings of continued induction of CYP1A through March 2005 (Esler, unpublished data) and their lack of data on Barrow's goldeneye demography, particularly rates of site fidelity and dispersal.

#### **OPTIONS:**

- 1) Add the Barrow's goldeneye to the IR&S list
- 2) Do not add Barrow's goldeneye to the IR&S list, but continue to work toward the restoration of their primary food source (mussels) which is currently on the IR&S list.

#### **PRO/CON ANALYSIS:**

Option 1: With Barrow's goldeneye continuing to demonstrate oil exposure, it would be appropriate to fund research projects through the Restoration Program. While they are ecologically similar to harlequin ducks, their diet and life history does differ. Current studies (Esler 2000, McKnight et al.

2006) suggest that the populations in oiled and unoiled areas are parallel and have been stable over time mostly due to a population decline in unoiled areas which indicate that the species is recovered from the population effects of the oil spill. Also, their current level of oil exposure can only be reduced through the recovery of their potential source of oil exposure, the mussel.

Option 2: The Barrow's goldeneye feeds on blue mussels which, is hypothesized to be their primary source of oil exposure (Trust 2000). The restoration of mussels which are currently on the IR&S list would directly benefit the health of the Barrow's goldeneye. Because Barrow's goldeneye and harlequin ducks occupy the same ecological niche, any restoration efforts for the harlequin ducks will likely benefit the Barrow's goldeneye.

# **POSITION OF INTERESTED PARTIES:**

Science Panel: The petition has been circulated to the Science Panel for their comments and we have not yet received comments from all of the seven members. Currently, three members support the petition and one member does not support the petition.

PAC: The PAC is awaiting a final recommendation from the Science Panel prior to their review.

**FWS liaison and agency scientist**: Harlequin ducks and Barrow's goldeneye are ecologically similar but have some differences, e.g. diet. Restoration actions that would benefit harlequins would likely benefit Barrow's goldeneye, with the exception that goldeneyes' productivity could be enhanced artificially.

The pathways of exposure to oil are not well known. Direct consumption of mussels is one pathway but excavation of sediments while foraging would potentially expose goldeneyes to oil.

# **RECOMMENDATION:**

I recommend Option 2. The Barrow's goldeneye population is stable. Also, the likely source of oil exposure is from mussels which are currently on the IR&S list and the Council's continued restoration of this prey species and the intertidal area will benefit the Barrow's goldeneye. Adding another resource to the IR&S list when its restoration is tied to the recovery efforts of currently listed resources would likely serve as a basis for only justifying additional research. This at a time when the Council is questioning the efficacy of additional research that doubtfully will lead to restoration. The Barrow's goldeneye is currently being studied through the Council funded project 070808/Ballachey, Bodkin and Esler - Nearshore Synthesis. Sea Otters and Sea Ducks and by the USGS Alaska Science Center through their bird banding program.

PREPARED BY: Catherine Boerner

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Piatt, J. F., C. J. Lensink, W. Butler, M. Kendziorek, and D. R. Nyeswander. 1990. Immediate impact of the "Exxon Valdez" oil spill on marine birds. Auk 107:387-397.

Savard, J. – P. L. 1988. Use of nest boxes by Barrow's Goldeneyes: nesting success and effect on the breeding population. Wildlife Society Bulletin 16:125-132.

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#### <u>Restoration Status of Barrow's Goldeneyes</u> (prepared by David Irons and Dan Esler) November 28, 2007

# General Background

Barrow's Goldeneyes (*Bucephala islandica*) are sea ducks that occur in protected nearshore marine waters (like Prince William Sound) during winter (October through April) and breed inland on ponds and lakes (Eadie et al. 2000). Barrow's Goldeneyes are a North American endemic (with the exception of a small number in Iceland) and have a restricted continental range (Figure 1). The vast majority of the global numbers of Barrows Goldeneyes occur in western North America, breeding from central Alaska to Washington state. The extent of the wintering range is similar, with nearly all wintering Barrow's Goldeneyes occurring from Kodiak Island, Alaska through Puget Sound, Washington. Within that restricted wintering range, Prince William Sound is an important area, supporting between 20,000 and 50,000 wintering individuals (McKnight et al. 2006).



Figure 1. North American range of Barrow's Goldeneyes (from U.S. Fish and Wildlife Service; Sea Duck Joint Venture).

On wintering areas, Barrow's Goldeneyes feed in the intertidal zone, consuming mussels (*Mytilus trossulus*) almost exclusively (Koehl et al. 1982). These natural history attributes suggest that Barrow's Goldeneyes are at high risk relative to other birds for direct and indirect, and both acute and chronic, effects of marine oil spills.

Following the sea duck paradigm (Goudie et al. 1994), Barrow's Goldeneyes would be expected to be relatively long-lived and thus their populations would be sensitive to changes in adult mortality. However, detailed work on Barrow's Goldeneye demography is largely lacking. Breeding biology has been well studied at some sites in British Columbia (Eadie 1989, Savard et al. 1991, Evans et al. 2002, Thompson and Ankney 2002), Iceland (Einarsson 1988, 1990), and eastern Canada (Robert et al. 2000), but survival and dispersal rates are not well-known (Lake et al. 2006). Some aspects of wintering ecology, such as diet (Koehl et al. 1982) and habitat selection (Esler et al. 2000a), have been studied, but detailed demographic data are lacking,

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which constrains full understanding or prediction of effects of the Exxon Valdez oil spill (Esler 2000).

#### Injury

Some acute mortality of Barrow's Goldeneyes was observed in the weeks and months immediately following the Exxon Valdez oil spill in March 1989; sea ducks, generally, were vulnerable to acute mortality and constituted approximately 25% of the carcasses recovered in Prince William Sound (Piatt et al. 1990). Total acute mortality of Barrow's Goldeneyes is difficult to determine, given uncertainty in carcass identification and recovery rates, but given the number of Barrow's Goldeneyes present at the time of the spill, acute mortality was likely in the thousands.

Of more concern are longer-term effects due to either chronic exposure to oil or indirect effects of trophic web disruption. Because Barrow's Goldeneyes occur exclusively in intertidal and shallow subtidal habitats, they would be particularly vulnerable to effects of lingering oil, as these are the habitats in which oil has remained for more than 14 years (Short et al. 2006). Similarly, reliance on intertidal invertebrate prey would suggest that Barrow's Goldeneyes are particularly vulnerable to disruptions of intertidal communities.

As suggested by their habitat choice, Barrow's Goldeneyes have been shown to have higher levels of induction of cytochrome P4501A (CYP1A) in oiled areas compared to unoiled areas. CYP1A induction occurs in response to exposure to certain, specific compounds, and has been used commonly to infer exposure to residual spilled oil for many species, including in the case of the *Exxon Valdez*. Elevated CYP1A induction in Barrow's Goldeneyes from oiled areas of Prince William Sound was documented in 1997 (Trust et al. 2000) and 2005 (Esler, unpubl. data). While these do not necessarily demonstrate subsequent injury, the potential for individual-or population-level effects of exposure to residual-oil is significant. Harlequin ducks (*Histrionicus*), another intertidal-dwelling sea duck, had lower winter survival rates on oiled areas in conjunction with elevated CYP1A induction (Esler et al. 2000b).

Survey data from the E.S. Fish and Wildlife Service indicated that winter numbers of goldeneyes on oiled areas were stable from 1990-1998, in contrast to significantly increasing numbers on unoiled areas during that same time period (Lance et al. 1999). That was interpreted as evidence of lack of recovery, as the prediction would be that lack of continued injury would result in parallel population trajectories and that recovery would be indicated by more positive trajectories on oiled areas. In the most recent survey (through March 2005; McKnight et al. 2006), slopes were parallel and stable over time, although this was due primarily to a decrease in goldeneye abundance on unoiled areas.

In a study of Barrow's goldeneye habitat use in oiled and unoiled portions of Prince William Sound, Esler et al. (2000a) found that densities of birds in oiled areas were at expected levels, given the habitat, suggesting that the oil spill had not led to depressed numbers at the time of the study (1996 and 1997).

Interpretation of surveys (McKnight et al. 2006) and habitat selection (Esler et al. 2000a) is constrained by lack of full understanding of Barrow's Goldeneye demography, particularly rates of site fidelity and dispersal (Esler 2000). These values have important implications for understanding the process of population recovery.

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#### **Recovery Status**

Given continued induction of CYP1A through March 2005 and only recent lack of difference in slopes between oiled and unoiled areas, there is concern about the recovery status of Barrow's Goldeneyes. Restoration activities, as described below, may be appropriate.

#### Restoration Recommendations and Opportunities

Continued monitoring of population numbers and trends, and CYP1A induction, are warranted under the circumstances.

Also, Barrow's Goldeneyes have some unique features that allow direct restoration with a high likelihood of success. In particular, because Barrow's Goldeneyes are almost exclusively cavity nesters, local populations can be enhanced through provision of additional nesting sites (nest boxes; Savard 1988, Evans et al. 2002). This activity would increase carrying capacity on breeding areas, which is thought to be the limiting factor for the species in general. It is likely that many of the birds wintering in Prince William Sound nest in adjacent watersheds. To benefit the Prince William Sound wintering population, connections between nearby high density breeding areas and birds wintering in the Sound would need to be confirmed. However, a pilot program using satellite telemetry could be used to define breeding areas to target for nest site enhancement. In addition, satellite telemetry could be used to confirm that juveniles produced in nest boxes recruit to the Prince William Sound population.

A satellite telemetry/nest box suite of restoration activities would have considerable side benefits, including participation by local communities and generation of data on demography (dispersal) that would enhance interpretation of survey data.

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## Motions for May 27, 2008 Trustee Council Action Items

<b>Consent Agenda:</b> I move to approv May 19, 2008.	ve the May 27, 2008 draft meeting agenda dated
Motion by:	Second by:
<b>Meeting Notes:</b> I move to approv 15, 2008 as presented/amended.	ve the May 1, 2008 draft meeting notes dated May
Motion by:	Second by:
<b>Cordova Center Project Managemen</b> managing agency for the Cordova Cent	t: I move we approve ADF&G as the project er.
Motion by:	Second by:
<b>Integration of Herring:</b> I move w continued preparation of an Integrated I	e approve additional funding of \$90,000 for the Herring Restoration Program.
Motion by:	Second by:
<b>FY 09 Invitation:</b> I move we appro presented/amended.	ve release of the FY 09 Invitation for Proposals as
Motion by:	Second by:
<b>Barrow's goldeneyes:</b> I move to Injured Resources and Services List.	approve adding Barrow's goldeneye to the
Motion by:	Second by: