

11.26.03
EVOSTC meeting November 12, 2015

Exxon Valdez Oil Spill Trustee Council

Thursday, November 12, 2015

9:30 a.m. to 4:30 p.m.

800-315-6338 – code 72241

Exxon Valdez Oil Spill Trustee Council

4210 University Drive • Anchorage, AK 99508-4626 • (907) 278-8012 • fax (907) 276-7178



AGENDA

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

November 12, 2015

9:30 a.m. to 4:30 p.m.

Anchorage, Alaska

Trustee Council Members

STEVEN E. MULDER

Alternate for Attorney General

Craig W. Richards

Alaska Department of Law

JAMES BALSIGER

Administrator, Alaska Region

National Marine Fisheries Service

U.S. Department of Commerce

LARRY HARTIG

Commissioner

Alaska Department of Environmental Conservation

TERRI MARCERON

Forest Supervisor

Chugach National Forest

U.S. Department of Agriculture

DAVID E. ROGERS

Alternate for Commissioner Samuel Cotten

Alaska Department of Fish and Game

MICHAEL JOHNSON

Senior Advisor to the Secretary for
Alaska Affairs

Office of the Secretary

U.S. Department of the Interior

Meeting in Anchorage: USGS Alaska Pacific University Campus;

Dr. Glenn A. Olds Hall Conference Room, 4210 University Drive

Teleconference Number: 800.315.6338. Code: 72241#

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Federal Trustees

U.S. Department of the Interior

U.S. Department of Agriculture

National Oceanic and Atmospheric Administration

State Trustees

Alaska Department of Fish and Game

Alaska Department of Environmental Conservation

Alaska Department of Law

Draft 11.3.15

1. Call to Order
2. Consent Agenda
 - Approval of Agenda*
 - Approval of March 25, 2015 Meeting Notes*
3. Public Comment (3 minutes per person)
4. Public Advisory Committee (PAC) Comments
Phil Johnson, PAC Designated Federal Officer
(RE June 29 & Sept 22 teleconferences)
5. Executive Director's Report
Elise Hsieh, EVOSTC Executive Director
- Old Harbor USFWS Conservation Easement Amendment*
Doug Campbell, USFWS
6. Investment and evaluation time horizons
Paul Erlendson, Callan Associates Inc.
- Annual Asset Allocation*
Elise Hsieh
7. FY16 EVOSTC Annual Budget
Elise Hsieh
Project 16120100*
Linda Kilbourne, EVOSTC Administrative Manager
8. FY17-21 Invitation for Proposals*
Catherine Boerner, EVOSTC Science Coordinator
9. Long-Term Programs Intro*
Catherine Boerner
- Herring Program Project 16120111*
Scott Pegau, Herring Program Lead
- Monitoring Program (Gulf Watch Alaska)
Molly McCammon, Gulf Watch Alaska Program Lead
Project 16120114*
Katrina Hoffman, Prince William Sound Science Center
10. NOAA Clean Harbor Projects*
Catherine Boerner
- NOAA Clean Harbor- Project Mgmt. Project 16120112
- Cordova Clean Harbor Project 16120112-A
11. Pigeon Guillemot Project 16100853*
Catherine Boerner
12. Habitat Parcels*
Phil Shepard, Great Land Trust
- Termination Point
Lauri Adams, EVOSTC Habitat
- Long Island

Draft 11.3.15

13. Lingering EVOS Oil*

Larry Hartig, AK Dept of Environmental
Conservation

Steve Mulder, AK Dept of Law

Adjourn by 4:30

*Potential Action Item

Exxon Valdez Oil Spill Trustee Council

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TRUSTEE COUNCIL MEETING NOTES

Anchorage, Alaska

March 25, 2015

Chaired by: Steve Mulder
Trustee Council Member

Trustee Council Members Present:

Terri Marceron, USFS
Geoff Haskett, USDOJ
Jim Balsiger, NMFS

•Steve Mulder, ADOL **
Tony DeGange, ADF&G *
Larry Hartig, ADEC

- Chair
- * Tony DeGange alternate for Samuel Cotten
- ** Steve Mulder alternate for Craig Richards

The meeting convened at 1:15 p.m., March 25, 2015 on the USGS Alaska Pacific University Campus, Dr. Glenn A. Olds Hall Conference Room, 4210 University Drive, Anchorage.

1. Approval of the March 25, 2015 meeting agenda

APPROVED MOTION: Motion to approve the March 25, 2015 draft meeting agenda.

Motion by Hartig, second by Marceron

2. Approval of the November 19, 2014 meeting notes

APPROVED MOTION: Motion to approve the November 19, 2014 draft Trustee Council meeting notes.

Motion by Hartig, second by DeGange

Public Comment: **One public comment was offered.**

3. Approval of Amended Annual Program Development and Implementation (APDI)
Project Number 15120100

APPROVED MOTION: Motion to approve an adjustment of \$11,752 within the FY 15 Annual Program Development and Implementation Budget Project 15120100, as detailed in the revision dated February 25, 2015. Authorization for this funding is approved for July 1, 2015 – January 31, 2016.

Motion by DeGange, second by Hartig

4. Approval of Kenai Peninsula Aquatic Ecosystem Restoration, Project Number
15150123

APPROVED MOTION: Motion to approve \$8,175,000, which includes GA, from the EVOS Research Investment Sub-Account towards funding of the Kenai Peninsula Aquatic Ecosystem Restoration Project. These projects are of a multi-year nature and thus the Council anticipates a future status report on the progress of the projects and the potential need to renew the funding at a future meeting. Release of any funding for each individual project is conditioned upon the EVOSTC Executive Director determining there are commitments for full funding of the individual project, including leveraging, as detailed in the Project No. 150150123, Kenai Peninsula Aquatic Ecosystem Restoration Project Overview, dated March 3, 2015. Authorization for this funding is approved for April 1, 2015 – October 1, 2016.

Motion by DeGange, second by Marceron

5. Approval of Thorsheim Drainage, KAP 3305: Uyak/TransPac Timber Rights

APPROVED MOTION: Motion to state on the record the Council's interest in continuing discussions with Uyak and TransPac regarding potentially purchasing fee title and the timber rights in the Thorsheim Drainage, KAP 3005 parcel. If this potential purchase continues to develop, a subsequent Council meeting would be

called to approve the purchase. As with all Council-funded habitat protection, the Council only considers purchase values that are consistent with an EVOSTC-approved appraisal.

Motion by DeGange, second by Haskett

6. Approval of Kenai Fjords Port Graham, PGC 1 through PGC8

APPROVED MOTION: Motion to approve up to \$60,000 to conduct due diligence for the possible acquisition of Port Graham Parcels PGC 1 through PGC 8 within Kenai Fjords National Park. Authorization for this funding is approved for April 1, 2015 – October 1, 2016.

Motion by Marceron, second by DeGange

Adjourn

APPROVED MOTION: Motion to adjourn

Motion by Marceron, second by DeGange

Off the record 1:50 p.m.

Meeting Summary

A. GROUP: Exxon Valdez Oil Spill (EVOS) Public Advisory Committee (PAC)

B. DATE: June 29, 2015

C. LOCATION: EVOS Trustee Council Conference Room, Grace Hall, 4230 University Drive, Anchorage, AK

D. MEMBERS IN ATTENDANCE: (T = via teleconference)

<u>Name</u>	<u>Principal Interest</u>
Amanda Bauer (T)	Commercial Tourism
Kurt Eilo (T)	Sport Hunting/Fishing, PAC Chair
Gary Fandrei (T)	Aquaculture/Mariculture
John French (T)	Science/Technical, PAC Vice-chair
Kate McLaughlin (T)	Conservation/Environmental
Angela Totemoff (T)	Public at Large

E. NOT PRESENT:

<u>Name</u>	<u>Principal Interest</u>
David Totemoff, Sr.	Native Landowner
Steven Aberle	Commercial Fishing
Patience Andersen Faulkner	Subsistence
Stacy Studebaker	Recreational Users

F. OTHER PARTICIPANTS:

<u>Name</u>	<u>Organization</u>
Elise Hsieh	Executive Director, Trustee Council (EVOSTC)
Philip Johnson	Designated Federal Officer, Department of the Interior
Cherri Womac	Trustee Council Staff
Linda Kilbourne	Trustee Council Staff
Catherine Boerner (T)	Trustee Council Science Coordinator
Katelyn Heflin	Summer Intern, Department of the Interior
Peter Hagen	National Oceanic and Atmospheric Administration
Scott Pegau	Prince William Sound Science Center
Tammy Neher	NOAA Kasitsna Bay Lab
Kris Holderied	NOAA Kasitsna Bay Lab
Barat LaPorte	Oles Morrison

H. SUMMARY:

At 1:40 p.m. the Designated Federal Officer (Philip Johnson) opened the meeting and took roll call of PAC members. Six members participated, establishing a quorum.

Public Comment: The floor was open for public comment, telephonically. No members of the public requested the opportunity for comment.

Executive Director's Report:

Executive Director Elise Hsieh provided an overview of the Draft FY 2017-2021 Invitation for Proposals (Draft Invitation).

EVOSTC staff, in consultation with the Science Panel, developed the initial draft. This draft is under review by the Invitation Working Group. They are scheduled to complete their review within 10 days to two weeks.

The PAC will have an opportunity to review the Draft Invitation at their September 22, 2015 meeting. The Trustee Council (TC) will then consider the Draft Invitation at their November 12, 2015 meeting.

Draft FY 2017-2021 Invitation for Proposals:

Catherine Boerner provided a briefing on the Draft Invitation.

The Science Panel met in April to discuss the Draft Invitation.

Focus areas include:

Herring – A program for continued monitoring of this species, which has not yet recovered. A new aspect of this program is funding a post-doctoral position. While this is designed as a five-year program, funding will be approved on an annual basis.

Long-Term Monitoring (LTM) of Marine Conditions and Injured Resources – A monitoring program that collects physical and biological information. This is also a five-year program with funding approved on an annual basis.

Data Management – Formerly much of this work was housed in LTM. The Science Panel recommended that this work merited a specific focus area, ensuring equal access by all focus areas including LTM and Herring.

Cross-Program Publication Groups – The goal of this focus area is to publish information in a new or novel way, to take a fresh look at existing data, and to synthesize information from the other focus areas.

Lingering Oil – Lingering oil (LO) proposals should identify data gaps and identify areas for further study. Collaborative research is desired. These LO proposals can be reviewed and funded off-cycle if warranted.

The Trustees continue to ask about the value of the science and monitoring being funded by the Council.

PAC discussion:

Reporting and Publication: John French asked about the status of recent LO reports. French recommended that a primary focus of the TC should be providing information to the public. In response it was noted that a recent final report on bioremediation is available on the EVOSTC website.

French noted that (retired) librarian Carrie Holba was instrumental in bringing investigators into compliance with publication requirements by assisting with finalizing of reports. Dede Bohn (U.S. Geological Survey) also played an instrumental role in this process. Hsieh reported that Holba recently retired and a new librarian has been hired.

It was noted that the EVOSTC website averages 1,700 hits per day, and that both the TC office staff and ARLIS are very responsive to information requests.

Public interest in the EVOSTC increased during and after the Deepwater Horizon (DWH) spill in the Gulf of Mexico, subsequent pipeline spills in various parts of the country, the 25th Anniversary of the *Exxon Valdez* oil spill and during the DWH Natural Resource Damage Assessment process.

EVOS Reopener: Kate McLaughlin raised the importance of the EVOSTC website and LO studies relative to the Reopener process. McLaughlin noted that this was a very important issue with national implications.

Executive Director Elise Hsieh noted that the TC is not a party to this litigation. That said, she noted the TC has funded scientific studies that may help inform this process. She also noted that the EVOSTC website plays an important role in disseminating information to the public, and that the website had recently been updated.

French asked about what would happen to the LO work if the reopener was approved. Hsieh reiterated that the TC can fund LO studies at any time, independent of any legal action associated with the reopener.

Draft Invitation: With regard to the long-term program outreach, Hsieh reported that the TC is seeking outreach information that the agencies can use within their existing outreach efforts, and that the need for outreach that can be transmitted to the agencies was captured in the Draft Invitation. One (older) example of TC office outreach is the Restoration Notebook. The Executive Director noted that approving outreach products that are disseminated by the long-term programs would entail a multi-stage process that takes time including TC staff review, agency review and legal review.

It may be more efficient for Trustee agencies to prepare their own outreach products for work they are associated with.

In general, for the new Draft Invitation, returning investigators need to describe how they met stated goals, describe what value was added, and explain why they should be funded for an additional five years.

Hsieh noted that the TC was taking public comments on the Draft Invitation until August 14, and that PAC members could also provide individual comments during that process.

PAC Motions:

French noted a general concern that the focus areas are managed separately and there is a lack of integration between projects conducted within Prince William Sound (PWS) and work conducted in the Gulf of Alaska (GOA).

Motion: French introduced a motion that priority should be given to approaches that integrate between PWS and the GOA. Seconded by McLaughlin. **Motion carried.**

Motion: French moved to approve the February 4, 2015 meeting summary. Seconded by McLaughlin. **Motion carried.**

Closing Remarks:

The Chair (Eilo) and the DFO (Johnson) thanked the PAC for their work.

The meeting was adjourned at 2:21 pm

I. FOLLOW-UP:

1. The next meeting of the PAC will take place telephonically at 9:30 a.m. on September 22, 2015 in Anchorage.

J. NEXT MEETINGS:

PAC Meeting (Anchorage on September 22, 2015)

Trustee Council Meeting (Anchorage on November 12, 2015)

K. ATTACHMENTS (provided to PAC members prior to the meeting):

1. February 04, 2015 *Exxon Valdez* Oil Spill (EVOS) Public Advisory Committee (PAC) draft meeting notes.
2. 6/17/2015 - *Exxon Valdez* Oil Spill Trustee Council Invitation for Proposals, Fiscal Year 2017.

L. CERTIFICATION:

PAC Chairperson

Date

Meeting Summary

A. GROUP: Exxon Valdez Oil Spill Trustee Council (EVOSTC) Public Advisory Committee (PAC)

B. DATE: September 22, 2015

C. LOCATION: Dr. Glenn A. Olds Hall Conference Room, 4210 University Drive, Anchorage, AK

D. MEMBERS IN ATTENDANCE: (T = via teleconference)

<u>Name</u>	<u>Principal Interest</u>
Amanda Bauer (T)	Commercial Tourism
Gary Fandrei (T)	Aquaculture/Mariculture
John French (T)	Science/Technical, PAC Vice-chair
Kate McLaughlin (T)	Conservation/Environmental
Angela Totemoff (T)	Public at Large
Patience Andersen Faulkner (T)	Subsistence
Stacy Studebaker (T)	Recreational Users

E. NOT PRESENT:

<u>Name</u>	<u>Principal Interest</u>
David Totemoff, Sr.	Native Landowner
Steven Aberle	Commercial Fishing
Kurt Eilo	Sport Hunting/Fishing, PAC Chair

F. OTHER PARTICIPANTS:

<u>Name</u>	<u>Organization</u>
Elise Hsieh	Executive Director, Trustee Council (EVOSTC)
Philip Johnson	Designated Federal Officer, Department of the Interior
Cherri Womac	Trustee Council Staff
Catherine Boerner (T)	Trustee Council Science Coordinator
Hellen Woods	Trustee Council Staff
Laurie Adams	Trustee Council Staff
Scott Pegau	Prince William Sound Science Center
Tammy Neher	NOAA Kasitsna Bay Lab
Kris Holderied	NOAA Kasitsna Bay Lab
Barat LaPorte	Oles Morrison

H. SUMMARY:

At 9:31 a.m. the Designated Federal Officer (Philip Johnson) opened the meeting and took roll call of PAC members. Seven members participated, establishing a quorum.

Public Comment: The floor was open for public comment, telephonically. No members of the public requested the opportunity for comment.

Executive Director's Report:

Executive Director Elise Hsieh provided an overview of significant activities this past year including the Long-Term Monitoring Workshop and the Draft FY 2017-2021 Invitation for Proposals (Draft Invitation). The Draft Invitation benefitted from review by the public, Trustee Council members, the EVOSTC PAC, the Science Panel and the Invitation Work Group.

The Annual Program Development and Implementation (APDI) Budget is now the "EVOSTC Annual Budget."

The Alaska Research Library and Information Systems digitizing work is now in its fourth year.

The Great Land Trust (GLT) habitat work is gaining momentum. For example the Ouzinke purchase is progressing. Other parcels that are in discussion include Port Graham/Kenai Fjords National Park and Portage Lake.

The PAC was briefed on a Herring Research and Data budget request. State budget cuts resulted in reduced support for the Alaska Department of Fish and Game (ADF&G) herring program. Agency requests for funding must be balanced between the prohibition for funding agency functions and the interest of the Council in facilitating its missions. The ADFG request is currently in the EVOSTC Annual Budget as it was just received. Next year the agency requests will be in proposals in the scientific program that include detail as to the funding requests and deliverables.

Draft FY 2017-2021 Invitation for Proposals:

Catherine Boerner provided a briefing on the Draft Invitation.

Two sets of public comments were received regarding the Draft Invitation. Both sets of comments were from potential Principle Investigators.

The Science Panel met September 16-17, 2015 to discuss the Draft Invitation, making minor changes. The Invitation Working Group also helped clarify issues and wording but no major changes were adopted.

A draft that incorporates comments to date will be available prior to the next Trustee Council meeting in November.

The Invitation for Proposals is anticipated to be issued on December 1, 2015. Program proposers are to submit their contact information and Program of interest by February 1, 2016, with proposals due April 1, 2016. Preliminary review will then take place and any feedback provided to proposers. Final proposals will be submitted September 1, 2016, prior to the next PAC meeting.

Long Term Programs:

Boerner then provided an update on the Long-Term Programs; the Herring Program and Long-Term Monitoring (Gulf Watch Alaska).

The Science Panel is supportive of the progress to date. An emphasis is placed on data analysis and collaboration between these Programs.

Herring Program - In FY 2016, two additional projects are being proposed.

16160111-S Herring Movement Study – This proposal is requesting funds to clarify the annual migration cycle of Prince William Sound (PWS) herring. The objective of the project are to 1) purchase and deploy additional acoustic receivers at the Ocean Tracking Network arrays so that the direction of herring movements (into or out of PWS) can be determined; and 2) purchase acoustic tags.

The acoustic tracking project will fund the purchase of tags and receivers. The Science Panel discussed whether to recommend this project for funding in FY 2016, or whether they should wait until data are analyzed. The Science Panel accepted the justification provided by the Principle Investigator (PI) and is recommending the project for continued funding.

Gary Fandrei asked about the lifespan of the receivers. Scott Pegau (Herring Program PI) responded that the receivers can be used until they are lost to the ocean, but the tags are one-time use only.

16160111-T ASL Study and Aerial Milt Survey - This project will conduct spring aerial surveys to document spawn distribution and biomass as well as process age, sex, and size samples of herring collected by acoustics surveys, spawning surveys, PWS Herring Program disease sampling and genetics collections.

The work would be conducted by ADF&G. Some of this work had in the past been supported by agency funds, but as mentioned above, State budget cuts have resulted in loss of that support. John French noted that the PAC typically has tried to avoid funding requests that could be supported through agency funding.

The Science Panel is recommending continued funding for the Herring Program.

Long-Term Monitoring (LTM) of Marine Conditions and Injured Resources –

The Science Panel noted there had been good coordination following the February 2015 meeting. They did voice some concerns regarding the Hollmen proposal (16120114I), which would fund development of a conceptual model. This project was not recommended for funding in FY 16.

In the Draft Invitation, conceptual modeling is expected to be included.

NOAA Clean Harbor Projects –

The Cordova Snow Management Study project completed its work in FY15 and is preparing a final report for submission. The Cordova Clean Harbor Program completed the construction of an anti-freeze shed and battery storage area in FY15 and will be implementing their outreach program in FY16 on the use of these facilities.

The Science Panel recommends funding to close out this work. The PAC had no additional comments or suggestions.

Pigeon Guillemot Restoration Research Project –

The Science Coordinator provided an update on this project. The number of active nests almost doubled the amount from the previous year following predator reduction in the nesting area. In contrast, nesting activity at a nearby control island did not increase during the same time period.

French asked if the researchers were counting fledglings vs. active nests. It was noted that fledglings would be too difficult to count given the birds nest in cliff habitat.

This project should be viewed as a 5-year demonstration project.

Habitat Program:

Hsieh briefed the PAC on Habitat Program activities.

Termination Point: This 1,060-acre parcel, known as Termination Point, is owned by Leisnoi, Inc. and is located on the northeastern end of Kodiak Island. An appraisal for a purchase of a conservation easement is underway and is expected to be completed by November 1, 2015. The land would be conserved with an easement held by the State of Alaska or the Kodiak Island Borough with additional enforcement rights held by the Bureau of Land Management (BLM). In both scenarios the property will be managed for conservation and public use. Koniag, Inc. owns the subsurface estate below this property. Negotiations with Koniag, Inc. regarding acquisition of the subsurface estate are ongoing.

Long Island is located in the Gulf of Alaska off of the northeastern coast of Kodiak and is owned by Leisnoi, Inc. It is proposed for protection through a conservation easement on 1334 acres. An appraisal for a proposed conservation easement is underway and is expected to be completed by November 1, 2015. As currently proposed, the conservation easement would be held by either the State of Alaska or the Kodiak Island Borough with additional enforcement rights held by the Bureau of Land Management (BLM). The conservation easement would allow public access in either scenario. As the fee owner, Leisnoi, Inc. would retain certain rights on the entire 1,334 acres, such as the ability to install appropriate signage, maintain certain rights to archaeological sites and artifacts, engage in subsistence activities, and maintain ownership of any potential carbon credit value. Additionally on approximately 141 acres on the northwestern point of Long Island, Leisnoi, Inc. will retain additional rights such as the ability to build structures and limit public access. Other uses such as subdivision and timber harvest will still be restricted. Koniag, Inc. owns the subsurface estate below this property. Negotiations with Koniag regarding acquisition of the subsurface estate are ongoing. The protection of this large, ecologically-rich island in the Kodiak Archipelago would contribute to EVOSTC area-wide goals of species recovery and habitat

protection. Species affected by EVOS in the Kodiak Archipelago are dependent on the coastal, wetland, and upland habitats provided by the Long Island parcel. Long Island provides habitat for large populations of sea birds, as well as shore birds and terrestrial and marine mammal species, including those affected by EVOS.

PAC discussion:

Termination Point – Stacey Studebaker indicated that the community of Kodiak is enthusiastic about the potential conservation easement for Termination Point. She had nominated this project many years ago and is thrilled that Leisnoi, Inc. may now be willing to reach agreement on this parcel. Given State budget issues, management by the Kodiak Borough is more likely than management by the Alaska Department of Natural Resources. There will be a presentation to the Kodiak Borough Assembly this Thursday, September 24, 2015.

French also supports the Termination Point project, considering it to be a valuable public asset.

Long Island – French raised concerns about hazardous materials left over from World War II, specifically leakage of transformer oils containing PCBs (polychlorinated biphenyls). He considers the Long Island parcel to also be valuable, but he recommends that the potential liability associated with the very high PCB levels found in a limited number of soil samples needs to be addressed prior to EVOSTC action.

French pointed to information in the Benefits Report regarding Ft. Tidball. Some cleanup has been conducted by the U.S. Army Corps of Engineers (ACOE) from 1986-2003. In 2005 it was determined that no further remedial action would be planned.

French indicated that the area affected by the contamination was relatively small, but concentrations were very high (parts per thousand), and migration of the PCB oil was fairly deep. French advocated for using a precautionary principle standard. French also asked if monitoring wells were still present and if the contaminated area was fenced.

Lauri Adams noted that if a successful purchase agreement is reached, appropriate due diligence would be conducted, including hazmat surveys and fieldwork before finalizing an agreement.

Studebaker agreed with French, expressing concern that the ACOE left high subsurface levels of PCBs in some areas.

The PAC noted the need to document any remaining contamination to avoid potential public exposure.

Hsieh observed that Leisnoi, Inc. may view the two parcels in tandem during the negotiations.

Studebaker asked if there were contamination issues at previously acquired properties. It was noted that due diligence is performed on acquisition for all parcels. And all project acquisitions require the approval of the Alaska Department of Law, U.S. Department of Interior Solicitor's Office and the U.S. Department of Justice.

Studebaker hoped that the two parcels could be considered separately, but recognized that may not meet the willing seller's desires.

It was then noted that a conservation easement differs from taking title to land. It was also noted that Koniag, Inc. owns the subsurface for this parcel. Andersen Faulkner mentioned Alaska native corporation litigation regarding what constitutes surface vs. subsurface rights.

French recommended that the PAC consider two distinct motions for these two sites.

Future Meetings and Activities:

French stated that the February meeting (Science Workshop) was very useful and recommended continuing these meetings in the future.

Hsieh explained that a similar Science Panel/PAC meeting will be held in the 3rd year of the new funding cycle (FY 19).

The next EVOSTC meeting will be on November 12, 2015. PAC members may attend this meeting.

Outside of the regular meeting schedule, PAC members can offer individual comments to the EVOSTC. The TC staff will ensure that Trustees are aware that those individual comments are from PAC member(s).

When the Port Graham appraisal(s) are available, they will be circulated to PAC members.

Under the Draft Invitation, proposals for FY 17-21 will be due on April 1, 2016. Final proposals will be due September 1, 2016.

Hsieh noted that if competing proposals are received, the PAC and TC will need to meet to decide which will be the "preferred proposal." Under that scenario, it is possible that a June, 2016 meeting will be required.

French strongly encouraged in-person meetings each year, finding value in these meetings. He believes this interaction helps the group function better as an advisory committee. Andersen Faulkner supported French's recommendation regarding in-person meetings.

Hsieh noted that in-person meetings are held every other year, with the next one planned for October 2016. The Executive Director also noted that the PAC membership has different views regarding the number of meetings.

There was general discussion regarding the EVOSTC staff scheduling both PAC and TC meetings to avoid meeting near the end of the State budget cycle (July 1) and the federal fiscal year (September 30).

PAC Motions:

Motion: Amanda Bauer introduced a motion to approve the June meeting summary. Seconded by Kate McLaughlin. **Motion carried.**

Motion: Bauer introduced a motion to approve the FY16 Annual EVOSTC Budget. Seconded by Studebaker. **Motion carried.**

Motion: Fandrei moved to approve the Draft Invitation, to go forward to the EVOSTC with minor edits. Seconded by Bauer. **Motion carried.**

Motion: Studebaker moved to accept the funding requests for the two new Herring Program proposals. Seconded by Fandrei. **Motion carried.**

Motion: McLaughlin moved to accept the Long-Term Monitoring budget, with the exception of the Hollmen project. Seconded by French. **Motion carried.**

Motion: Bauer moved to recommend the NOAA Clean Harbor projects for continued funding. Seconded by McLaughlin. **Motion carried.**

Motion: Bauer moved to recommend the pigeon guillemot project for continued funding. Seconded by Andersen Faulkner. **Motion carried.**

Motion: French moved that the PAC strongly supported the Termination Point parcel. Seconded by Studebaker. **Motion carried.**

Motion: Andersen Faulkner moved that the PAC offers cautious support for the Long Island parcel, with a strong note regarding remaining contamination and consideration for public and environmental safety. Seconded by Studebaker. **Motion carried.**

Motion: Bauer moved to adjourn the meeting. Seconded by Angela Totemoff. **Motion carried.**

Closing Remarks:

The DFO (Johnson) thanked the PAC for their work.

The meeting was adjourned at 10:55 a.m.

I. FOLLOW-UP:

1. The PAC meeting notes and recommendations will be distributed to the EVOS Trustee Council prior to their next meeting, which will be held on November 12, 2015 in Anchorage. The DFO and/or PAC Chair will plan on attending this meeting, summarizing the outcome of PAC meetings held since the last EVOS TC meeting. The PAC members are welcome to attend in person or telephonically.

J. NEXT MEETINGS:

Trustee Council Meeting (Anchorage on November 12, 2015)

K. ATTACHMENTS (provided to PAC members prior to the meeting):

1. September 22, 2015 *Exxon Valdez* Oil Spill Trustee Council (EVOSTC) Public Advisory Committee (PAC) draft meeting agenda.
2. Draft June 29, 2015 *Exxon Valdez* Oil Spill Trustee Council (EVOSTC) Public Advisory Committee (PAC) draft meeting summary.
3. February 4, 2015 *Exxon Valdez* Oil Spill Trustee Council (EVOSTC) Public Advisory Committee (PAC) meeting summary.
4. October 16, 2014 *Exxon Valdez* Oil Spill Trustee Council (EVOSTC) Public Advisory Committee (PAC) meeting summary.
5. 8/24/2015 – Draft Invitation Comments (emails).
6. 8/17/2015 - *Exxon Valdez* Oil Spill Trustee Council Draft Invitation for Proposals, Fiscal Year 2017-2021.
7. 9/11/2015 – FY 2016 *Exxon Valdez* Oil Spill Trustee Council Annual Budget.
8. 9/4/2015 - ADF&G Herring Funding Request.
9. 9/1/2015 - FY 2016 Great Land Trust Proposal.
10. 9/2/2015 – FY 2016 Alaska Research Library and Information Services Document Digitizing Project Phase 4 Proposal.
11. 9/11/2015 – *Exxon Valdez* Oil Spill Trustee Council Proposal Non-Disclosure Form.
12. 9/11/2015 - *Exxon Valdez* Oil Spill Trustee Council Draft Work Plan for FY 2016.
13. 9/10/2015 – Termination Point Benefits Report.
14. 9/10/2015 – Long Island Benefits Report.

L. CERTIFICATION:

PAC Chairperson

Date

April 9, 2015



**Exxon Valdez Oil Spill
Trustee Council**

2015 Asset Allocation Review

Paul Erlendson
Senior Vice President

The Capital Markets at January 2015

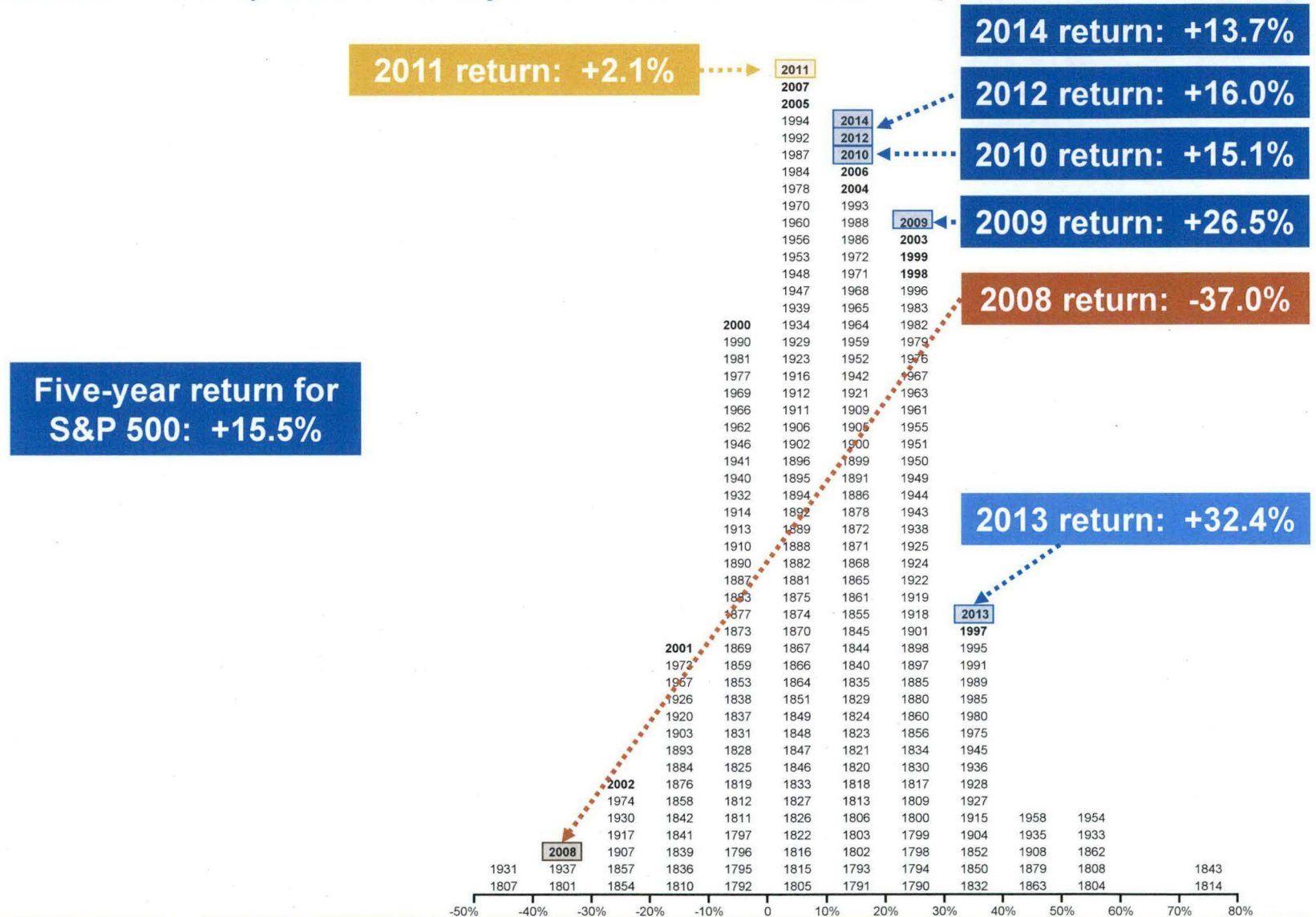
U.S. Equity Markets Continue Rally, International Markets Derail, Fixed Income Rebounds

- Results for 2014 showed continuing strength in large cap U.S. equity, weakness in small cap, with substantial intra-year variability. Developed international markets turned down as economic fortunes flagged, while emerging markets continue to suffer.
- Five-year equity returns through 2014 are free of the financial crisis and are very strong. Ten-year returns no longer include the 2000 – 2002 downturn, but no longer include the robust 2003-04 results. Fifteen-year equity returns are still below long-run averages, and are equal to those of fixed income.

	2009	2010	2011	2012	2013	2014 YTD thru Dec	Average Annual Returns		
							5 Years 2010–14	10 Years 2005–14	15 Years 2000–14
Broad U.S. Stock Market									
Russell 3000	28.34	16.93	1.03	16.42	33.55	12.56	15.63	7.94	4.82
S&P Super Composite 1500	27.25	16.38	1.75	16.17	32.59	13.08	15.58	7.88	4.81
Large Cap U.S. Stocks									
Russell 1000	28.43	16.10	1.50	16.42	33.11	13.24	15.64	7.96	4.62
S&P 500	26.47	15.06	2.11	16.00	32.39	13.69	15.45	7.67	4.24
Small Cap U.S. Stocks									
Russell 2000	27.17	26.85	-4.18	16.35	38.82	4.89	15.55	7.77	7.38
S&P 600 Small Cap	25.57	26.31	1.02	16.33	41.31	5.76	17.27	9.02	9.87
Non-U.S. Stock Markets									
MSCI EAFE US\$	31.78	7.75	-12.14	17.32	22.78	-4.90	5.33	4.43	2.54
MSCI Emerging Markets	79.02	19.20	-18.17	18.63	-2.27	-1.82	2.11	8.78	7.38
Fixed Income									
Barclays Aggregate	5.93	6.54	7.84	4.21	-2.02	5.97	4.45	4.71	5.70
Citi Non-US	4.38	5.22	5.17	1.51	-4.56	-2.68	0.85	2.64	4.65
Hedge Funds									
DJCS Hedge Fund Index	18.57	10.95	-2.52	7.67	9.73	4.13	5.88	5.82	6.34
Cash Market									
90-Day T-Bill	0.21	0.13	0.10	0.11	0.07	0.03	0.09	1.54	2.01
Inflation									
CPI-U	2.72	1.50	2.96	1.74	1.50	0.76	1.69	2.12	2.24

Source: Callan Associates

2014 Performance in Perspective: History of the U.S. Stock Market (226 Years of Returns)



Source: Ibbotson

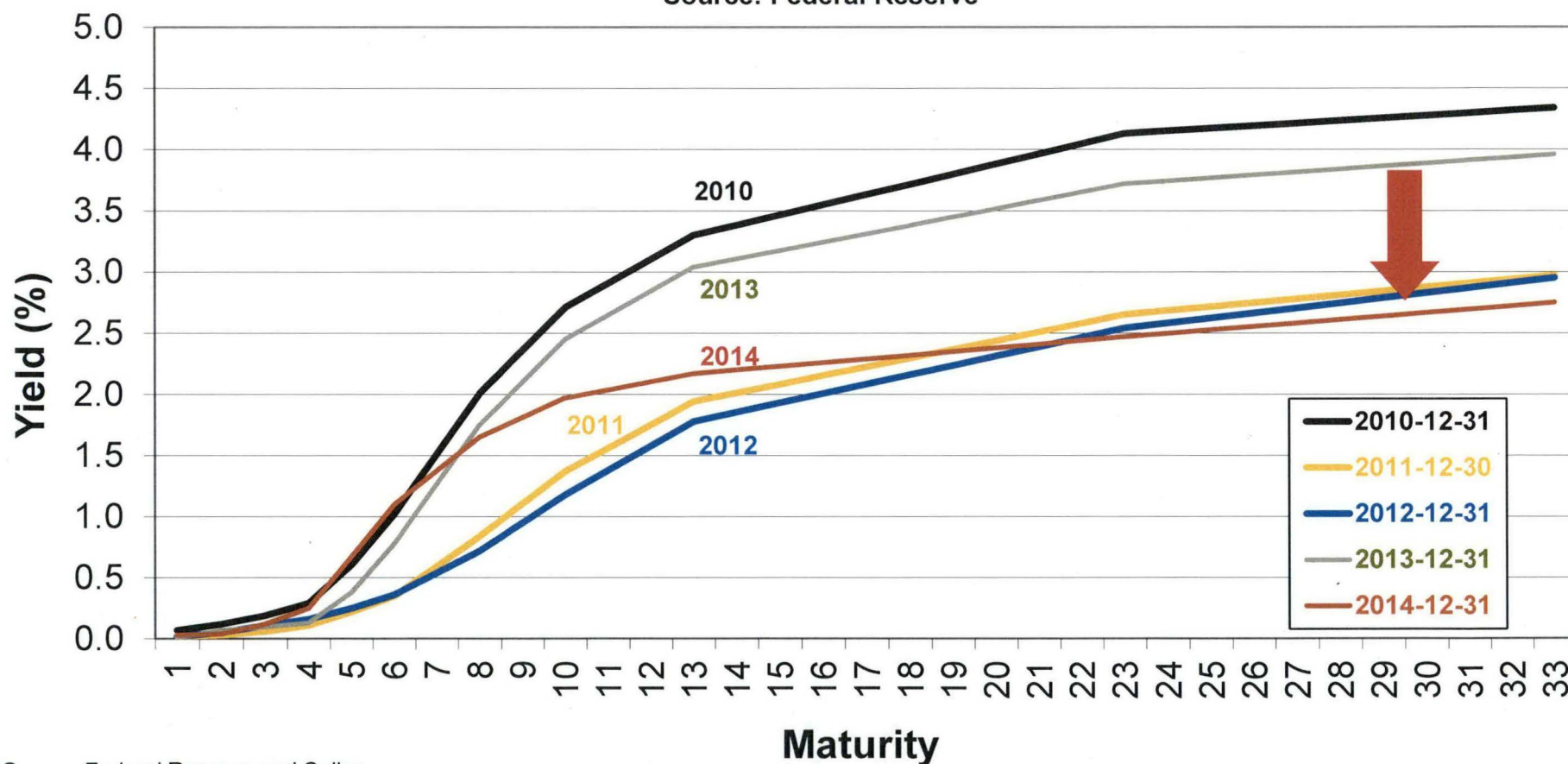
Treasury Rates Fell on the Long End in 2014

U.S. Treasury Yield Curves

U.S. Treasury Yield Curves

Constant Maturities: 1Mo/3Mo/6Mo/1Yr/2Yr/3Yr/5Yr/7Yr/10Yr/20Yr/30Yr

Source: Federal Reserve



Source: Federal Reserve and Callan

2015 Capital Market Expectations

- **Broad market bond returns held at 3.0%.**

- We expect interest rates to rise, especially if the economy continues to expand and the Fed executes on its stated unemployment-rate-linked monetary policy. Bonds will suffer capital loss before higher yields kick in. We expect cash yields to move toward 3.0% and 10-year Treasury yields to reach 5% over the ten-year projection – a reversion to mean.
- Project an upward sloping yield curve, but a very slim risk premium for bonds over cash (0.75%).
- Cash returns nudged upward to 2.25% to reflect expected rise in Fed Funds rate.
- Longer duration returns lowered, reflecting sharp reduction in yields in 2014.

- **Domestic Equity held at 7.60%, Non-U.S. Equity at 7.80%.**

- US markets enjoyed robust returns, but the US economic outlook is now stronger and fundamentals remain reasonable.
- Building equity returns from long-term fundamentals, we can build an expectation to just shy of 8%:
 - 2.5-3.5% real GDP growth, which means roughly 5-6% nominal earnings growth,
 - 2.5 % dividend yield,
 - Expect something more from return on free cash flow, besides dividends (The “buyback yield” has been exceptional, one good use of all that cash), perhaps 50-100 bps,
 - Small premium for Non-US over Domestic, largely due to Emerging Markets.

- **Real Estate return held at 6.15%.**

- Reflects downward pressure on income returns at 4-5% with increased competition for investment.
- Asset class eyed by those hungering for yield.

- **Hedge Fund return raised to 5.25%**

- Expectations of T-bill plus 3%; reflects increase in cash.

2015 Capital Market Expectations—Return and Risk

Summary of Callan's Long-Term Capital Market Projections (2015 – 2024)

Asset Class	Index	PROJECTED RETURN			PROJECTED RISK		Projected Yield	2014 - 2023		Geometric* Delta
		Arithmetic	10-Year Geometric*	Real	Standard Deviation	Sharpe Ratio		10-Year Geometric*	Standard Deviation	
Equities										
Broad Domestic Equity	Russell 3000	9.15%	7.60%	5.35%	19.00%	0.363	2.40%	7.60%	19.00%	0.00%
Large Cap	S&P 500	8.90%	7.50%	5.25%	18.30%	0.363	2.50%	7.50%	18.30%	0.00%
Small/Mid Cap	Russell 2500	10.15%	7.85%	5.60%	22.95%	0.344	1.90%	7.85%	22.95%	0.00%
Global ex-US Equity	MSCI ACWI ex USA	9.80%	7.80%	5.55%	21.45%	0.352	2.70%	7.80%	21.45%	0.00%
International Equity	MSCI World ex USA	9.25%	7.50%	5.25%	20.20%	0.347	3.00%	7.50%	20.20%	0.00%
Emerging Markets Equity	MSCI Emerging Markets	11.45%	7.90%	5.65%	27.95%	0.329	1.70%	7.90%	27.95%	0.00%
Fixed Income										
Short Duration	Barclays G/C 1-3	2.40%	2.40%	0.15%	2.25%	0.067	2.80%	2.75%	2.25%	-0.35%
Domestic Fixed	Barclays Aggregate	3.05%	3.00%	0.75%	3.75%	0.213	4.60%	3.00%	3.75%	0.00%
Long Duration	Barclays Long G/C	3.75%	3.20%	0.95%	11.40%	0.132	5.30%	4.10%	11.40%	-0.90%
TIPS	Barclays TIPS	3.10%	3.00%	0.75%	5.30%	0.160	4.20%	3.00%	5.30%	0.00%
High Yield	Barclays High Yield	5.50%	5.00%	2.75%	11.10%	0.293	8.00%	5.05%	11.45%	-0.05%
Non-US Fixed	Barclays Global Aggregate ex US	2.70%	2.30%	0.05%	9.40%	0.048	4.00%	2.75%	9.40%	-0.45%
Emerging Market Debt	EMBI Global Diversified	5.10%	4.70%	2.45%	10.00%	0.285	6.50%	4.90%	10.65%	-0.20%
Other										
Real Estate	Callan Real Estate	7.35%	6.15%	3.90%	16.50%	0.309	5.00%	6.15%	16.50%	0.00%
Private Equity	TR Post Venture Cap	13.55%	8.50%	6.25%	33.05%	0.342	0.00%	8.50%	33.05%	0.00%
Hedge Funds	Callan Hedge FoF Database	5.55%	5.25%	3.00%	9.30%	0.355	2.25%	5.10%	8.85%	0.15%
Commodities	Bloomberg Commodity	4.40%	2.75%	0.50%	18.50%	0.116	2.25%	3.05%	18.25%	-0.30%
Cash Equivalents	90-Day T-Bill	2.25%	2.25%	0.00%	0.90%	0.000	2.25%	2.00%	0.90%	0.25%
Inflation	CPI-U		2.25%		1.50%			2.25%	1.50%	0.00%

* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

Source: Callan Associates

2015 Capital Market Expectations—Correlation Coefficient Matrix

Key to Constructing Efficient Portfolios

	Broad	Lg Cap	Sm/Mid	GlobxUS	Int'l Eq	Emerge	Defensive	Dom Fix	Long D	TIPS	Hi Yield	NUS Fix	EMD	Real Est	Pvt Eq	Hedge Fd	Comm	Cash Eq	Inflation
Broad Domestic Equity	1.000																		
Large Cap	0.997	1.000																	
Small/Mid Cap	0.965	0.940	1.000																
Global ex-US Equity	0.882	0.879	0.853	1.000															
International Equity	0.852	0.850	0.820	0.986	1.000														
Emerging Markets Equity	0.861	0.855	0.840	0.933	0.860	1.000													
Defensive	-0.240	-0.230	-0.260	-0.254	-0.230	-0.280	1.000												
Domestic Fixed	-0.107	-0.100	-0.125	-0.118	-0.100	-0.145	0.870	1.000											
Long Duration	0.136	0.138	0.121	0.106	0.119	0.069	0.681	0.918	1.000										
TIPS	-0.050	-0.045	-0.065	-0.051	-0.045	-0.060	0.530	0.580	0.527	1.000									
High Yield	0.605	0.605	0.575	0.586	0.570	0.565	-0.170	0.040	0.220	0.030	1.000								
Non-US Fixed	0.014	0.050	-0.100	0.013	0.060	-0.090	0.480	0.510	0.542	0.340	0.120	1.000							
EMD	0.587	0.590	0.550	0.553	0.530	0.550	-0.120	0.030	0.159	0.170	0.390	0.010	1.000						
Real Estate	0.735	0.730	0.715	0.669	0.650	0.645	-0.140	-0.020	0.188	0.005	0.540	-0.050	0.450	1.000					
Private Equity	0.943	0.940	0.910	0.927	0.900	0.895	-0.240	-0.180	0.054	-0.090	0.610	-0.060	0.560	0.715	1.000				
Hedge Funds	0.764	0.760	0.740	0.730	0.700	0.725	-0.120	0.095	0.272	0.070	0.540	-0.080	0.510	0.585	0.735	1.000			
Commodities	0.162	0.160	0.160	0.168	0.160	0.170	-0.220	-0.120	-0.045	0.100	0.100	0.050	0.190	0.200	0.180	0.210	1.000		
Cash Equivalents	-0.042	-0.030	-0.080	-0.040	-0.010	-0.100	0.300	0.100	-0.049	0.070	-0.110	-0.090	-0.070	-0.060	0.000	-0.070	0.070	1.000	
Inflation	-0.025	-0.020	-0.040	-0.019	-0.050	0.050	-0.200	-0.280	-0.337	0.160	0.060	-0.150	0.000	0.150	-0.030	0.200	0.400	0.050	1.000

- Relationships between asset classes is as important as standard deviation.
- To determine portfolio mixes, Callan employs mean-variance optimization.
- Return, standard deviation and correlation determine the composition of efficient asset mixes.

Source: Callan Associates

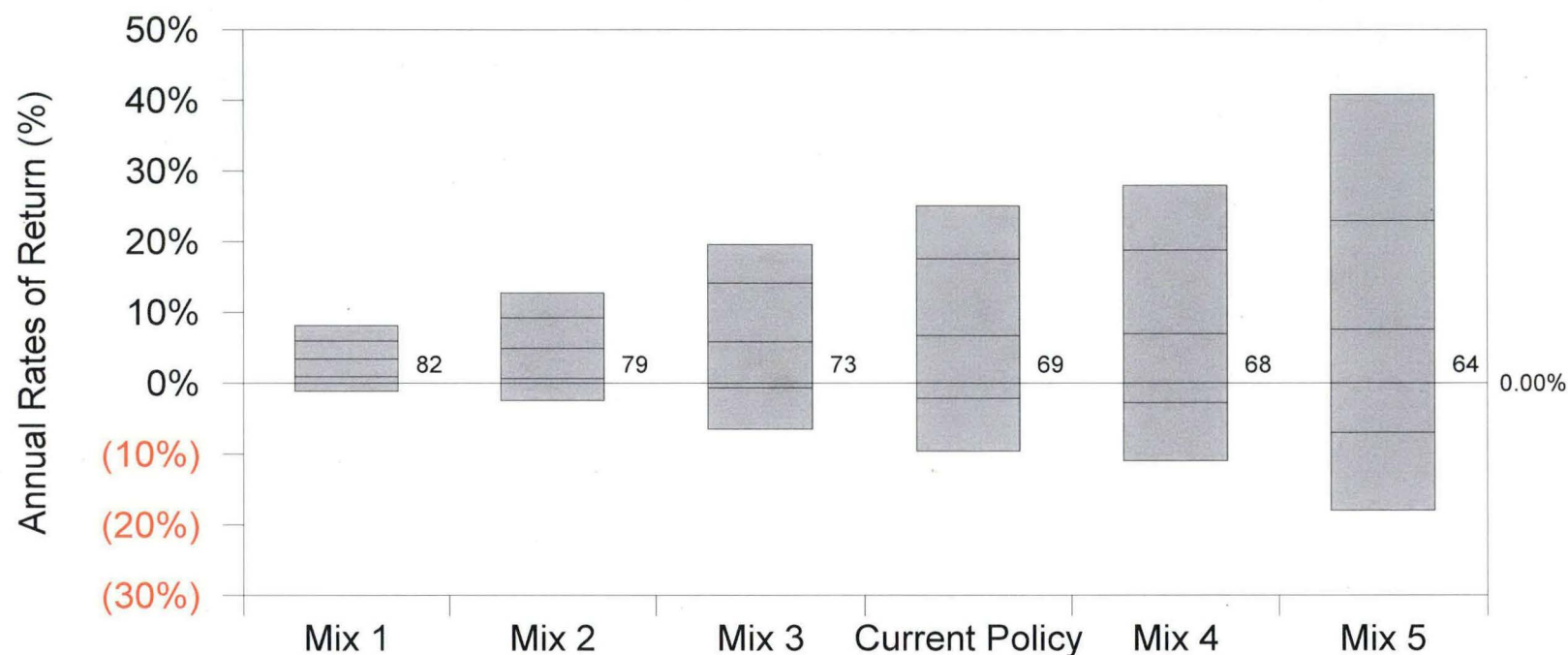
EVOSTC Existing Asset Classes: Return and Risk Projections

EVOSTC Asset Mix Alternatives

Portfolio Component	Min	Max	Mix 1	Mix 2	Mix 3	Current Policy	Mix 4	Mix 5
US Broad Equity	0	100	4	20	35	47	50	0
Domestic Fixed	0	100	94	70	47	30	23	0
International Equity	0	100	2	10	18	23	27	100
Totals			100	100	100	100	100	100
Projected Arithmetic Return			3.40%	4.86%	6.32%	7.34%	7.79%	9.25%
Projected Standard Deviation			3.58%	5.87%	9.97%	13.05%	14.42%	20.20%
5 Yr. Geometric Mean Return			3.38%	4.79%	5.99%	6.71%	7.00%	7.54%
10 Yr. Geometric Mean Return			3.38%	4.78%	5.98%	6.69%	6.97%	7.49%
10 Yr. Simulated Sharpe Ratio			0.30%	0.42%	0.37%	0.33%	0.32%	0.25%

Possible Short-term Outcomes

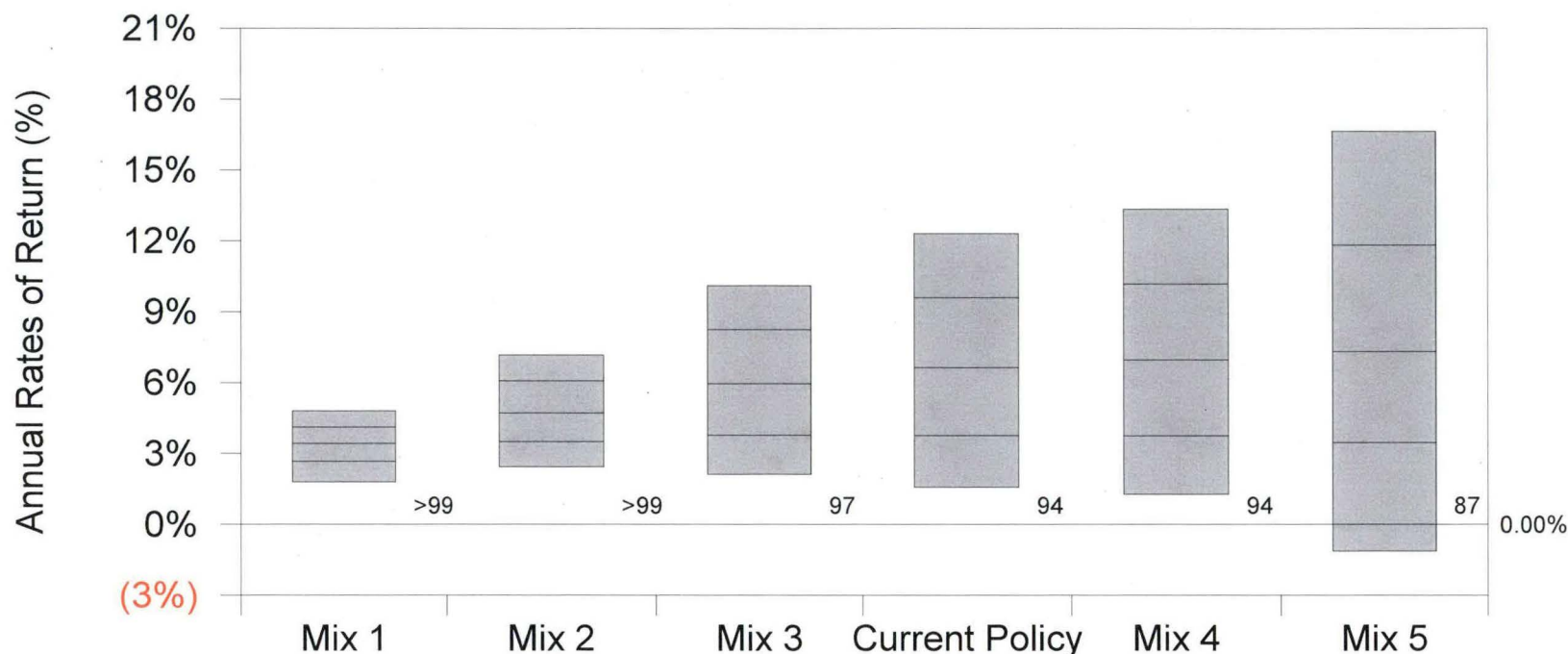
Range of Projected Rates of Return Projection Period: 1 Year



10th Percentile	8.1%	12.7%	19.6%	25.1%	27.9%	40.8%
25th Percentile	5.9%	9.2%	14.1%	17.6%	18.8%	22.9%
Median	3.4%	4.9%	5.8%	6.7%	7.0%	7.6%
75th Percentile	0.9%	0.6%	(0.7%)	(2.1%)	(2.8%)	(7.0%)
90th Percentile	(1.1%)	(2.5%)	(6.5%)	(9.6%)	(11.0%)	(18.0%)
Prob > 0.00%	82.1%	79.0%	72.8%	69.1%	67.7%	64.4%

Possible Longer-term Outcomes

Range of Projected Rates of Return Projection Period: 10 Years



10th Percentile	4.8%	7.2%	10.1%	12.3%	13.3%	16.6%
25th Percentile	4.1%	6.1%	8.2%	9.6%	10.2%	11.8%
Median	3.4%	4.7%	6.0%	6.6%	7.0%	7.3%
75th Percentile	2.7%	3.5%	3.8%	3.8%	3.7%	3.5%
90th Percentile	1.8%	2.4%	2.1%	1.6%	1.3%	(1.1%)
Prob > 0.00%	>99.0%	>99.0%	97.1%	94.4%	93.6%	87.3%

FY17-21 Draft Invitation Comments Received (as of 8/24/15)

Comments below are from the FY17-21 Invitation Working Group Members, Trustee Council, the Programs, and Public Comment. The Working Group Members are:

ADFG: Eric Volk, Sherri Dressel, Chris Siddon, Steve Moffitt

USFS: Ron Britton

NOAA: Shawn Carey, Pete Hagen

USGS: Dede Bohn

DOI: Veronica Varela (USFWS), Geoff Haskett (USFWS)

LTM Science Advisory Panel/Herring Advisory Group: Steve Martell, Jeep Rice

Comments in blue are further information or indicated the comment has been addressed in the draft invitation.

Eric Volk, ADFG 1.9.15

The main gap I see in the long term monitoring component is the absence of studies focused on fish, aside from the identified forage fish and herring. I have two concepts that could be included in the call as part of the long term monitoring program. These ideas benefited from conversations with Jim Hasbrouck (ADFG), Rich Brenner (ADFG) and Jodi Pirtle (NOAA):

1. Though EVOS has funded salmon studies in the past, I think the absence of a salmon component in the long term monitoring studies is surprising to many. In 2013 and 2014, ADF&G scientists conducted trawl surveys in southwestern Prince William Sound (PWS). The trials were successful and the most abundant fish species captured included juvenile salmon, herring and gadids. The surveys are modeled after NOAA's Southeast Coastal Monitoring (SECM) program (same gear and trawl parameters) which has produced the most accurate forecasts of adult pink salmon anywhere in Alaska. These forecasts are extremely valuable to fisheries managers, commercial harvesters and processors. However they also provide a host valuable ecological data useful for evaluating species interactions, biological and physical oceanographic conditions that impact species, and changes in fish community composition over time. All of these speak to a better understanding of long-term changes to these components of the pelagic ecosystem. This would provide links to other components of the long-term monitoring and herring programs. We expect that collaborations between ADF&G, NOAA and UAF could continue these surveys and analyses in the future.

Salmon studies have not been included in recent monitoring programs as pink and sockeye salmon have been considered "recovered" from the effects of the Spill since 2002. While we understand the potential value of salmon studies in relation to those resources that are still recovering, the remaining funds are limited and are typically focused on supporting those resources that have not yet recovered.

2. Another fish ecological assemblage missing from the program is benthic keystone predators such as demersal rockfish and lingcod. These species are also important recreational species within the oiled area, but assessment data is limited. One possibility is a habitat mapping approach that might encompass PWS to Kodiak, coupled with periodic and targeted surveys to estimate density in preferred habitats. There is a large amount of publically available mapping data in the study area that could be refined to map preferred habitats for these species throughout the area. Periodic abundance estimates at a selection of sites would contribute to modeling efforts aimed at region-wide abundance estimates. These species are important components of the benthic community and are linked to pelagic and nearshore communities through forage fish.

We have discussed the possibility of studies to provide rockfish abundance estimates over the years. After reviewing the potential high cost of the studies and the low potential that the data would add to our

understanding of those resources that are still recovering, it was recommended that the remaining funds would be better spent elsewhere. Rockfish were considered "Very Likely Recovered" in 2010 and 2014.

Sherri Dressel, ADFG 1.12.15

1. I expressed concern to Scott Pegau in FY12-16 that the projects seemed spread too thin, e.g. that sample sizes might be too small to achieve their goals, or that the distribution of samples might be too narrow to say that they represented the full population. However, with the broad goals defined in the 2010 IHRP, I can understand their desire to spread funds as much as possible. My recommendation and hope would be that a narrower invitation might allow FY17-21 researchers to go to a greater depth on a narrower range of projects.

Sherri has provided valuable input into those projects requested in the Herring Focus Area of the Invitation. We have encouraged her to continue her work with the Herring Monitoring Program as they develop their response to this Invitation.

2. If the focus of the invitation remains at "Enhanced monitoring" and a strong emphasis is put on improving the model (and the data that go into the model) to give a reliable index of spawning abundance, simulations can be done to investigate which type of data (recruitment estimates, maturity estimates, disease indices) have the greatest impact on resultant model estimates of spawning biomass. Knowing what types of data make the biggest difference in the model can guide the EVOSTC on what research will provide the biggest "bang for their buck". I don't believe that the HRM researchers working on the model have gotten to the point of being able to determine what types of data are most important, but I wonder if there is any guidance those researchers can give or any preliminary simulations they could do to help us in the current Invitation process. Dr. Trevor Branch will be presenting at the Science Workshop and might be able to speak to this. Steve Martell is more knowledgeable than I on how much work this would be and how exactly to ask.

Again, we have encouraged Sherri to work with the existing Herring Program to assist them in developing their response to this Invitation.

3. I am not sure where this fits in to the Invitation but, as was requested by the Science Panel, I think it is critically important that more detail is included in the FY17-21 Proposals on survey design, sampling methods, sample sizes, and analysis types and details.

The Science Panel strongly agreed with this statement and the Invitation draft and associated forms reflect the tighter focus on project design and protocols.

Sherri Dressel, ADFG 5.15.15

Sherri provided comments within the text of the 5.1.15 Invitation draft.

At the Science Review in February, I asked Elise about the possibility of additional funding for a State employee to help integrate the results of EVOS research and modeling for long-term State use. For instance, the Bayesian ASA model that is being developed would be extremely useful for State use beyond EVOS studies. To incorporate it for management use will require considerable review and integration, which we don't currently have the time and funding for employees to do. I know that one of the goals of EVOS is to make widespread use of funded research. Additional funding for a State employee will help us make full use of the research for PWS, as well as to apply it to other stocks so the EVOS funds can have even wider-reaching benefits.

Steve Moffitt has done a tremendous job at coordinating with EVOS within the demands of his current position and I am working beyond the time and funding I'm currently receiving from EVOS. Due to upcoming budget cuts, I am concerned that Steve and I will be a bottle-neck for getting EVOS researchers the time and coordination they need, let alone having time to integrate their results. Any additional funding would be greatly appreciated. Also, EVOS has graciously paid for some of my travel to EVOS meetings. I have generally been paying for travel to at least two meetings per year out of my State travel budget. If EVOS has funds to pay for this travel so that I can continue in upcoming years, that would be greatly appreciated as well. I've mentioned these funding requests to Tom Brookover and have cc'd both he and Jeff Regnart on this email so they are aware of my requests. If there is any additional information I can provide, or if you have suggestions for whether and how to propose this to the Council at this time, please let me know.

The other issue that I've mentioned in a comment in the attached document is that, due to budget cuts for the next few years, it is very likely that the State will have substantially reduced (or possibly eliminated) funding for surveys and sampling in PWS. The funding situation will not be final for this upcoming year until after the final budget is decided upon by the legislature and governor, but I wanted to give you a heads up that the first priority for the herring program listed in this call for proposals (to develop and improve the ASA model) may be difficult to achieve without additional data collection. I'm not sure how you would choose to include this data collection in the priorities, but I wanted you to know that we might be facing this difficult situation.

Funding for travel for Sherri to the Program meetings has been included in the draft FY16 EVOSTCAPDI (Budget).

With regard to additional EVOSTC funding for staffing, ADFG should submit to our office a summary of the request that the Council and Public Advisory Committee can review at their fall meetings. We circulate materials starting September 1. In doing so, please be aware that many trust agency staff hours are not compensated directly from trust funds, as much of the Council's work benefits the long-term interests and resources of the respective state or federal government. In addition, Council funding of agency staff has long history of public scrutiny.

Geoff Haskett and Veronica Varela, USFWS 6.23.15

Please refer to attached letter signed by Geoff Haskett (Attachment A) for provided comments. The responses below are numbered in response to the comments in the letter.

Specific to the draft Invitation:

1. As per the Invitation, Proposers are advised to review the 1994 Restoration Plan (which is fairly brief, considering) and proposals must be consistent with these policies. See, Draft Invitation, Section III, regarding Policy and Legal Review of Proposals (bolding is in original text): "To be eligible for funding, proposals must be designed to restore, replace, enhance or acquire the equivalent of natural resources injured as a result of the Spill or the reduced or lost services provided by these resources. In addition, proposals must be consistent with the policies contained in the 1994 Restoration Plan. Council staff will review each proposal for responsiveness to this Invitation, completeness and for adherence to the format and instructions contained in this document. A legal and policy review of each proposal submitted pursuant to this Invitation may be conducted by the Alaska Department of Law and the U.S. Department of Justice."

To emphasize this requirement, the following language will be reiterated in each of the focus areas: "To be eligible for funding, proposals must be designed to restore, replace, enhance or acquire the equivalent of natural resources injured as a result of the Spill or the reduced or lost services provided by these resources. In addition, proposals must be consistent with the policies contained in the 1994 Restoration Plan."

2. The Restoration Plan outlines a number of policies that allow the Trustees some flexibility in restoration activities, while maintaining a focus on restoration of the spill ecosystem. For example, the 1994 Restoration Plan policies include a broader ecosystem approach but also support a more targeted focus on specific injured resources. It also allows for resources and services not previously identified as injured to be considered for restoration if reasonable scientific or local knowledge obtained since the Spill indicates a spill-related injury. In some past invitations that were a broader call and with less focus, the Council would reiterate portions of Restoration Plan policies to give sidebars to the proposers. The FY17-21 Invitation, similar to the FY12-16 Invitation, is already narrowed to specific focus areas, such as herring, that are within the Restoration Plan's policies and goals. An attempt to include the Restoration Plan's full policies and allowances for restoration activities in a brief, comprehensive sentence or two and repeat it throughout this Invitation would not provide an accurate portrayal of activities allowed. The language in the draft was also in the FY12-16 Invitation did not result in issues related to relevancy to restoration activities. The degree of helpfulness of the Programs to various interested parties is a focus of this draft Invitation, and will likely continue in future calls as it is a difficult goal to attain.
3. The establishment of a post-doc position will allow a researcher in an early career stage to work in the program and Alaska and bring an infusion of ideas within a format that is structured for a specific period of time. Post-docs are an economical way to involve early scientists and reap the benefits of their energy and ideas while not establishing a new permanent staff position. The post-doc's project will be supervised by the Herring Program Lead and will address the Herring Program's goals and objectives. While the work must serve the Program goals and under the Herring Program Lead, it is not pre-determined or a list of tasks dictated in advance from the Program Lead as it is intended that the post-doc will also lend ideas and value as to the activities that can be undertaken. Both Programs have experienced attrition of experienced project personnel, especially the Herring Program, and the post-doc position may also serve as a conduit for new researchers to be introduced to the Program.

The Council requested that the initial draft Invitation include the herring, long-term monitoring (which included data management), and lingering oil focus areas. The Science Panel proposed the Cross-Program Publication Focus Area for the Council's review as it builds on the Long-Term Programs and past EVOSTC work. The addition of any additional focus areas would be at the Council's direction.

4. We have worked hard to ensure that the draft Invitation does not limit competition and does not create unfair advantage.
 - a. The Cross-Program publication group does not exclude PIs without EVOSTC experience from applying. We only ask that they include at least one PI from both the herring and long-term monitoring programs to foster collaboration and coordination between the Council's funded Programs. The proposed publication must be focused on providing further insight into the Focus Areas under this Invitation. Veronica will look at new language.
 - b. The Program and project proposals are identical regardless of past experience with the EVOSTC. We have added text to Section IV of the Invitation requesting that organizations who submitted in 2012 provide any changes to their original submission. Veronica will look at new language.
5. In response to this comment, a note will be added in the Long-Term Monitoring Program, Environmental Driver section indicating that Project of Highest Priority: [Continuation of the GAK 1 line.] The projects of interest that are included in each focus area are deliberately general. The goal of establishing the Programs was to create a more collaborative process that created a comprehensive program based on the Council's needs and the current state of the ecosystem. Providing a list of "projects of interest" provides guidelines to the proposers while allowing for innovation and feedback from PI's who are already in the field.

The specific project ideas in the draft Invitation are drawn from recommendations from the Science Panel, Agency Staff, Trustees and from information from the February 2015 Program Science Workshop and provide proposers with information as to what these groups will be considering when reviewing proposals. This format worked well in the FY12-16 Invitation as it balanced recommendations by those groups with the resources and ideas that proposers can contribute.

In reference to the specific topics in the Herring and Long-Term Monitoring Focus Areas that may require further analysis; they are generally not suitable for scientific publication and will be presented in their final report at the conclusion of the project.

6. We appreciate the conversation we have had on this comment with you. As discussed, the draft invitation will include some conceptual guidelines such as Comment 1, effective and balanced use of the fund and other specific guidelines. As noted, we do not currently use published "evaluation factors" as part of our proposal review process. Prior numbering systems, etc. used in the past were not effective or helpful. The current annual Work Plan document, that includes comments by the EVOSTC PAC, Science Panel, Executive Director and Science Coordinator, is an effective system that provides helpful guidance and recommendations to the Trustees. This method has proven to be considerably more usable than numerical scores.

Comments regarding the business model of the Trustee Council for FY17-21

1. Data management should eventually be handled by one of the agencies that will be responsible for managing resources injured by the Spill. Until such time that one of the Trust Agencies indicates a willingness to undertake this activity, the EVOSTC office will continue to include it in invitations or contract for services through a Trust Agency. Proposers to EVOSTC, due to the annual funding cycle, tend to be very responsive and the current Data Management work under the Long-Term Monitoring Program has likewise proven to be responsive. A direct contract through ADFG would not have lent any value to the current funding stream or PI responsiveness. As with every proposal, the EVOSTC office will consider whether a change in the anticipated contracting/funding stream is needed for the FY17-21 data work depending upon the parties involved and any need for change.
2. The implementation of the Programs in 2012 allowed for data to be shared in a non-public forum among the funded projects within the two Programs. This was a major step in allowing for collaboration between projects and Programs and the first time that such a requirement has been implemented. In compliance with the EVOSTC data policy, data is not publically available until a project's final report has completed EVOSTC peer review and been accepted by the EVOSTC Science Coordinator. Many projects have chosen to release their data on the public portal prior to the completion of the project. The current EVOSTC data policy was designed to meet the needs of the Council and their trust agencies that often have an internal peer review process before data can be released to the public.

Trustee Council Members informal comments - 2.12.15

1. Where applicable, a differentiation of old work vs. newly proposed work and rationalization/justification for change. Identify specifically the management question being addressed (and an agency contact, as is requested in our annual report would also be helpful).

This clarification has been included in the draft Invitation text and associated forms.

2. Outreach budget and products: the Trust agencies would benefit from a summary of program highlights or a synthesis of key points that would allow the trust agencies to use the results in their agency's outreach. The outreach products for the program could be minimized as the trust agencies can maximize the use of the information and coordinate it with existing agency public outreach activities.

Language regarding outreach efforts by the Programs has been refined and clarified in the draft Invitation

General comments

There have been some agency staff and currently-funded PI inquiries as to whether the Council would consider funding the Harbor Protection and Marine Restoration Focus Area which was included in the FY12-16 Invitation.

For FY 12-16, the Harbor Protection and Marine Restoration Focus Area was intentionally allotted a shorter-term and budget. This focus area raises issues of the Council funding activities typically undertaken by local or state governments, paying for prohibited conduct and past projects in this area that were not successfully maintained by local communities. Please see the attached language (Attachment B) for the language included in the earlier Invitation issued for FY 12-16 for this focus area.

Will the Council be soliciting for an independent scientific synthesis activities in this Invitation?

EVOSTC looks forward to receiving the final reports from the NCEAS independent syntheses funded in FY12-16. Based on those results, the Council could potentially request proposals at another time in the FY17-21 funding years. However, we have removed the language from the earlier invitation draft so as not to set an expectation that there would be a request.

How are the individual program (funding) numbers determined?

In 2009-2010, the TC established focus areas and allotted funding. Consistent with these allotments, in 2012, the Council began implementing the delegated programs at a funding rate of approximately \$2m/year for monitoring and 1m/year for Herring. FY 12-16 funding was based on those allotments plus 2.75% for inflation, compounded annually. FY 17-21 funding is based on those allotments plus 2.25% for inflation, compounded annually. As with focus areas and this draft, actual funding amounts are at the discretion of the Council.

Is there a way to include language that identifies the species that have not recovered and the goals for their restoration?

The following text has been added to each Focus Area:

"To be eligible for funding, proposals must be designed to restore, replace, enhance or acquire the equivalent of natural resources injured as a result of the Spill or the reduced or lost services provided by these resources. In addition, proposals must be consistent with the policies contained in the 1994 Restoration Plan. Please also refer to the 2014 Injured Resources and Services List Update for detailed information. *See references*"

PUBLIC COMMENTS

Trevor Branch, University of WA, Current Herring Program PI for ASA Model – 8.4.15

My comments are related to the Herring Research and Monitoring Program:

HIGHEST PRIORITY

I completely agree that the highest priority of the program is to continue developing and testing the updated age-structured assessment (ASA) model in collaboration with ADF&G. Similar Bayesian models may in the future be used to manage other Alaskan herring populations, thus the PWS model serves as a development center for ADF&G models.

A key component of modeling should be to expand the ASA model to ages 0-2 instead of starting the model at age 3 and above as at present. This will enable the model to fit to new abundance indices aimed at predicting incoming recruitment at age 3, from school sizes and abundance of age 0-2 herring. In addition, a substantial part of the herring program is aimed at juveniles and in estimating over-winter survival of juveniles.

The potential addition of age 0-2 herring to the ASA model will be discussed with the working group and science panel. While the data might be useful to include, it is not clear how starting the model at age 0-2 with no comparative age composition data of older cohorts would be better than using the relative indices of age 0-2 to predict age 3 abundance without including younger age classes in the model.

PROJECTS OF INTEREST

Item 2: the term “post-doctoral fellow” that is based in Alaska, formally implies someone registered at a University of Alaska academic institution. But it would make more sense to have such a person be based in Cordova to conduct their research, rather than at Juneau, Anchorage or Fairbanks. I would suggest one of two changes here: either “involvement of faculty supervision of a postdoc based 70% in Alaska”, or “a post-doctoral fellow or equivalent”. The latter term allows the possibility of hiring a full-time research associate, fresh out of a PhD, but that does not have to be affiliated with a university.

We have changed the text in this section from the older draft that Dr. Branch reviewed. The revised text does address some of his concerns. We have also updated the text to specify that the position could be held by a post-doc or equivalent. We will discuss what would be considered as an acceptable “equivalent” that could be considered for this funding with the science panel and working group.

Item 3: This is an excellent idea to look at comparative studies of other herring populations. I would suggest allowing for the possibility of a broader outlook than just herring in the NE Pacific Ocean. For instance, herring populations in Russia and Japan are highly informative for collapses. Additionally, much useful information about herring dynamics can be obtained from Atlantic herring, and other similar forage fish species. Perhaps: adding at the end “... and could also include relevant information from other forage fish species and herring populations in other parts of the world.”

The Council commissioned a white paper from Dr. Doug Hay in 2006 that provided a comparative analysis of worldwide herring stocks in the context of potential enhancement options. The Council also funded a workshop in Alaska with Japanese researchers who were using new aquaculture methods to increase herring biomass in Northern Japan. The workshop was attended by agency managers and EVOSTC-funded herring researchers. The current language in the Invitation requires proposers to have reviewed the extensive peer-review literature on other herring and forage fish stocks as part of their study design.

Item 4: an index of spawning biomass (acoustic survey, mile-days of milt) is so critical to monitoring that I would put this under the highest priority and conduct it every year.

The cost to complete these in-depth surveys each year would likely be well beyond the funds that are available for the Program each year.

Item 10: I would include “ocean acidification” explicitly here, as recent work has shown an alarming range of behavioral changes in various fish populations when exposed to more acidified waters, and Alaska is predicted to be most affected by ocean acidification.

A reference to ocean acidification was added to the Invitation as suggested.

New item: an analysis has been done looking at which of the past data series is most useful to assess current abundance, and identified the disease data (cheap, needed to explain the collapse), and the diver egg counts (needed for an absolute biomass anchor in the assessment) as the most important data collected in the past. However, neither is required to explain future trends. I would suggest adding an item as follows: “Conduct simulation studies to determine which data time series, if collected in the future, would be most useful in assessing future herring biomass, trends, and recovery.”

The Invitation already requests that each proposed Program and project conducts this analysis as part of their study design.

Current Long-Term Monitoring Program PI's and Program Leads – 8.14.15

LONG-TERM MONITORING OF MARINE CONDITIONS AND INJURED RESOURCES FOCUS AREA
(Draft Invitation for Proposals pages 12-17)

We agree with the benefits outlined by the EVOS Trustee Council in the draft Invitation for Proposals of a multidisciplinary, integrated, long-term ecosystem monitoring program to monitor recovery of spill-injured resources and how factors other than oil may adversely affect recovering resources. We appreciate the Council's recognition of the value of long-term data sets, the flexibility provided to proposers to balance continuation of long-term time series with enhanced monitoring projects, and the clear guidance provided on assessment of project designs and relevance to agency management objectives.

In working with Council staff and the EVOSTC Science Panel over the initial four years of the Long-Term Monitoring (LTM)/Gulf Watch Alaska and Herring Research and Monitoring (HRM) programs, we have recognized the importance of program administration and science coordination to the success of a large, integrated program and appreciate the acknowledgement of these efforts in the invitation. Based on initial efforts of the LTM and HRM programs, the LTM program synthesis and the February 2015 joint science workshop, we note the benefit of 1) integrating both field work and synthesis efforts between the two programs and 2) conducting monitoring in multiple regions within the spill-affected area (currently in Prince William Sound, northern Gulf of Alaska shelf and Cook Inlet) to assess the effects of changing climate conditions on recovery of injured resources.

Integration and synthesis of science information within and between programs was recognized as an important need by program investigators, EVOSTC Science Panel members and the 2015 Joint Science Workshop participants. However, the only mention of data integration for the LTM focus area (between projects, components and programs) in the invitation is under item 2 of the preferred requirements on page 11 and under the Cross Program Publication Groups focus area. We do note that the projects of interest section in the invitation for the HRM program does include several projects that address using integration of physical and biological factors, predation and anthropogenic effects to understand factors affecting herring recovery. We also note that the description of the Joint Science Workshop on p. 5 includes a requirement for the LTM and HRM program leads to produce a synthesis report, but since data integration projects are not included in the LTM focus area language, it is not clear how the science integration efforts will be funded. Within the FY12-16 LTM

program, which is currently funded at a similar level to what is proposed in the invitation, most science integration between investigators has been accomplished by highly leveraged, in kind personnel contributions. If science integration within and between the programs is a Council priority, we suggest including additional language to clarify those requirements, perhaps in the projects of interest section. One approach for explicitly funding data integration could be to add one or more post-doctoral positions to the LTM program for synthesis and analysis efforts targeted to trustee agency management needs and to help address investigator attrition (as the invitation provides for the HRM program). Another approach could be to expand the level of effort expected in the Cross- Programs Publications Group focus area (see below).

The requirement for the programs and PI's to include time for the preparation and attendance at this workshop would be the same as the first five-year Invitation. We have added clarifying text that specifically states that proposed programs and projects must include a budget in year 3 to prepare for this meeting.

We suggest a clarification to language in Paragraph 3 on pg. 15 where the invitation states that proposals must explain how program objectives "support management objectives of natural resource managers and their services in PWS ...". We recommend that PWS be replaced with "EVOS-affected region" to be consistent with other parts of the invitation.

The text has been updated as recommended.

We strongly encourage the Council to expand outreach activities beyond trustee agency outreach staff by including and funding direct activities between the program and the residents and communities of the spill-affected region. We feel this effort is necessary to meet the goals of the program and that it should be funded at a level similar to or higher than the previous 5-year program.

As noted above, informal Trustee comment has noted that the Trust agencies would benefit from a summary of program highlights or a synthesis of key points that would allow the trust agencies to use the results in their agency's outreach. The outreach products for the program could be minimized as the trust agencies can maximize the use of the information and coordinate it with existing agency public outreach activities. This suggestion would need to be reviewed by the Council prior to adding additional funding for outreach.

DATA MANAGEMENT FOCUS AREA (Draft Invitation, pages 17-20)

We agree with the need for coordinated data management services for both the LTM and HRM programs and the inclusion of data management as a separate focus area. We also recognize the need to support data coordination, quality control, integration, and synthesis efforts within the programs, and support for programs to work closely with the data management team, based on our experience in the first four years of the current LTM program. In addition, agency resource manager use of monitoring data can be greatly facilitated by decision support tools that make the patterns and trends in the data and relationships between species trends and marine conditions visualized and easier to understand. In order to help agency managers more quickly and effectively use the data collected under the LTM program for management of spill-injured resources, we suggest including a preferred requirement for a decision support tool development project under the FY17-21 invitation. Ideally, this project would include active involvement of trustee agency managers in both the prioritization and testing of information tools from LTM data.

We will discuss what types of "decision support tools" would be useful by agency managers with the working group.

CROSS-PROGRAM PUBLICATION GROUPS FOCUS AREA

(Draft Invitation, pages 20-21)

We strongly support the addition of the Cross-Program Publication Groups focus area in the invitation as a mechanism to support data synthesis efforts from LTM and HRM monitoring efforts. We agree with the intent of this focus area to support data integration that furthers understanding of the impacts of the spill and other stressors on injured resources, and provides guidance for management actions, by production of science manuscripts that integrate data from the LTM and HRM programs. We suggest that consideration be given to an increased level of funding for this focus area, as publication costs alone for open access special issues of journals can be upwards of \$30,000. Since developing special journal issue publications often include investigator time for data analyses, collaborations and meeting travel, it would be helpful if the invitation provided clarification on how these costs are expected to be funded.

The Invitation is not requesting a special issue of a journal but a single cross-cutting publication from each Group. The funds currently budgeted in the Invitation for a single publication are sufficient to complete the task.

The data integration efforts in this focus area also appear to be similar to the examples for the synthesis report required for the Joint Program Synthesis Workshop on page 5 of the invitation, and, as mentioned above, we suggest clarifying how the LTM integrated synthesis efforts are expected to be funded. One approach to funding the required synthesis efforts could be to expand the level of effort in the Cross-Program Publication Groups focus area to explicitly fund data analyses and cross-project and cross-program integrated assessments (e.g., ecosystem factors affecting recovery of injured species, climate drivers, anthropogenic effects). Another approach could be to explicitly include data integration project examples under the projects of interest section in the LTM focus area. We suggest that there may be an advantage to having integrated assessments funded in a separate focus area (perhaps under an expanded Cross-Program Publication Groups), to allow proposers to develop both monitoring- and integration-focused projects and to provide more explicit guidance from the Council on the level of effort expected for data integration and synthesis.

The parameters of the workshop have changed from those specified in the first five-year term. The goals of the workshop, as defined in this Invitation, are to assess the progress of the program and projects and to determine if they are addressing management priorities. A comprehensive synthesis paper is not required under this Invitation.

Attachment A



IN REPLY REFER TO:

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
1011 East Tudor Road
Anchorage, Alaska 99503-6199



FWS/AFES

JUN 23 2015

Ms. Elise Hsieh
Executive Director
Exxon Valdez Oil Spill Trustee Council Office
4210 University Drive
Anchorage, Alaska 99508-4626

RECEIVED

JUN 26 2015

EXXON VALDEZ OIL SPILL
TRUSTEE Council

Dear Ms. Hsieh:

Thank you for providing the May 2015 draft of the FY17-21 Invitation for our review. I appreciate the hard work of you and your staff in drafting this important document. As you know, I am the acting Trustee Council Representative for the U.S. Department of the Interior on the Exxon Valdez Oil Spill Trustee Council. My staff and I have reviewed the draft Invitation, and this letter transmits our comments and questions. Below I outline the most significant of our comments. Enclosed with this letter are more detailed comments on the draft Invitation provided as redline/strikeout in the draft document. Note that these comments do not contain feedback from fellow affected bureaus within the Department, specifically, the National Park Service and the Bureau of Indian Affairs. We are working to coordinate with these bureaus and will submit additional comments, if any, as soon as possible.

Secondly, while reviewing the draft Invitation, we came across a few topics related to the business model for Trustee Council activities in FY17-21 that should be discussed by the Trustees and their legal counsel before finalizing a draft Invitation. Those topics are also briefly described below.

Comments specific to the draft Invitation

1. Throughout the draft Invitation, the focus on an ultimate goal of restoring injured natural resources and services must be maintained. All programs/projects should be required to demonstrate the nexus between the injured resources/services and the benefits provided to those resources/services through the proposed program/project. Proposal reviewers should also recognize this screening factor as the highest priority.

2. Related to the previous comment, I do not support the establishment of a postdoctoral fellow position as the position is described in the draft Invitation. Although cultivating new scientists and generating new academic partnerships are good things to do, the link to providing benefits to injured natural resources is weak, and I do not consider it an appropriate use of settlement funds.
3. I feel the draft Invitation should not entirely exclude the "harbor protection, marine restoration, and lessons learned/outreach" Focus Area, as is currently written. The harbor protection and marine restoration categories have the highest potential out of all of the Focus Areas in the draft Invitation of generating measurable improvements in environmental quality, providing benefits to injured resources in the Spill area. The Trustee Council should remain open to new ideas in this Focus Area.
4. The Invitation should be carefully designed to avoid any limitation on competition and potential unfair advantages among proposers.
 - a. As currently drafted, funding for Cross-Program Publications appears to be inappropriately and unnecessarily limited to those individuals who have received funding from the Trustee Council before -- new investigators can be a part of a Cross-Program Publication group proposal, but only at the discretion of previously funded investigators. We understand this was done to encourage cross-program efforts in data synthesis and analysis, but we also understand that one of the goals of this new Focus Area is to stimulate new perspectives and ideas on interpreting previously collected data. The latter goal would seem to be best achieved by providing new investigators the chance to submit a proposal on their own. Therefore, I recommend that the draft Invitation is revised to allow any investigator, regardless of previous affiliation with Trustee Council activities, to apply for funding in this Focus Area.
 - b. As currently drafted, the types and amount of information requested of proposal submitters is different between entities that have submitted proposals in the past and entities that have not submitted proposals before. The reason for the dual lists of proposal requirements is not apparent. All proposers within a Focus Area should have the same list of proposal requirements so that proposal evaluators have equal kinds and scopes of information for each proposal, facilitating fair competition during proposal evaluations.
5. The Invitation and resulting programs/projects would benefit from more explicit descriptions of the restoration work that the Council wishes to be accomplished in FY17-21. Rather than listing examples of projects that "would be of highest priority" or are "of interest," the Invitation should explicitly state specific types of projects that, at a minimum, must be included in a program proposal in order to address Council goals for FY17-21.

For example, with respect to the Long-Term Monitoring of Marine Conditions and Injured Resources Focus Area, rather than providing examples of projects "that could potentially be part of a comprehensive monitoring program," the Council (through its support staff) should evaluate the data that has been collected thus far and identify a

Council position on what constitutes a comprehensive monitoring program that fulfills Council goals for the next five years. Regarding the Cross-Program Publication Focus Area, if there are specific topics that the Council feels strongly should be further analyzed and presented in a formal publication, these topics should be explicitly mentioned in the Invitation as priorities for this funding.

We assume the science workshop held in February 2015 provided much of the evaluation and information that would be needed to formulate a proposed Council position and specific goals for the next five years. Including in the Invitation more explicit descriptions of the required minimum elements of a program/project proposal will help proposers craft successful proposals that most effectively address Council needs and goals.

6. Contributing to the idea of helping proposers craft successful proposals, the Invitation would benefit from some description of the evaluation factors that will be used to judge the proposals. We have suggested several minimum evaluation factors in the attached document. Of note is the re-emphasis on need to demonstrate the link between the proposed activities and the restoration of injured natural resources and services.

Comments regarding the business model of the Trustee Council for FY17-21

1. The Trustee Council should consider assuming the activities described under the Data Management Focus Area into the Trustee Council's operating budget and administering the funding for those activities as a contract for professional services. A contract would provide the Council with the administrative authority to ensure Council goals are met. Administering the data management program as a multi-year contract not to exceed five years could also enable the Trustee Council to avoid the annual proposal review process for this activity, helping the Council fulfill its goal of streamlining its administrative activities.
2. The Trustee Council intended to make all data collected with its funding available to the public, academic institutions, and natural resource management agencies. However, the goal has not been achieved, and delays as long as five years for some datasets appears likely. This is not complementary with the Council's goal of providing natural resource monitoring data to natural resource management agencies to assist them in managing the resources under their jurisdiction and delays any restoration benefit that might be achieved through improved management decisions. The Council should require that data are promptly validated and made public by specific, reasonable timelines that meet Council goals. This requirement should be described in the funding mechanism used to administer the data collection projects, and the Council should maintain the ability to enforce the requirement. With respect to the FY17-21 Invitation specifically, making the data more promptly publicly available would also facilitate open competition in the Cross-Program Publication Focus Area in that investigators not previously involved with the data collections would also have access to the Council's data.

I believe it would be beneficial to discuss several of these items among the Trustee group to assist in establishing the direction of the Council's work for the next five years and finalizing the content of the draft Invitation. I would like to review a revised Invitation and have an opportunity to discuss any outstanding comments with you and the Trustee group no later than August 31, 2015 (or three weeks before the fall meeting of the Public Advisory Committee).

If you have any questions about these comments and questions, please contact Ms. Veronica Varela, Natural Resource Damage Assessment Coordinator, at (907) 786-3866.

Sincerely,



Geoffrey L. Haskett
Regional Director

Enclosure

cc: Mr. Joe Darnell, Solicitor's Office-Alaska Region
Ms. Terri Marceron, Forest Supervisor, Chugach National Forest
Mr. Jim Balsiger, Regional Administrator, National Marine Fisheries Service Alaska
Mr. Sam Cotton, Commissioner, Alaska Department of Fish and Game
Mr. Larry Hartig, Commissioner, Alaska Department of Environmental Conservation
Mr. Craig Richards, Attorney General, Alaska Department of Law
Ms. Gina Belt, U.S. Department of Justice
Ms. Erika Zimmerman U.S. Department of Justice
Ms. Dede Bohn, U.S. Geological Survey

ATTACHMENT B**HARBOR PROTECTION AND MARINE RESTORATION**

Damage to natural resources occurs not only with an initial oil spill, but also potentially through additional injury to the affected environment. This subsequent insult can result from well-intended but ultimately damaging spill response efforts. In addition, additional pollution from human uses in and around the spill area can further compromise the recovery of the natural resources initially injured by the spill. Thus, the following three components focus Council efforts to mitigate sources of additional pollution in the spill areas and to organize, preserve and pass on information gained in the response to EVOS.

a. Storm water, wastewater, and harbor projects

Each harbor, marina, boatyard and vessel in Alaska has the potential to generate some incremental pollution. This type of non-point source pollution, if unmitigated, ultimately affects the water quality in the marine coastal environment. Incremental pollution can stress the health of the ecosystem needed to support recovering resources resulting from the spill. Chronic marine pollution stresses fish and wildlife resources, possibly delaying recovery of resources injured by the oil spill. For example, with regard to the worldwide mortality of seabirds, the effects of chronic marine pollution are believed to be at least as important as those of large-scale spills. In the 1994 Restoration Plan, Council identified reduction of marine pollution as a type of general restoration: removal of a source of stress that may delay natural recovery.

The pollutants that might be generated at a marina and enter a marina basin include nutrients and pathogens (from pet waste and overboard sewage discharge), sediments (from parking lot runoff and shoreline erosion), fish waste (from dockside fish cleaning), petroleum hydrocarbons (from fuel and oil drippings and spills from solvents), toxic metals (from antifoulants and hull and boat maintenance debris), and liquid and solid wastes (from engine and hull maintenance and general marina activities).

The construction of a marina can create a condition of reduced water circulation. Installation of bulkheads and jetties, which are necessary to ensure the safety of vessels, docks, and shoreside structures, can cause water circulation in the basin to be below what it was before the marina's construction. Over time, reduced circulation and increased pollutant generation can increase pollutant concentrations in the water column, sediments, and aquatic organisms.

The fact that a marina is present does not mean that water quality is poor. Many marinas may have fair to excellent water quality. Despite this, their aquatic habitats might not be healthy enough to support a natural diversity of aquatic organisms, and may still have sediments contaminated by pollutants from storm water runoff or by antifoulants leached from ship hulls or piers.

The implementation of effective pollution reduction projects and techniques will be dependent upon the individual harbor and marina. Many coastal communities in the spill area have a limited ability to collect and properly dispose of waste, such as oily bilge water, used engine oil, paints, solvents, and lead-acid batteries. Improper disposal of these wastes in landfills adversely affects the quality of nearby marine waters through runoff and leaching. In some cases, these wastes are discharged directly into marine waters.

ATTACHMENT B

The Council has approved the funding of several projects to prepare waste management plans and has contributed to their implementation. These projects resulted in the acquisition of waste oil management equipment and the construction of environmental operating stations for the drop-off of used oil, household hazardous waste and recyclable solid waste in Cordova, Valdez, Chenega Bay, Tatitlek and Whittier, Kodiak and lower Cook Inlet. Best management practices for both storm water and harbors also exist for minimizing potential environmental impacts to the marine environment. Activities may include, but are not limited to best management practices listed in the Alaska Storm Water Guide and Alaska Clean Harbors Guide. *See References.* In addition, please be aware that there are legal restrictions on the use of the Council's funds. These include a restriction on funding "normal agency activities" or funding activities that are legally required.

The Council seeks to further reduce pollution in the marine environment to contribute to the recovery of injured natural resources and proposes to fund this program with \$1,700,000 over an up to five-year contract period.

PLEASE NOTE: Council multi-year funding must be approved annually by the Council. In addition, projections of future funding are also dependent upon investment funds which are affected by market fluctuations.

b. Marine debris removal

Marine debris is an issue in the marine and near-shore environment in Alaska, where it is likely that thousands of tons of marine debris exist within three nautical miles of the Alaska coastline. Marine fish and wildlife become entangled in and ingest debris from foreign and domestic sources that may be a day or decades old and that range from small plastic items to very large fishing nets. Approximately 175 metric tons of debris was collected from Alaska coasts by citizen cleanup projects in 2007. Marine debris removal projects can result in an immediate improvement to the coastal habitat.

Coastal communities are effective in marine debris cleanups due to their intimate knowledge of the locations of debris accumulation. In addition, when communities participate in marine debris cleanups, they often alter the common practices that led to marine debris as their awareness of the effects of the debris on their coastline and the fisheries upon which they depend increases. Marine debris removal reduces marine pollution affecting injured resources and services and, thus, further supports natural restoration.

For the purposes of this invitation, marine debris is defined as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment located within the area of focus. Because of the ocean currents and weather patterns in this region, a significant amount of debris found is likely to have originated outside of the area. The Council is interested in receiving proposals from an organization or team that will develop and implement a community-based marine debris removal program.

ATTACHMENT B

The Council proposes to fund a marine debris removal program with \$1 million over an up to two-year contract period.

PLEASE NOTE: Council multi-year funding must be approved annually by the Council. In addition, projections of future funding are also dependent upon investment funds which are affected by market fluctuations.

Activities may include, but are not limited to:

1. Assessment of existing debris in the region for prioritization and planning of specific actions, as well as selection of best practices for accomplishing program goals.
2. Detection, assessment, and/or removal of persistent debris, including derelict fishing gear, such as abandoned crab pots, fish nets, and monofilament line, from coastal habitats and removal of debris washed up on shorelines.
3. Detection, assessment, and/or removal of debris from marine, estuarine or beach environments resulting from point-in-time events (i.e., vessel groundings, storms, etc.).
4. Use of strategies, methods, priorities and plans for the detection, safe removal, and responsible disposal of derelict fishing gear and associated marine debris impacting or expected to impact habitat affected by the spill. Applicable management practices and local or regional protocols may already exist and, where possible, these should be applied. However, the program may also include defining best management practices and local or regional protocols where necessary.
5. Prevention, outreach, education and/or volunteer activities. Proposers are encouraged to include education and outreach as a component of removal activities. These activities should include the public and other stakeholders, such as the fishing industry, fishing gear manufacturers, other marine-dependent industries, and the plastic and waste management industries.

c. Response, Damage Assessment and Restoration Implications

Damage to natural resources occurs not only with an initial oil spill, but also potentially through spill response efforts. Damage assessment from the 1989 spill has yielded information that can assist in mitigating damage from spill response activities in future spills. Skilled damage assessment also quantifies the extent of injury and allows for the accurate monitoring and measurement of restoration after a spill. Organizing, preserving, and passing on such information will help responders and those conducting future damage assessments. These efforts ensure that restoration efforts are truly effective. Outreach efforts could include a conference or series of papers sharing information to be used by future responders, including natural resource assessment, the long-term costs of high-pressure washing, use of dispersants in the near-shore, sub-arctic environment, and the effects of potential burning scenarios.

The Council proposes to fund this effort with \$700,000 over a up to five-year contract period.

PLEASE NOTE: Council multi-year funding must be approved annually by the Council. In addition, projections of future funding are also dependent upon investment funds which are affected by market fluctuations.

ATTACHMENT B**Considerations Applicable to Proposers**

The Harbor Protection and Marine Restoration focus area contains three subject areas to be funded under this Invitation: "Storm Water, Wastewater, and Harbor Projects," "Marine Debris Removal" and "Response, Damage Assessment and Restoration Implications." These three, separate subject areas will be administered as multi-year contracts with a Council-funded program for each subject area. There is no required length of contract, though the Council has contemplated implementation over a 2-5 year period, as appropriate. Proposing entities may submit proposals in more than one focus area, and organizations and individuals may participate in more than one competing proposal within a single focus area.

The following are mandatory requirements for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. Proposers must demonstrate that they have:

1. A proposal which is focused within the oil spill-affected area;
2. A proposal which responds to one of the Harbor Protection and Marine Restoration subject areas described under this focus area.
3. A proposal for a program that complies with the Council's founding documents and related data and reporting policies and procedures. *See References.*
4. An existing administrative structure to manage funds and projects; the proposer may be an existing organization or collaboration among existing entities and individuals.
5. A structure to communicate with the Council through a single Team Leader; regardless of the structure of the proposers, they must produce a single, comprehensive proposal.
6. A Team Leader who will work with and be responsive to Council's objectives and requirements.
7. A Team Leader who will facilitate the most cost-effective and scientifically-supportive stream of funding among the parties and projects involved.
8. A program technical panel to review potential projects and give guidance and oversight on the direction of the program.
9. The ability and commitment to make all data, documents, annual and final reports available electronically to the public.
10. A mechanism for public outreach and opportunities for public comment on program activities.

The following are preferred requirements for potential proposers. Proposers that meet the requirements will be rated more highly during the review process. The Council is seeking a proposal in each of these three subject areas that:

1. Implements a reduction and removal program with clearly identified goals (broad in scope) and specific, measurable objectives, including realistic and detailed timelines and milestones.
2. Continues to reassess the program's progress and relevancy and considers newly-available technologies.

ATTACHMENT B

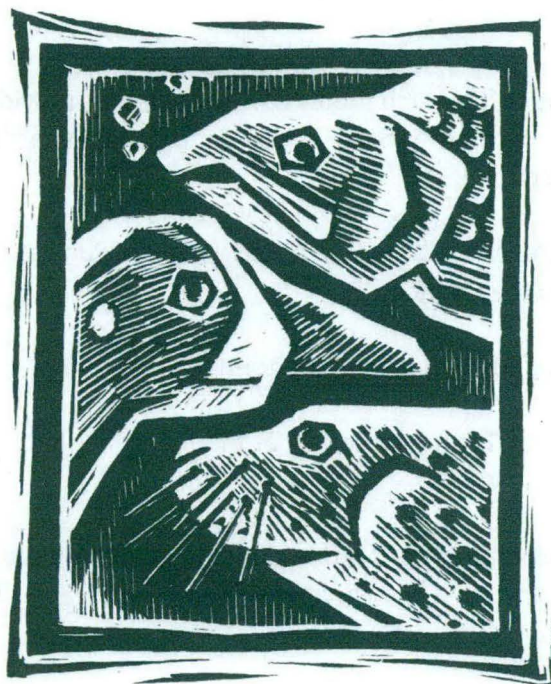
3. Demonstrates an understanding and synthesis of existing technical and scientific literature, research results, and technical and scientific knowledge that includes outcomes of prior Council work and which recognizes the available technical and research infrastructure.
4. Demonstrates an effective and balanced use of funds, including establishing appropriate collaborations with other organizations and experts, achieving the most efficient use of funds, and taking optimal advantage of existing infrastructure. This includes collaborations among entities such as public and nonprofit organizations, corporations and businesses, and federal, state, and local government to cooperatively implement the proposed projects.
5. Provides a detailed plan for local and native community involvement in the program.
6. Provides a detailed public outreach plan that describes specific products. This could include the creation and dissemination of simple web-accessible exhibits, newsletters disseminated to spill communities and other data users, real-time data streaming for use in public settings like aquaria and visitor's centers, and submissions to public data consortiums.
7. Demonstrates a credible feasible, and detailed, realistic and detailed administrative structure and technical and scientific implementation of the program, including project team qualifications (education, experience, related work efforts, proposed time commitment, past performance), and availability of facilities or other requirements necessary for project success.
8. For Marine Debris:
 - a. provides a final report with the total amount of debris removed, total areas cleaned or restored, types of debris encountered, and volunteer hours involved;
 - b. presents a written safety plan for all project related activities, including management of volunteers. The safety plan should consider safety at the site during and after project implementation, and potential safety concerns with regard to the current and future use of the site; and
 - c. provides a public outreach plan that can effectively educate the public with the goal of altering debris-creating human practices and habits.

The following are mandatory requirements for each fiscal year of the program. The submitted budget for each year shall include the staffing and funds necessary to meet these requirements.

1. An annual report must be presented to the Council that includes the following:
 - a. A financial accounting of any Council funding in the past year including a comparison of the requested budget versus the actual budget.
 - b. A summary of the projects funded, including brief annual reports from each.
2. A funding request must be presented to the Council each fiscal year and will include the following:
 - a. An administrative budget that details the cost of running the program.
 - b. An executive list and summary of projects recommended for funding and the technical and scientific basis thereof.

11.02.15 Draft

Exxon Valdez Oil Spill Trustee Council



Invitation for Proposals
Fiscal Years 17-21

Released December 1, 2015

Glossary of Terms

Council – *Exxon Valdez* Oil Spill Trustee Council or EVOSTC

EVOS – *Exxon Valdez* Oil Spill or Spill

EVOSTC – *Exxon Valdez* Oil Spill Trustee Council

Fiscal Year – The Council operates on a fiscal year (FY) that begins on February 1 and ends on January 31.

Focus Area – A specific area of interest for which the EVOSTC anticipates providing funding under a potential 20-year plan. This Invitation represents the second of four five-year funding cycles under that 20-year plan, as discussed in Section I.

Group Lead - An individual who represents a proposed Cross-Program Publication Group and is responsible for communicating with the Council.

Long-Term Herring Program - Herring Research and Monitoring Program

Long-Term Monitoring Program - Long-Term Monitoring of Marine Conditions and Injured Resources Program

Long-Term Programs - Long-Term Monitoring of Marine Conditions and Injured Resources, Herring Research and Monitoring Program, and Data Management Program

PAC – EVOSTC Public Advisory Committee

Preferred Proposer – If competing proposals are received in response to this Invitation, the Council will review proposals, identify a Preferred Proposer for each Focus Area and will direct Council staff to work with each Preferred Proposer to revise the subject proposals to satisfy any scientific, technical or programmatic concerns before re-submission for funding review.

Program – A comprehensive suite of projects managed by Program Lead(s) that seeks to address hypotheses related to a specific focus area; current EVOSTC Programs are long-term and propose activities over a multi-year period.

Program Lead – An individual who represents a proposed Program and is responsible for communicating with the Council.

Program Science or Technical Panel – A panel of scientific or technical experts to review potential projects and give guidance and oversight on the direction of the Program; is not required to be independent from the Program. This Panel is in addition to, and independent of the EVOSTC Science Panel.

Project – An individual task that is led by a primary investigator and is attempting to address a specific scientific hypothesis or Program objective.

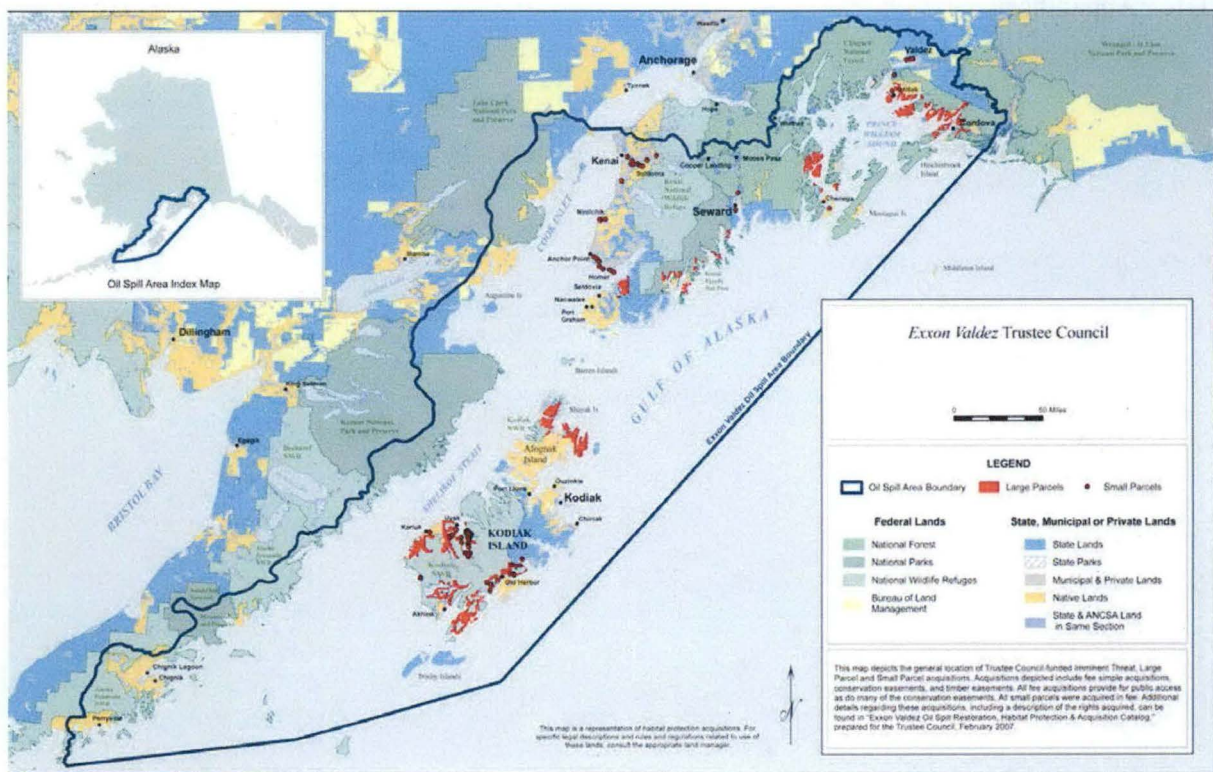
PWS – Prince William Sound

Spill– *Exxon Valdez* Oil Spill or EVOS

Spill Area – see map below (Figure 1)

Trustee Agency – One of the six state and federal agencies represented on the Council.

Figure 1: Map of the *Exxon Valdez* Oil Spill area boundary.



This map is also available at: <http://www.evostc.state.ak.us/index.cfm?FA=facts.map>

Contents

I.	Background and Purpose of the FY17-21 Invitation for Proposals	1
II.	Schedule and Cycles of Review and Funding	4
III.	Proposal Invitation by Focus Area	6
IV.	Additional Evaluation of Proposals	22
V.	Instructions for Submitting a Proposal	24
VI.	References	25
VII.	Non-Discrimination Statement	26
VIII.	Appendices	26

I. Background and Purpose of the FY17-21 Invitation for Proposals

In 1992, the *Exxon Valdez* Oil Spill Trustee Council (Council) was formed consisting of six natural resource trustees, three State of Alaska trustees and three federal trustees, to take the actions necessary to restore the natural resources injured, lost, or destroyed as a result of the 1989 *Exxon Valdez* oil spill (EVOS or Spill). The Council was established to administer funds from the settlement of civil natural resource damages claims brought against Exxon Corporation and related companies by the State of Alaska and the United States. The Council initiated an extensive public process to begin the work of restoration using these joint trust funds and, in 1994, adopted a Restoration Plan (Plan) to guide restoration through research and monitoring, habitat protection, and general restoration.

As part of this effort, the Council also adopted an official list of natural resources and natural resource services injured by the Spill. When the 1994 Plan was drafted, the distinction between the effects of the Spill and those of other natural or human-caused stressors on injured resources or services was not fully understood. Through the hundreds of studies conducted over the last twenty-six years, the Council has come to recognize that ecosystem restoration is not easily addressed. The interactions between a changing environment and the injured resources and services are only beginning to be understood, and, as time passes, the ability to distinguish the effects of the oil from other factors affecting fish and wildlife populations becomes more difficult. These complexities and the difficulties in measuring the continuing impacts from the Spill result in some inherent uncertainty in defining the status of a resource or service for an updated list of injured species and services.

The 1994 Plan also outlined an ecosystem-based approach to restoration, a more integrated view that has become increasingly recognized as essential. Even before the Plan was final, the Council began efforts to better understand the coastal marine ecosystem. This approach has provided and continues to provide an abundance of information on fish, marine birds, and mammals.

Numerous restoration projects were funded by the Council, and by 2010, approximately ten percent of the civil settlement funds remained for future use. To more efficiently and effectively manage the remaining funds, the Council refined the scope of its restoration efforts to five defined restoration categories: (1) herring, (2) lingering oil, (3) long-term monitoring of marine conditions and injured resources, (4) harbor protection, marine restoration, and lessons learned/outreach, and (5) habitat acquisition and protection. The Council streamlined the implementation of its restoration activities by establishing a 20-year strategic plan implemented in four five-year increments. In addition, the Council reduced its administrative costs by adopting the management practice of using third-party leads (i.e., outside of Council staff) to coordinate the Herring and Long-Term Monitoring of Marine Conditions and Injured Resources Programs. These adjustments were achieved through a lengthy process with numerous public and Council meetings in 2010-2011.

In spring 2011 the Council issued the first Invitation, for FY12-16, under the new 20-year Program requesting project proposals in the following Focus Areas: a long-term herring Program; a long-term Program for the monitoring of marine conditions and injured natural resources; projects in harbor protection; a marine debris Program; and projects in lingering oil. (The Council administers the habitat acquisition and protection program separately.)

Many excellent proposals were submitted in response to the FY12-16 Invitation. Some involved collaborations among local and other entities working together in several areas, including two aimed at establishing comprehensive long-term herring and monitoring of marine conditions and injured resources Programs. In fall 2011, the Council approved projects in these Focus Areas, including the two long-term Programs. Their approval marked the beginning of a new stage for the Council, defined by reduced administrative costs and an emphasis on supporting the Focus Areas.

In February 2012, funding commenced for the two long term Programs: the Herring Research and Monitoring Program and the Long-Term Monitoring of Marine Conditions and Injured Resources Program, also known as Gulf Watch Alaska. The Programs are administered under five-year cooperative agreements, reviewed annually; each year the Council, EVOSTC Science Panel and Public Advisory Committee (PAC) meet to review the past-year's results and future year's requested funding. The Council contemplates the long-term Programs to be twenty-years in length, concluding in 2032. Although some continuity in the Programs is encouraged, each five-year Invitation is open for submission of proposals by any interested parties.

Similar to the FY12-16 Invitation, this FY17-21 Invitation continues to address the herring, long-term monitoring, and the lingering oil Focus Areas. The other Focus Areas included in the FY12-16 Invitation, such as marine debris, harbor protection, and marine restoration, are not included in this Invitation. They were addressed and completed under the FY12-16 Invitation and were designed to be allocated limited funding and to be short-term. Two new Focus Areas have been added to this Invitation to complement and enhance the work in the Long-Term Programs. One new Focus Area is data management, which was previously included within the Long-Term Monitoring Program but serves both the Long-Term Monitoring and Herring Programs. The second new Focus Area is the Cross-Program Publication Groups, which encourages additional collaboration within and between the Programs. Both of the new Focus Areas are consistent with the Council's intentions for the 20-year Program model, which called for developing science-based products regarding environmental changes and of the impacts of these changes on injured resources and services. Examples of these products are data management portals for enhancing the Council's ability to share data among interested parties and scientific publications that integrate and interpret data collected by the Programs.

This Invitation calls for proposals for FY17-21 in the five Focus Areas of 1) herring; 2) long-term monitoring of marine conditions and injured resources; 3) data management; 4) cross-Program publication groups; and 5) lingering oil.

For the Herring, Long-Term Monitoring of Marine Conditions and Injured Resources, and Data Management Focus Areas:

- Each proposal must describe a comprehensive, five-year, multi-project Program.
- Funding will be awarded to only one Program proposal per each of these three Focus Areas; therefore, each proposal for these three Focus Areas must include a comprehensive suite of projects that will address all of the Council's needs for that Focus Area for the five-year funding cycle.

- Because a Program proposal will likely involve several individual projects, each with potentially different teams of investigators, each Program proposal is required to identify a Program Lead who will be the primary coordinator of all of the proposal's activities and the primary spokesperson in communications with the Council.
- The Program Lead may be a representative from a single organization that will manage the proposed Program or from a consortium that will work together in a structured manner to manage the proposed Program.
- Section III describes the proposals for these Focus Areas in further detail.

For the Cross-Program Publication Groups and Lingering Oil Focus Areas:

- Proposals will be for individual, stand-alone projects, and may or may not require funding for the entire five-year funding period.
- Funding is not limited to only one proposal per Focus Area.
- Section III describes the proposals for these Focus Areas in further detail.

Proposing entities may submit proposals in more than one Focus Area, and organizations and individuals may participate in more than one competing proposal within a single Focus Area.

Upon selection, the intention of the Council is to implement the Program awards through NOAA Cooperative Agreements, with the exception of those portions of the Programs which will be conducted by Trust Agencies directly or through specific arrangements. Entities eligible to receive funding through Cooperative Agreement include institutions of higher education, other nonprofits, commercial organizations, foreign governments, organizations under the jurisdiction of foreign governments, international organizations, and state, local and Indian tribal governments. Federal agencies or institutions are not eligible to receive such Federal assistance, and will instead receive funding through arrangements with the Department of Interior National Resource Damage Assessment and Restoration Fund. Agencies of the State of Alaska will receive funding through an account established with the State of Alaska.

This Invitation uses a several-step process, as detailed below in *Schedule and Cycles of Review and Funding*, to assist in refining preferred proposals into final proposals submitted to and reviewed by the Council for funding to commence February 1, 2017. Although the FY17 proposals encompass a five-year span, the Council will approve funding on an annual basis, and funding approved for a certain fiscal year cannot be used outside of that fiscal year without additional Council approval, or in accordance with the Council's financial procedures policy (*See References*). Approved Programs and projects must re-submit annual proposals each year. This process allows the Council a formal opportunity to review the progress of the Programs and projects toward meeting their goals and objectives as well as those of the Council. Information on the Invitation, including Frequently Asked Questions, reference documents, and required forms can be found on the Council's website (*See References*).

II. Schedule and Cycles of Review and Funding

The Council operates on a fiscal year that begins on February 1 and ends on January 31. For information on the management of approved annual funds within a multi-year project, review the Council's Financial Procedures document available on the Council's website (*See References*). The following describes the schedule and cycles of proposal reviews and Council funding decisions for the five Focus Areas of this FY17-21 Invitation.

Proposal Deadline and Review for Herring, Long-Term Monitoring of Marine Conditions and Injured Resources, and Data Management Focus Areas

The Herring, Long-Term Monitoring, and Data Management Programs are administered as multi-year cooperative agreements renewable, if selected under subsequent invitations, every five years for an anticipated total of another fifteen years. Program proposers must submit a proposal detailing the activities and budgets for the five-year period of FY17-21. The Council will review the FY17-21 proposals and approve funding for FY17 at their fall 2016 meeting. Proposers approved for FY17 Program funding will continue to submit annual proposals for subsequent fiscal years (FY18, 19, 20 and 21) for Council review and approval.

December 1, 2015 Invitation for FY17-21 Proposals issued

February 1, 2016 Deadline for Program proposers to submit contact information and Program of Interest

April 1, 2016 FY17-21 Proposals Due by 5:00 PM AKDT

April-May, 2016 Proposals reviewed by Council staff, Trust Agency staff, the EVOSTC Science Panel and PAC

June 2016 Council will select preferred Program proposers if there are competing Program proposals in any Focus Area

June 1, 2016 List of revisions/comments sent to Program Lead(s) if there are no competing Program proposals

July 1, 2016 Notification and list of revisions/comments sent to selected preferred Program proposers if applicable

August 24, 2016 Revised final proposals due by 5:00pm AKDT

September-October, 2016 Review by Council and Trust Agency staff, the EVOSTC Science Panel and PAC

October/November, 2016... FY17 Funding decision made by Council

February 1, 2017 Funding released for FY17

FY18, 19, 20 and 21: Annual Herring, Long-Term Monitoring and Data Program Proposal Cycle of Review and Funding

The proposer approved for FY17 Program funding, as outlined above, will continue to submit annual proposals for subsequent fiscal years (FY18, 19, 20 and 21) for Council review. Approval of funds for subsequent fiscal years depends in part on the successful and timely submittal of required interim reports. (*See the Council's Reporting Policy for details.*) As part of reviewing the Programs, Council staff may provide written recommendations to the Council for any potential changes to the scope of the program(s) that may be required and a consideration of whether the Program(s) is meeting its objectives. This information may be shared with the Program Lead for discussion and response before any actions are taken by the Council. The anticipated schedule for FY18-21 is as follows:

September 1: annual Program proposals for the upcoming fiscal year are due on September 1 of the fiscal year previous to the proposed work. The annual proposals may adjust or revise the FY17 –FY21 five-year plan initially proposed, but requests for additional funding will not be considered without prior approval of the EVOSTC Executive Director.

October–November: Proposal review includes the Council and Trust Agency staff, Science Panel and PAC, each of which may provide funding recommendations.

October- November: The Council reviews and determines funding for the upcoming fiscal year, beginning on the following Feb. 1. Final approvals will be decided at the Council's annual fall public meeting.

FY19: A Joint Science Workshop and a PAC Workshop with the Herring, Long-Term Monitoring, and Data Management Programs is held. Program Leads and individual researchers present their findings in the context of a summary of how Program projects are addressing management agency priorities and Program hypotheses. (*See Joint Science Program Workshop, below.*)

Joint Science Program Workshop

As outlined above, in the third year of the Programs, the Council will host and fund travel for a three-day Joint Science Program and PAC Workshop. The Science Program Workshop will take place over approximately two days and the PAC Workshop will take place over one day.

The Science Workshop allows Council staff, Trustee Agency staff and the EVOSTC Science Panel to review the progress of the Herring, Long-Term Monitoring, and Data Management Programs' five-year cooperative agreements. In advance of the Workshop, Program Leads are responsible for providing to the Council a written report of how each Program's projects are addressing management agency priorities and Program hypotheses. The report should address fundamental drivers, trends, and status in a way that contributes to the Council's and the public's understanding of the effects of the Spill and to the identification and development of possible management or restoration efforts that may benefit injured resources and services. These may include such topics as, but not limited to, a synthesis of retrospective data, climate drivers; lingering oil recovery, and the effects of human interventions.

The Science Workshop will be held in Anchorage over a period of approximately two days. The Workshop includes presentations by Program Leads and Program-selected PIs on projects within the

Programs. The Workshop also includes information as to the availability of data to user groups and how funded information is being used to further Council goals with respect to Program objectives and its utility beyond the Program. The Workshop includes parallel, and, if possible, cross-Program presentations by both the Herring and the Long-Term Monitoring researchers to allow for a broad ecosystem-based consideration of the ongoing research.

A one-day PAC Workshop will be held for the PAC to learn more about the Programs through presentations provided by the Program Leads and Program-selected PIs, including a review of the Program's website and outreach products for use in their communities.

Program and individual Program project proposals should include a budget in their FY19 annual proposal for the preparation of materials for this meeting.

Cross-Program Publication Groups Focus Area

Proposals for a Cross-Program publication can be for a single-year or multi-year project, and activities can occur in any fiscal year in the five-year cycle. Proposals are due to the Council on September 1, 2016 - September 1, 2020 of the preceding fiscal year for consideration. The FY17 proposal review cycle, and any multi-year proposals, will be the same as the Herring, Long-Term Monitoring, and Data Management Programs as detailed in Section II. All multi-year projects or Programs require funding to be re-authorized annually by the Council.

Lingering Oil Focus Area

Lingering oil proposals under this Invitation may be submitted at any time in the five-year period and can be for a single-year project or multi-year project and may be reviewed outside of the Council's annual review cycle, as needed. All multi-year projects require funding to be re-authorized annually by the Council.

III. Proposal Invitation by Focus Area

Building on its past efforts and public input, the Council has identified five areas of focus to be administered under this Invitation: (1) herring; (2) long-term monitoring of marine conditions and injured resources; 3) data management; 4) cross-Program publication groups and 5) lingering oil. The following sections elaborate on the details of the proposed areas of focus that are the subject of this Invitation.

HERRING RESEARCH AND MONITORING PROGRAM

The Council has classified the Prince William Sound (PWS) population of Pacific herring (*Clupea pallasii*) as a resource that has not recovered from the effects of the Spill. The PWS herring population was increasing prior to 1989 with record harvests reported just before the Spill. The Spill occurred just prior to spawning and the 1989 year class was one of the smallest cohorts of spawning adults recorded. By 1993 the fishery had collapsed with only 25 percent of the expected adults returning to spawn. The PWS fishery was closed from 1993 to 1996, but reopened in 1997 and 1998, based on an increasing population. Numbers again declined in 1999, and it is possible that the opening of the

fishery in 1997 and 1998 stressed an already weakened population and may have contributed to the 1999 decline. The herring fishery in PWS has been closed for 20 of the 26 years since the Spill. The 1993 collapse can be explained by several competing hypotheses, including disease and predation; however, data uncertainty makes it unlikely that the reasons will ever be fully understood. No trend suggesting consistent population recovery has occurred, and, in 2014, the Council declared Pacific herring as not recovering from the effects of the Spill.

The Council recognizes the uncertainty over the role of the Spill in the decrease and continued low abundance of the PWS herring population. However, herring are considered a keystone species in the marine ecosystem and play a vital role in the food chain of many injured species. Thus, an increase in the herring population biomass has the potential to support the restoration of other injured species. In November 2006, prompted by public comments about the continuing impacts to communities and commercial fishers from the lack of herring recovery, the Council convened scientists and researchers, commercial and subsistence fishermen, and natural resource managers for a herring workshop. One of the most important outcomes of the workshop was the consensus that a long-term strategic herring program was needed. From 2006 to 2009, Council representatives met with natural resource managers, commercial fishers, scientists, the PAC and Alaska Native residents of Spill-area communities to gain sufficient input to draft a cost-efficient, scientifically credible, and coordinated Program.

The result was the Integrated Herring Restoration Program (IHRP) document that included information on past and current projects, known limiting factors, and a list of potential restoration options. The goal of the IHRP was to determine what, if anything, can be done to successfully restore PWS herring; to determine what steps can be taken to examine the reasons for the continued decline of herring in PWS; to identify and evaluate potential recovery options; and to recommend a course of action for restoration.

In 2010, the Council adopted the final version of the IHRP and the IHRP-recommended restoration option of Enhanced Monitoring as the preferred approach based on the state of herring science at the time. Enhanced monitoring provides information to the Council that allows for a comprehensive review of the continued lack of recovery and provides information that can be used by herring management agencies. The FY12-16 Invitation for Proposals requested the submission of a comprehensive Program plan that would seek to enhance the current monitoring program of the Alaska Department of Fish and Game (ADF&G) and provide further insight into the continued lack of recovery.

A long-term herring Program proposal for this area was designed by the Prince William Sound Science Center to address this option and in 2012 the Council funded the first five-year term of the Herring Research and Monitoring Program. The currently-funded Program provides important information such as predictors of relative recruitment, trends in disease, investigations on how ocean conditions affect recruitment, and investigations into the relative productivity of various nursery bays. Research in this Program has also led to a better understanding of the role of disease, predictability of disease outbreaks, and potential disease management practices that could reduce disease impacts on herring biomass. Increased monitoring of herring populations and quantification and measurement of critical life-history attributes aid in the development of better predictive models of herring biomass.

Improved forecasts of stock biomass allow for more effective fisheries management and long-term sustainability of the stock. Improved estimates of herring biomass will be useful if active intervention were to be implemented in the future.

The FY17-21 Invitation is an open, competitive invitation and seeks to continue an integrated monitoring Program which builds upon the efforts of the first five-year Program. The overall goal of the Herring Research and Monitoring Program is to provide information to herring management agencies to enhance their management activities and to continue investigating the factors limiting herring populations in the Spill area and whether action could be taken to remedy such factors.

For the FY17-21 Invitation, the Council anticipates funding this long-term Program at up to \$5,525,000 (not including 9% GA) for the entire five-year term. Funding may be proposed as unevenly allocated among the five-year term, as appropriate to the proposed activities. Any multi-year funding must be approved annually by the Council. In addition, projections of future funding are dependent upon investment funds, which are affected by market fluctuations.

The Council has discussed specific components that are of particular interest for the Herring Research and Monitoring Program. The following are examples of the types of projects that could be part of a comprehensive monitoring Program. The list is based on projects that have been funded in the past and provided important information or work that may provide further insight into the current status of PWS. This list is not comprehensive and the projects listed are not mandatory.

To be eligible for funding, proposals must be designed to restore, replace, enhance or acquire the equivalent of natural resources injured as a result of the Spill or the reduced or lost services provided by these resources. In addition, proposals must be consistent with the policies contained in the 1994 Restoration Plan. Please also refer to the 2014 Injured Resources and Services List Update for detailed information. (See References.)

Overall Program Goal:

The continued development and testing of an updated age-structured assessment (ASA) model in collaboration with ADF&G. This would include simulations to evaluate which data sources, if collected under this Invitation, would be the most useful in assessing future herring biomass, trends, and recovery.

Areas of interest include (in no specific order):

1. An evaluation of the effects of changes since the Spill in piscivorous fish and/or seabird populations in PWS and the potential impact on herring recovery.
2. A plan for a post-doc fellow position or equivalent within the Program to introduce young scientists, current research techniques and ideas to the Program. The project led by the post-doc position must seek to address the Herring Program's goals and objectives. This position should be budgeted at \$10,000 in FY17 for recruitment costs and a maximum of \$85,000 annually for up to three years. The post-doctoral fellow or equivalent must be in Alaska, preferably in Cordova, AK, for 70% of the EVOSTC fiscal year and be supervised in their Program-related work by the Herring Program Lead.

3. A comparative retrospective analysis of data from PWS and other herring populations (e.g. Pacific herring populations off of Alaska, British Columbia, West Coast) to assist in determining the continued lack of recovery of PWS herring populations. This analysis may include topics such as herring abundance, recruitment, growth, disease resistance/susceptibility, as well as the impact of oceanographic and food web drivers on herring populations.
4. A project for a comprehensive spawn assessment to be conducted at a minimum interval of every two years.
5. A study of adult herring movement to provide information on herring movement between PWS and the Continental Shelf. Examples include microchemistry, acoustic tagging, and genetics studies.
6. The continuation of the work to study the role of disease in herring recovery and the potential for developing tools to aid management agencies in the detection and management of disease outbreaks.
7. A retrospective analysis of the relationship between physical and biological oceanographic factors, including spatial and temporal patterns, which could be affecting PWS herring.
8. The continued examination of the role of humpback whale population growth, changes in foraging behavior and consequent predation on herring and whether it is a potential limitation of herring recovery.
9. A study to estimate and corroborate herring age at maturity with ASA model estimates.
10. An evaluation of the possible effects of climate change and ocean acidification on various biological attributes of herring populations such as growth and susceptibility to disease.
11. An assessment of the potential impacts on PWS herring of anthropogenic changes related to commercial fisheries, by either extractive fishing or fish aquaculture. Such an examination could include an examination of potential serial depletion of herring sub-stocks during the fishery history.

Considerations Applicable to Proposers

The following are mandatory requirements for potential Program proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. Interested Program proposers must email their contact information and Program of interest to dfg.evos.invitation@alaska.gov by February 1, 2016 to be added to a list of interested proposers on the EVOSTC website to facilitate coordination among potential proposers.

Program proposers must demonstrate that they have:

1. A proposal that is focused within the Spill-affected area.
2. A proposal that responds to the call for a Herring Program, as described in this Invitation.

3. A proposal that contains clearly stated Program hypotheses, describes how these hypotheses contribute to the management objectives of natural resource managers and their services in the Spill area, and explains how the hypotheses support the monitoring and restoration of PWS herring.
4. A proposal for a Program that complies with the Council's founding documents and relevant policies and procedures. (*See References.*)
5. An existing administrative structure to manage funds and projects; the proposer may be an existing organization or collaboration among existing entities and individuals.
6. A structure to communicate with the Council through the Program Lead regardless of the structure of the individual proposers; they must produce a single, comprehensive proposal.
7. A Program Lead who will work with and be responsive to the Council's objectives and requirements.
8. A Program Lead who will facilitate the most cost-effective and scientifically-supportive stream of funding among the parties and projects involved in a manner that minimizes administrative costs.
9. A Program Lead who is capable of integrating data from all of the individual projects in their program to inform the program's annual proposals and individual project protocols and design.
10. A Program Science Panel to review potential and existing projects and give guidance and oversight on the Program's design and implementation to the Program Lead(s). The panel cannot include members who are participating in projects funded through the program in FY17-21.
11. The ability and commitment to make all data, documents, and annual and final reports available electronically to the public according to explicitly stated timelines and reporting guidelines.
12. A process to provide scientific peer review for approval of final reports, as appropriate.
13. A plan for ensuring individual project compliance with reporting, data submission, and quality policies. (*See References.*)
14. Established realistic and detailed timelines and milestones specific to the individual projects and the overall Program. Must demonstrate a credible, feasible, and detailed administrative structure and scientific implementation of the Program, including project team qualifications (education, experience, related work efforts, proposed time commitment, past performance), and availability of facilities and other requirements necessary for Program success. This would include a power or sensitivity analysis of the proposed sampling design and objectives for each individual project.
15. Provides a public outreach plan focused on providing information to the Trustee Agencies for use in their respective outreach and education materials. This information may include a summary of Program highlights or summary of key points for the agencies to incorporate in their ongoing outreach efforts. A list of Trust Agency outreach contacts will be provided to the Program

proposer selected by the Council for funding. Outreach efforts by the Program should focus on developing and maintaining accurate and timely content for the Program's website as a primary source of information on the Program. Any additional outreach materials that include information not contained in publically-available proposals or annual reports must be approved by the Council office prior to public circulation. Materials should be brief and direct the target audience to the Program's website. The cost of outreach efforts for this Program should not exceed \$15,000 per year.

The following are mandatory requirements for individual project proposers within a Program proposal. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. These include:

1. Project proposals that seek to continue to contribute new data to the data sets collected in the first five-year Program using the same protocols and project design must provide a description and justification that the past project design is still appropriate, based on the objectives and proposed uses for the data collection activities. If changes are needed based on current information or if a new project design is proposed, a justification for the changes must be provided, including rationale based on statistical analyses such as power or sensitivity analysis of the proposed sampling design.
2. Project proposals that seek to begin work that was not undertaken in the first five-year program must provide a justification of how the project will provide data useful to addressing management objectives and Program hypotheses.

The following are preferred requirements for potential proposers. Proposers that meet these requirements will be rated more highly during the review process. The Council prefers a herring Program that:

1. Continues to reassess the Program's progress and relevancy and considers newly-available technologies;
2. Demonstrates an understanding and synthesis of existing scientific literature, research results, and scientific knowledge that includes outcomes of prior Council work;
3. Demonstrates an effective and balanced use of funds, including establishing appropriate collaborations with other organizations and experts, achieving the most efficient use of funds, and taking advantage of existing infrastructure;
4. Provides a detailed plan for local and Alaska Native community involvement in the Program. The degree to which the activities of the proposed program allow involvement with local communities and incorporation of local knowledge will vary, but interaction with communities is required. Reviewers will give additional consideration to proposals that demonstrate meaningful community involvement and/or make use of local and traditional ecological knowledge; and

The following are mandatory requirements for each fiscal year of the Program. The submitted proposal and budget for each year shall include the staffing and funds necessary to meet these requirements. (*See the Council's Reporting Procedures and Budget Forms for details.*)

1. An annual report must be presented to the Council on March 1 of each fiscal year (except FY17) and will include the following:
 - a. A completed Program Summary Status Form and Budget Form (*Attachments E and F of Reporting Procedures*) and
 - b. A completed Project Reporting Form and Budget Form for each project in the program (*Attachments C and E of Reporting Procedures*).
2. A proposal request must be presented to the Council on September 1 of each fiscal year and will include the following:
 - a. A completed Long-Term Program Proposal Form and Budget Form (<http://evostc.state.ak.us/index.cfm?FA=pubs.invites>); and
 - b. A completed Long-Term Project Proposal Form and Budget Form for each project in the Program (<http://evostc.state.ak.us/index.cfm?FA=pubs.invites>).

LONG-TERM MONITORING OF MARINE CONDITIONS AND INJURED RESOURCES PROGRAM

In the 26 years since the Spill, it has become apparent that the ecosystem can undergo profound changes and that such changes may hinder a return to pre-Spill conditions. The 1994 Restoration Plan recognized that recovery from the Spill would likely take decades. The Plan set aside a Restoration Reserve from the natural resource damages settlement funds to provide for long-term observation of injured resources and services and for appropriate restoration actions into the future. To further this effort, in 1999 the Council also supported the development of a long-term research and monitoring Program.

The Council's goals for post-Spill long-term monitoring have two components: monitoring the recovery of resources from the initial injury and monitoring how factors other than oil may inhibit full recovery or adversely impact recovering resources. This second type of monitoring involves collecting data on physical and biological environmental factors that drive ecosystem-level changes. The information that is produced from such monitoring may be used to manage individual injured species and resources. However, such data are increasingly valuable in illuminating the larger ecosystem shifts that impact and influence a broad variety of species and resources injured by the Spill.

Monitoring these changes provides useful data to natural resource management agencies and interested parties that allows for adjustment to their activities and management strategies to adapt to current conditions and further support the recovery of injured resources. The Council has a history of supporting oceanographic monitoring by helping to establish and fund long-term data collection projects. In this initiative, the Council envisions developing partnerships with scientific entities or consortia able to sustain those data collections, to maximize Council funding, to develop science-based

products that will inform the public of changes in the environment and the impacts of these changes on injured resources and services.

An integrated monitoring Program requires information on environmental drivers and pelagic and benthic components of the marine ecosystem. Additionally, while extensive monitoring data has been collected thus far through Council-funded projects, as well as from other sources, and made publicly available, much of that information needs to be assessed holistically to understand the range of factors affecting individual species and the ecosystem as a whole.

In 2012, during the previous cycle of this invitational process, the Council selected a multi-disciplinary team headed by the Alaska Ocean Observing System (AOOS), Prince William Sound Science Center (PWSSC), and NOAA to begin work on a five-year integrated long-term monitoring Program, the Long-Term Monitoring Program, also known as Gulf Watch Alaska. The FY17-21 Invitation is an open, competitive invitation and seeks to continue an integrated monitoring Program which maintains continuity and builds upon the efforts of the first five-year cooperative agreement.

For the FY17-21 Invitation, the Council anticipates funding this long-term Program at up to \$11,050,000 (not including 9% GA) for the entire five-year term. Funding may be proposed as unevenly allocated among the five-year term, as appropriate to the proposed activities. Any multi-year funding must be approved annually by the Council. In addition, projections of future funding are dependent upon investment funds, which are affected by market fluctuations.

The Council has discussed specific ecosystem components that are of particular interest and include environmental drivers, pelagic monitoring, and benthic monitoring. The following are examples of the types of projects in each area that could potentially be part of a comprehensive monitoring Program. The list is based on projects that have been funded in the past and provided important information or work that may provide further insight into the current status of PWS. This list is not comprehensive and the projects listed are not mandatory.

To be eligible for funding, proposals must be designed to restore, replace, enhance or acquire the equivalent of natural resources injured as a result of the Spill or the reduced or lost services provided by these resources. In addition, proposals must be consistent with the policies contained in the 1994 Restoration Plan. Please also refer to the 2014 Injured Resources and Services List Update for detailed information. (See References.)

Areas of interest (in no particular order):

Environmental Drivers

1. The monitoring of oceanographic conditions, including water temperature, salinity, and turbidity, with a sampling design that yields insight into either the broad region of PWS or meaningful sub-regions of PWS, particularly in support of biological studies conducted by the Programs.
2. An assessment of the transport of nutrients between the Gulf of Alaska and PWS and the effects on PWS biological production over time.

Pelagic Monitoring

1. Monitoring projects conducted as part of the first five-year program for killer whale, humpback whale, seabirds, and forage fish have proven useful in addressing management objectives and program hypotheses. Continuity of existing data sets is encouraged but any proposals should include a justification of the proposed monitoring methodology. The humpback whale project may be submitted under the herring Focus Area detailed above.
2. An evaluation of the possible effects of climate change on the pelagic ecosystem.

Nearshore Monitoring

1. Monitoring programs conducted as part of the first five-year Program in the nearshore have proven to be useful in addressing agency management objectives and Program hypotheses. Continuity of existing data sets is encouraged but any proposals should include a justification of the proposed monitoring methodology.
2. An evaluation of the possible effects of climate change on the nearshore ecosystem.

Conceptual Modeling

In contrast to the prior five-year Invitation, the Council will not provide funding in FY17-21 to projects focused on conceptual modeling.

Considerations Applicable to Proposers

The following are mandatory requirements for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. Interested Program proposers must email their contact information and Program of interest to dfg.evos.invitation@alaska.gov by February 1, 2016 to be added to a list of interested proposers on the EVOSTC website to facilitate coordination among potential proposers.

Program proposers must demonstrate that they have:

1. A proposal that is focused within the Spill-affected area.
2. A proposal that responds to the call for a Long-Term Monitoring of Marine Conditions and Injured Resources Program, as described in this Invitation.
3. A proposal that provides a clear description of Program objectives, explains how these objectives support the management objectives of natural resource managers and their services in the Spill area, and how such objectives further the Council's mission of recovering injured natural resources and their services.
4. A proposal for a Program that complies with the Council's founding documents and relevant policies and procedures. (*See References.*)
5. An existing administrative structure to manage funds and projects; the proposer may be an existing organization or collaboration among existing entities and individuals.

6. A structure to communicate with the Council through the Program Lead regardless of the structure of the individual proposers; they must produce a single, comprehensive proposal.
7. A Program Lead who will work with and be responsive to the Council's objectives and requirements.
8. A Program Lead who will facilitate the most cost-effective and scientifically-supportive stream of funding among the parties and projects involved in a manner that minimizes administrative costs.
9. A Program Lead who is capable of integrating data from all of the individual projects in their program to inform the program's annual proposals and individual project protocols and design.
10. A Program Science Panel to review potential and existing projects and give guidance and oversight on the Program's design and implementation to the Program Lead(s). The panel cannot contain members who are participating in projects funded through the program in FY17-21.
11. The ability and commitment to make all data, documents, and annual and final reports available electronically to the public according to explicitly stated timelines and reporting requirements.
12. A process to provide scientific peer review for approval of final reports, as appropriate.
13. A plan for ensuring individual project compliance with reporting and data submission and quality policies. (*See References.*)
14. Established realistic and detailed timelines and milestones specific to the individual projects and the overall Program. Must demonstrate a credible, feasible, and detailed administrative structure and scientific implementation of the Program, including project team qualifications (education, experience, related work efforts, proposed time commitment, past performance), and availability of facilities and other requirements necessary for Program success. This would include a power or sensitivity analysis of the proposed sampling design and objectives for each individual project.
15. A public outreach plan focused on providing information to the Trustee Agencies for use in their respective outreach and education materials. This information may include a summary of Program highlights or summary of key points for the agencies to incorporate in their ongoing outreach efforts. A list of Trust Agency outreach contacts will be provided to the Program proposer selected by the Council for funding. Outreach efforts by the Program should focus on developing and maintaining accurate and timely content for the Program's website as a primary source of information on the Program. Any additional outreach materials that include information not contained in publically-available proposals or annual reports must be approved by the Council office prior to public circulation. Materials should be brief and direct the target audience to the Program's website. The cost of outreach efforts for this Program should not exceed \$30,000 per year.

The following are mandatory requirements for individual project proposers within a Program proposal. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. These include:

1. Project proposals that seek to continue adding new data to data sets collected in the first five-year Program using the same protocols and project design must provide an assessment of the past protocols and project design in terms of their appropriateness for achieving the proposed project and Program goals. If changes to past protocols and project design are needed or if a new approach to project design is proposed, the proposal must include a justification for the changes including rationale based on statistical analyses such as power or sensitivity analysis of the proposed sampling design.
2. Project proposals that seek to begin work that was not undertaken in the first five-year program must provide a justification of how the project will provide data useful to addressing management objectives and Program hypotheses.

The following are preferred requirements for potential proposers. Proposers that meet these requirements will be rated more highly during the review process. The Council prefers a long-term monitoring Program that:

1. Continues to reassess the Program's progress and relevancy and considers newly-available technologies;
2. Demonstrates an understanding and synthesis of existing scientific literature, research results, and scientific knowledge that includes outcomes of prior Council work;
3. Demonstrates an effective and balanced use of funds, including establishing appropriate collaborations with other organizations and experts, achieving the most efficient use of funds, and taking advantage of existing infrastructure;
4. Provides a detailed plan for local and Alaska Native community involvement in the Program. The degree to which the activities of the proposed program allow involvement with local communities and incorporation of local knowledge will vary, but interaction with communities is required. Reviewers will give additional consideration to proposals that demonstrate meaningful community involvement and/or make use of local and traditional ecological knowledge.

The following are mandatory requirements for each fiscal year of the program. The submitted budget for each year shall include the staffing and funds necessary to meet these requirements. *(See the Council's Reporting Procedures and Budget Forms for details.)*

1. An annual report must be presented to the Council on March 1 of each fiscal year (except FY17) and will include the following:
 - a. A completed Program Summary Status Form and Budget Form (*Attachments E and F of Reporting Procedures*) and
 - b. A completed Project Reporting Form and Budget Form for each project in the Program (*Attachments C and E of Reporting Procedures*).

2. A funding request must be presented to the Council on September 1 of each fiscal year and will include the following:
 - a. A completed Long-Term Program Proposal Form and Budget Form (<http://evostc.state.ak.us/index.cfm?FA=pubs.invites>) and
 - b. A completed Long-Term Project Proposal Form and Budget Form for each project in the Program (<http://evostc.state.ak.us/index.cfm?FA=pubs.invites>).

DATA MANAGEMENT PROGRAM

The Council faces challenges in ensuring that critical data and the products of the Long-Term Monitoring and Herring Programs are available to the general science and natural resource management communities, both now and into the future. The data must also be useful for gaining an effective understanding of the effects of the Spill, recovery status of affected ecosystems, and the potential for restoration and/or management actions to facilitate the recovery of injured resources and services.

This call for a Data Management Program requires a comprehensive Program to meet the data needs of both the Herring and Long-Term Monitoring Programs and their individual researchers. Potential proposers in this Focus Area will be required to provide a coordinated and collaborative plan created in consultation with the Program Lead(s) from each team. A list of parties interested in submitting Herring and Long-Term Monitoring Program proposals will be posted on the Council's website.

In 2012, in the previous cycle of this invitational process, the Council selected the Alaska Ocean Observing System (AOOS) and the National Center for Analysis and Synthesis (NCEAS) to build and maintain a data management system that would serve the needs of the Herring and Long-Term Monitoring Programs and the Council. The current data system contains over 40GB of shared data from over 35 Program projects and provides a web-based portal for file sharing and Program information. Information on the data collected as part of the FY12-16 Data Program can be found on the Council's website and on the Gulf of Alaska Data Portal. (*See References*)

The FY17-21 Invitation is an open, competitive invitation and seeks to continue a Program which maintains continuity and builds upon the efforts of the first five-year cooperative agreement. The Council expects the funding request for the Data Management Program to decrease to levels required to maintain the infrastructure that was completed in the first five-year Program without further visualization development.

For the FY17-21 Invitation, the Council anticipates funding this data management Program at up to \$1,000,000 (not including 9% GA) for the entire five-year term. Funding may be proposed as unevenly allocated across the five-year term, as appropriate to the proposed activities. Any multi-year funding must be approved annually by the Council. In addition, projections of future funding are dependent upon investment funds, which are affected by market fluctuations.

A proposal for a Data Management Program must address the following:

1. The Program should be prioritized to meet the needs of the Herring and Long-Term Monitoring Programs with respect to data accessibility and preservation. Detailed information on how the data Program meets the needs of the herring and long-term monitoring Programs and their individual projects will be required.
2. Any data collected by the Programs and provided to the Data Management Program for processing must be able to be transferred to the Council at its request with no further cost. An explicit statement of how data will be delivered at the end of the term or the termination of the contract must be included.
3. Data collected must be made publicly available upon written approval by the Herring or Long-Term Monitoring Program Leads.
4. Data and any associated infrastructure must be archived at a minimum of two independent off-site locations. The locations of the archives must be geographically distributed to guard against data loss from natural disasters or technical failure.

Considerations Applicable to Proposers

The following are mandatory requirements for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process. Interested Program proposers must email their contact information and Program of interest to dfg.evos.invitation@alaska.gov by February 1, 2016 to be added to a list of interested proposers on the EVOSTC website to facilitate coordination among potential proposers.

Proposers must demonstrate that they have:

1. A proposal which responds to the call for a Data Management Program, as described in this Invitation.
2. A proposal for a Program that complies with the Council's founding documents and relevant policies and procedures. (*See References.*)
3. An existing administrative structure to manage funds and deliverables; the proposer may be an existing organization or collaboration among existing entities and individuals.
4. A structure to communicate with the Council through a single Program Lead; regardless of the structure of the proposer, they must provide a single, comprehensive proposal.
5. A Program Lead who will work with and be responsive to Council's objectives and requirements.
6. A Program Lead who will facilitate the most cost-effective and technically-supportive stream of funding among the parties.
7. The technical infrastructure and experienced personnel required to make all data, documents, annual and final reports available electronically both to the researchers and to the public based on a clearly defined timeline of deliverables.

8. Plans to continue to reassess the Program's progress and relevancy and consider newly-available technologies.
9. Demonstrated an effective and balanced use of funds, including establishing appropriate collaborations with other organizations and experts, achieving the most efficient use of funds, and taking advantage of existing infrastructure.
10. Established realistic and detailed timelines and milestones specific to individual tasks and the overall Program.
11. Demonstrated a credible, feasible, and detailed administrative structure and technical implementation of the Program, including project team qualifications (education, experience, related work efforts, proposed time commitment, past performance), and availability of facilities and other requirements necessary for Program success.

The following are mandatory requirements for each fiscal year of the Program. The submitted budget for each year shall include the staffing and funds necessary to meet these requirements.

1. An annual report must be presented to the Council on March 1 of each fiscal year (except FY17) and will include the following:
 - a. A financial accounting of any Council funding received in the past year including a comparison of the requested budget versus the actual budget and
 - b. A summary of any individual projects funded, including brief annual reports from each.
2. A funding request must be presented to the Council on September 1 of each fiscal year and will include the following:
 - a. A completed Data Management Program Proposal Form and Budget Form (<http://evostc.state.ak.us/index.cfm?FA=pubs.invites>) and
 - b. A completed Data Management Project Proposal Form and Budget Form for any individual projects in the Program (<http://evostc.state.ak.us/index.cfm?FA=pubs.invites>).

CROSS-PROGRAM PUBLICATION GROUPS

The Council seeks proposals from a group of researchers interested in focusing on producing an integrated manuscript publication(s). The proposal must be for integrative, cross-discipline, novel work that cuts across Programs and would, at a minimum, integrate data from the Herring and Long-Term Monitoring Programs. The goal of this Focus Area is to promote collaboration between the Programs and to assess the data collected by the Programs, natural resource management agencies and other organizations to provide a broader context of the status of the ecosystem in the Spill area.

The proposed group must include a least one researcher from both the Herring and Long-Term Monitoring Programs. Additional members of the proposed group are not required to have previous experience with EVOSTC. Funds available under this Focus Area cannot be utilized for additional data

collection. Proposals received in response to this Focus Area will be reviewed independently and, while a proposal may be of any reasonable length, proposals are anticipated to be fewer than five pages.

The final report for each group will be a manuscript(s) published in a peer-reviewed scientific publication. If the group is unsuccessful in publishing their manuscript, other options may be approved in consultation with the EVOSTC Executive Director and Science Coordinator.

For the FY17-21 Invitation, the Council may fund up to three proposals over the five-year term for a maximum of \$50,000 (not including 9% GA) per proposal. Proposals are due to the Council on September 1, 2016 through September 1, 2020 for work proposed in FY17 through FY21, respectively. Funding may be proposed as unevenly allocated across the five-year term, as appropriate to the proposed activities. Council multi-year funding must be approved annually by the Council. In addition, projections of future funding are dependent upon investment funds, which are affected by market fluctuations.

Considerations Applicable to Proposers

The following are mandatory requirements for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process.

Proposers must demonstrate that they have:

1. A proposal that is focused within the Spill-affected area and has the primary objective of providing data interpretation that furthers the Council's goals of understanding the effects of the Spill on the natural resources of PWS, the effects of potential other stressors that may be preventing the full recovery of natural resources, and possible restoration or management actions that may facilitate the recovery of natural resources;
2. A proposal that includes at least one researcher from both the Herring and Long-Term Monitoring Programs. Additional group members are not required to have any experience with the EVOSTC and can be from any organization, agency, or Program.
3. A proposal that responds to the cross-Program publication groups Focus Area, as described in this Invitation;
4. A proposal that complies with the Council's founding documents and relevant policies and procedures; (*See References.*)
5. A Group Lead responsible for communication with the Council; (regardless of the structure of the proposers, a single, comprehensive proposal must be submitted for each group) and
6. Targeted peer-reviewed scientific journal(s) that can provide their finally published articles for public use without additional charge to the user (Open Access). Publications that will not allow papers for use without additional cost to the user cannot be considered.

The following are mandatory requirements for each fiscal year of funding. The submitted budget for each year shall include the staffing and funds necessary to meet these requirements.

1. An annual report must be presented to the Council on March 1 of each fiscal year and will include the following:
 - a. A financial accounting of any Council funding received in the past year including a comparison of the requested budget versus the actual budget
 - b. A brief annual report summarizing the past year's work.
2. A funding request must be presented to the Council on September 1 of each fiscal year and will include the following:
 - a. A completed Cross-Publication Group Project Proposal Form and Budget Form (<http://evostc.state.ak.us/index.cfm?FA=pubs.invites>)

LINGERING OIL

One of the most surprising revelations from two decades of research and restoration efforts since the Spill is the persistence of subsurface oil in the intertidal environment in a relatively un-weathered state. This oil, estimated in 2004 to be around 97.2 metric tons (or 23,000 gallons), is contained in discontinuous patches across beaches that were initially impacted by the Spill (<http://www.evostc.state.ak.us/static/PDFs/LingeringOilReport.pdf>). The patches cannot be visually identified on the beach surface, but their presence may be a source for exposure to oil for resources that seek food in sediments where the oil persists. Survey work funded by the Council indicated that the oil is decreasing at a rate of zero to four percent per year, with only a five percent chance that the rate is as high as four percent. As a result, oil has persisted for decades.

Passive and subsistence uses were significantly impacted by the Spill and this has affected the overall health of the communities in Prince William Sound. The presence of lingering oil has also impacted the public's perception of the spill area, who no longer views it as the pristine environment that was present before the spill occurred. This perception has continued to preclude full recovery for some passive and subsistence uses. It may require additional resources to evaluate, monitor, and redress the impact of lingering oil on these uses in the spill area. An important function of this information gathering would be to pass this information back to the communities and the general public.

Other Council efforts to date have included the development of a spatial probability model which has been used to identify beach segments with a high likelihood of persistent oil and the identification of the factors limiting the degradation of the oil, and evaluation of remediation treatment options. A project funded for FY15 has identified the locations where heavier amounts of lingering subsurface oil are expected, evaluated the feasibility of various methods of restoring these sites, and estimated the costs of the selected methods. This project is currently undergoing peer review.

Upon receiving additional information from these current lingering oil studies and the resolution of the Reopener, the Council will evaluate whether there is a need for undertaking additional restoration measures in habitat with lingering subsurface oil. Thus, no prospective funding amount has been

proposed. Additional information related to this Focus Area may be made available after the Council's fall 2015 meeting.

Lingering Oil proposals funded under this Invitation may be proposed off-cycle and as single-year projects or multi-year projects. All multi-year projects require funding to be authorized annually by the Council. As in the past, the Council has not established a set amount of funding for projects in this Focus Area.

Considerations Applicable to Proposers

The following are mandatory requirements for potential proposers. Proposals that do not meet each of these criteria will be considered non-responsive to the Invitation and excluded from the review process.

Proposers must demonstrate that they have:

1. A proposal which demonstrates a clear linkage to injured natural resources or services;
2. A proposal which is focused within the Spill-affected area;
3. A proposal which responds to the lingering oil Focus Area, as described in this Invitation;
4. The ability and commitment to make all data, documents, annual and final reports available electronically to the public according to an explicit timeline of deliverables;
5. A Lead PI responsible for communication with the Council regardless of the structure of the proposers. A single, comprehensive proposal must be submitted for each project; and
6. A proposal that complies with the Council's founding documents and relevant policies and procedures. (*See References.*)

IV. Additional Evaluation of Proposals

A. Policy and Legal Review

To be eligible for funding, proposals must be designed to restore, replace, enhance or acquire the equivalent of natural resources injured as a result of the Spill or the reduced or lost services provided by these resources. In addition, proposals must be consistent with the policies contained in the 1994 Restoration Plan. Council staff will review each proposal for responsiveness to this Invitation, completeness and for adherence to the format and instructions contained in this document. A legal and policy review of each proposal submitted pursuant to this Invitation may be conducted by federal and State attorneys.

- Proposers should also note that the following activities, in general, will not be considered for use of Council funding: (1) activities that constitute legally required mitigation for the adverse effects of an activity regulated or otherwise governed by local, state or federal law; (2) activities that are required by a separate consent decree, court order, statute or regulation; and (3) activities that constitute "normal agency activities" that the government would have conducted had the Spill not

occurred. (*See Memorandum of Agreement and Consent Decree between the United States & the State of Alaska, Aug. 29, 1991*).

- Program or project proposers that have received funding previously from the Council will be evaluated on their past performance. Proposers that are delinquent in submitting any required interim and final reports to the Council or that have otherwise performed unsatisfactorily will be not be considered for future funding. Submitting all overdue deliverables to the Council by September 1, 2016 requalifies the proposer for funding.

B. Council Science Review

Council staff, Trust Agency staff, and the EVOSTC Science Panel review the proposals and, as appropriate and as schedules may allow, may provide written comments for project refinement to the Program Lead(s) or Proposer. These reviewers will provide funding recommendations to the Executive Director.

C. Public Advisory Committee Review

The Council's Public Advisory Committee (PAC), representing a cross-section of interest groups affected by the Spill, reviews the proposals and provides the Council with funding recommendations.

Evaluation factors to be considered by the PAC include, among other criteria that may be identified by the PAC, whether and how the proposal achieves the requirement of restoring, replacing, enhancing or acquiring the equivalent of natural resources injured as a result of the Spill or the reduced or lost services provided by these resources.

D. Annual Work Plan

Annually, the Council's Executive Director provides the recommendations and comments of the Council's Public Advisory Committee, EVOSTC Science Panel, other Council advisors and Council staff to develop an annual draft Work Plan for the Council's review. This draft Work Plan compiles all of the items comprising the Council's restoration Program budget for the following fiscal year: Program and project proposals for the fiscal year, as well as Council administration costs.

E. Trustee Council Decision

To assist in their decision as to which proposals will be selected for funding, the Council may take into consideration the recommendations of the Executive Director, Science Coordinator, public comment, Public Advisory Committee, Trust Agency staff, and EVOSTC Science Panel. These recommendations are purely advisory in nature and the final decisions are at the sole discretion of the Council members. Unanimous agreement of all six Council members is required to fund a proposal. It is anticipated that funding decisions for FY17 (i.e., approval of the Work Plan) will be made at a Council meeting in October/November 2016 and funding will be released Feb. 1, 2017.

V. Instructions for Submitting a Proposal

A. What to Submit

The EVOSTC website has a webpage for information, updates about this Invitation, and submittal forms for each Focus Area at: <http://www.evostc.state.ak.us/index.cfm?FA=pubs.IP>

Program proposers must email their contact information and Program of interest to dfg.evos.invitation@alaska.gov by February 1, 2016 to be added to a list of interested proposers on the EVOSTC website to facilitate coordination among potential proposers.

Please submit an electronic copy of the proposal package by **April 1, 2016, 5:00 PM AKDT** to:

Elise Hsieh, Executive Director at dfg.evos.invitation@alaska.gov

Proposal forms must be composed using Microsoft Word with figures and tables embedded. Budget forms must be composed using Microsoft Excel. The proposal and budget forms should not be modified to include additional information not specifically requested. PDF files will not be accepted.

For submissions by a consortium or organization that did submit a proposal under the FY12-16 Invitation, please provide any changes in the information below. For submissions by a consortium or organization that did not submit a proposal under the FY12-16 Invitation, please provide the following information in addition to the Program and Project Proposal forms (Appendices A-E) for the organization or each member of the consortium:

1. Information on Consortium or Organization

- a. Years in existence.
- b. Current and future sources of funding.
- c. Current staff size by area of expertise (e.g. science management, administration, IT, etc.).
- d. Audited financial statement covering past three years.
- e. Information about facility, including location, ownership, authority to use, size, and resources available.
- f. Statement confirming proposal and related activities are consistent with the founding, authorizing documentation of the Proposer's organization.
- g. Number of members of the organization's existing science or technical review panel. If no panel currently exists, please note as such.
- h. Number of members of the organization's existing public advisory committee or mechanism for public involvement. If no group currently exists, please note as such.
- i. Name and resume of the Program Lead(s) and any key staff. This should include a summary of the experience of the Program Lead(s) in managing large and complex scientific programs.
- j. Capabilities of existing IT infrastructure to make data and reports publically available.

2. Experience with EVOSTC

- a. Amount of funding received by the organization or individual PI's from EVOSTC currently or in the past and listing of projects funded. Note, however, that except in the case of Cross-

Program Publication proposals, prior experience with EVOSTC is not a requirement to be eligible to receive funding.

- b. A statement that the proposer has read and clearly understands the Council's founding documents and the policies and procedures that are relevant to the proposal. Any conflicts between the Council's policies and procedures and the proposer's should be addressed in this section.

3. Current Areas of Study and Funding Sources

- a. Listing of the current areas of study for each organization and amount of funds released for each area annually.
- b. Experience of each organization with the Focus Areas of this Invitation must be addressed in the proposal. However, past experience with the Focus Areas is not a requirement for a proposer to be eligible for Council funding.
- c. Amounts and funding sources for any matching funds that would be available in support of the proposed program or individual projects.

4. Collaboration/Coordination

- a. Experience working with state, federal, and private entities to complete projects.
- b. Experience working with local and tribal communities in the Spill area.
- c. Outreach plan that details the types of outreach envisioned and the audience for each type.

VI. References

EVOSTC Founding and other Documents are available at the Council's website (evostc.state.ak.us), including the items listed below.

Information, proposal forms, and updates for this Invitation can be found at:

<http://evostc.state.ak.us/index.cfm?FA=pubs.IP>

The following can be found at: <http://evostc.state.ak.us/index.cfm?FA=pubs.listKeyDocs>

- Memorandum of Agreement and Consent Decree between the United States & the State of Alaska (Aug. 29, 1991)
- Agreement and Consent Decree between the United States, the State of Alaska, and Exxon Corporation (Sep. 20, 1991)
- Governments' Memorandum in Support of Agreement and Consent Decree (Oct. 8, 1991)
- Exxon Valdez Oil Spill Restoration Plan (Nov. 1994)

2014 Status of Injured Resources & Services:

<http://evostc.state.ak.us/index.cfm?FA=status.injured>

EVOSTC Policies and Procedures:

<http://evostc.state.ak.us/index.cfm?FA=policies.home>

Integrated Herring Restoration Program (IHRP):

<http://evostc.state.ak.us/static/PDFs/IHRP%20DRAFT%20-%20July%202010.pdf>

FY12-16 Herring Research and Monitoring Program including Data Management:
<http://evostc.state.ak.us/index.cfm?FA=projects.herringResearch>

FY12-16 Long-Term Monitoring Program:
<http://evostc.state.ak.us/index.cfm?FA=projects.gulfWatch>

FY12-17 Gulf of Alaska Data Portal:
<http://portal.aos.org/gulf-of-alaska.php>

VII. Non-Discrimination Statement

The Exxon Valdez Oil Spill Trustee Council administers its programs free from unlawful discrimination against any persons based on race, religion, color, national origin, age, sex, physical or mental disability, marital status, pregnancy, or parenthood. Each state and federal agency that implements programs funded by the Council also has legally mandated anti-discrimination policies that apply to any contracts entered into as a result of this FY17-21 Invitation. To obtain more information about the anti-discrimination policies of individual agencies, see the links provided below for that agency.

USDA: http://www.usda.gov/wps/portal/usda/usdahome?navid=NON_DISCRIMINATION

NOAA: <http://www.eeo.noaa.gov/>

USDOJ: <http://www.doi.gov//pmb/eeo/index.cfm>

ADF&G: <http://www.adfg.alaska.gov/index.cfm?adfg=home.oeostatement>

ADOL: <http://doa.alaska.gov/dop/eeo/>

ADEC: <http://doa.alaska.gov/dop/eeo/>

VIII. Appendices

Electronic forms are available for download at <http://evostc.state.ak.us/index.cfm?FA=pubs.IP>

Appendix A – Herring and Long-Term Monitoring Program Proposal Form

Appendix B – Data Management Program Proposal Form

Appendix C – Herring and Long-Term Monitoring Program Project Form

Appendix D – Cross-Program Publication Group Proposal Form

Appendix E – Lingering Oil Project Proposal Form

Appendix F – Herring, Long-Term Monitoring and Data Management Program Project Budget Form

Appendix G – Cross-Program Publication Group and Lingering Oil Project Budget Form

FY16 EVOSTC Annual Budget
February 1, 2016– January 31, 2017

For the actual amounts authorized for funding during a particular fiscal year, please see the Annual Funding Overview (AFO).

This budget provides a **12-month** allocation of Trustee Council activities. The program components are:

- Administration Management
- Data Management
- Science Program
- Public Advisory Committee (PAC)
- Habitat Protection Program
- Trust Agency Project Management & Federal Funds Transfer
- Trust Agency Funding
- Alaska Resources Library & Information Services (ARLIS)

The budget estimates detailed within program components are projected based upon prior-year actual expenditures and include estimated merit-step increases, as well as payroll benefits increases. The component items cover operational costs of the *Exxon Valdez* Oil Spill Restoration Office and administrative costs associated with developing, implementing, and overseeing current Trustee Council program objectives.

TABLE OF CONTENTS

Budget Summary Information.....	3
Administration Management	5
Data Management	8
Science Program	10
Public Advisory Committee (PAC)	12
Habitat Protection Program	13
Trust Agency Project Management & Federal Pass Through	15
Trust Agency Funding	17
Alaska Resources Library & Information Services (ARLIS)	18

BUDGET SUMMARY INFORMATION - \$2,520,420

The Council's FY16 Annual Budget is funded by the *Exxon Valdez* Oil Spill Investment Fund Research and Habitat sub-accounts, which are managed by the Alaska Department of Revenue. The following summary tables show budget allocations by component, budgeted amount, and include 9% General Administration (GA) costs. The remainder of the document provides additional detail for each component and, where applicable, the agency distribution for the funds.

Component	FY15 Budget	FY16 Budget
Administration Management	\$729,754	\$725,560
Data Management	\$68,125	\$67,035
Science Program	\$300,420	\$502,621
Public Advisory Committee (PAC)	\$20,611	\$18,094
Habitat Protection Program	\$668,758	\$678,330
Trust Agency Project Management	\$339,395	\$252,849
Trust Agency Funding	\$2,180	\$35,970
Alaska Resources Library & Information Services (ARLIS)	\$189,782	\$239,961
Total	\$2,319,025	\$2,520,420

(\$201,395 more than FY15)

8-Year Annual Budget Comparison FY09 – FY16								
Component	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Administration	\$720,572	\$804,663	\$813,693	\$708,137	\$726,893	\$710,545	\$729,754	\$725,560
Data Management	\$210,902	\$149,991	\$152,080	\$137,885	\$57,143	\$63,874	\$68,125	\$67,035
Science Management	\$696,129	\$468,539	\$231,336	\$287,471	\$160,662	\$286,877	\$300,420	\$502,621
Public Information & Outreach	\$183,665	\$136,850	In Admin. Mgmt	In Admin. Mgmt	In Admin. Mgmt	In Admin. Mgmt	In Admin. Mgmt	In Admin. Mgmt
Public Advisory Committee (PAC)	\$48,505	\$37,605	\$37,060	\$16,132	\$16,486	\$19,047	\$20,611	\$18,094
Habitat Protection Program	\$109,000	\$109,000	\$109,000	\$192,274	\$208,311	\$242,634	\$668,758	\$678,330
Trust Agency Project Management	\$354,339	\$367,033	\$339,774	\$297,510	\$297,510	\$326,312	\$339,395	\$252,849
Trust Agency Funding	\$29,975	\$29,975	\$29,975	\$1,199	\$1,635	\$1,962	\$2,180	\$35,970
Alaska Resource Library & Information Services	\$177,565	\$166,372	\$137,119	\$71,182	\$75,406	\$118,304	\$189,782	\$239,961
Total	\$2,530,652	\$2,270,028	\$1,834,123	\$1,711,790	\$1,544,046	\$1,769,555	\$2,319,025	\$2,520,420

8-Year Cost by Component Type Comparison FY09 – FY16								
Cost Type	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Personnel	\$1,433,092	\$1,312,115	\$1,112,766	\$913,325	\$959,996	\$1,070,942	\$1,180,246	\$1,102,412
Travel	\$78,000	\$69,000	\$67,000	\$45,100	\$23,000	\$104,300	\$81,995	\$64,500
Contractual	\$795,607	\$632,480	\$473,095	\$554,775	\$395,634	\$407,040	\$826,305	\$1,116,900
Commodities	\$15,000	\$34,000	\$32,500	\$32,250	\$28,701	\$26,163	\$32,000	\$24,500
Equipment	\$0	\$35,000	\$24,500	\$25,000	\$9,225	\$15,000	\$7,000	\$4,000
Subtotal	\$2,321,699	\$2,082,595	\$1,682,681	\$1,570,450	\$1,416,556	\$1,623,445	\$2,127,546	\$2,312,312
GA – 9%	\$208,953	\$187,433	\$151,442	\$141,340	\$127,490	\$146,110	\$191,479	\$208,108
Total	\$2,530,652	\$2,270,028	\$1,834,123	\$1,711,790	\$1,544,046	\$1,769,555	\$2,319,025	\$2,520,420

Total FY16 Annual Budget from Habitat Sub-Account	
Habitat	\$678,330
Total	\$678,330

Total FY16 Annual Budget by Agency from Habitat Sub-Account						
Cost Type	ADF&G	ADOL (through ADF&G RSA)	ADNR	DOI FWS	DOI BLM	Total Budget
Personnel	\$0	\$34,521	\$90,000	\$25,000	\$6,000	\$155,521
Travel	\$2,500	\$0	\$2,500	\$0	\$0	\$5,000
Contractual	\$85,000	\$0	\$71,000	\$303,800	\$2,000	\$461,800
Commodities	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$87,500	\$34,521	\$163,500	\$328,800	\$8,000	\$622,321
GA – 9%	\$7,875	\$3,107	\$14,715	\$29,572	\$720	\$56,009
Total	\$95,375	\$37,628	\$178,215	\$358,392	\$8,720	\$678,330

Total FY16 Annual Budget from Research Sub-Account	
Admin Management	\$725,560
Data Management	\$67,035
Science Program	\$502,621
Public Advisory Committee	\$18,094
Trust Agency Project Management	\$252,849
Trust Agency Funding	\$35,970
ARLIS	\$239,961
Total	\$1,842,090

Total FY16 Annual Budget by Agency from Research Sub-Account										
Cost Type	ADF&G	LO funding To be Determined*	ADEC	NOAA	DOI USGS	DOI FWS	DOI SEC	DOI OEPC	USFS	Total Budget
Personnel	\$762,819	\$0	\$0	\$75,000	\$55,972	\$12,000	\$25,000	\$7,100	\$9,000	\$946,891
Travel	\$57,500	\$0	\$0	\$2,000	\$0	\$0	\$0	\$0	\$0	\$59,500
Contractual	\$415,100	\$150,000	\$0	\$0	\$90,000	\$0	\$0	\$0	\$0	\$655,100
Commodities	\$20,500	\$0	\$0	\$0	\$4,000	\$0	\$0	\$0	\$0	\$24,500
Equipment	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000
Subtotal	\$1,259,919	\$150,000	\$0	\$77,000	\$149,972	\$12,000	\$25,000	\$7,100	\$9,000	\$1,689,991
GA – 9%	\$113,393	\$13,500	\$0	\$6,930	\$13,497	\$1,080	\$2,250	\$639	\$810	\$152,099
Total	\$1,373,312	\$163,500	\$0	\$83,930	\$163,469	\$13,080	\$27,250	\$7,739	\$9,810	\$1,842,090

*The overall amount of the budget includes \$163,500 for Lingering Oil in the Science Program component. Agency cost distribution to be determined. This table to be updated upon agency determination.

ADMINISTRATION MANAGEMENT - \$725,560

Cost Category	FY15 Total Budget for Comparison	FY16 Total Budget
Personnel	\$497,014	\$446,576
Travel	\$5,500	\$5,500
Contractual	\$145,485	\$189,575
Commodities	\$19,500	\$22,000
Equipment	\$2,000	\$2,000
Subtotal	\$669,499	\$665,651
GA - 9%	\$60,255	\$59,909
Total	\$729,754	\$725,560

(\$4,194 decrease: 20% of Librarian's time moved from Admin to ARLIS)

PERSONNEL - \$446,576

Position	Range /Step	Months	Monthly Cost	12-Month Cost
Executive Director – Elise Hsieh	28/F	12	\$15,271	\$183,254
Librarian III – Helen Woods	20/A	2.5	\$9,067	\$22,668
Associate Coordinator – Cherri Womac	18/L	12	\$10,426	\$125,115
Administrative Manager – Linda Kilbourne	19/E	12	\$9,628	\$115,539
Personnel Total				\$446,576

Cost includes benefits. Librarian 12-month allocation split Admin (20%) & ARLIS (80%).

TRAVEL - \$5,500

These funds are for travel support for meetings and trainings.

CONTRACTUAL – \$189,575

- Professional Development**

\$250

Administrative funds are budgeted for in-state training and professional meetings with state, federal or program agency representatives on administrative, program or budget issues as necessary.

- Administrative Support**

\$38,000

Administrative funds are budgeted to provide services and consultation (Lauri Adams) to the Executive Director with the administrative functions of the EVOSTC office.

- Trustee Council's Office Space**

\$90,000

The Trustee Council's office relocated to Grace Hall on the Alaska Pacific University campus in Anchorage in summer 2012. The space for the Trustee Council's office is administered through a Memorandum of Agreement (MOA) with the U.S. Geological Survey of the Department of Interior.

- Agreed-Up Services Contract**

\$22,150

These funds support an Agreed-Up Procedures (AUP) contract (currently Elgee, Rehfeld, Mertz) for the review of targeted financial transactions of the Trustee Office and agencies receiving EVOSTC funds.

- **Investment Services Contract**

\$8,000

These funds support investment consultation services (currently Callan Associates) in association with the Investment Working Group.

- **Telephone and Internet Service**

\$7,650

These funds are for recurring charges for telecommunications, increased bandwidth, teleconferencing meetings, and long distance phone services. Also includes annual cell phone allowance each for ED and AM.

- **Public Notices**

\$2,100

These funds are for advertising Trustee Council public meetings and workshops in newspapers in the spill-affected areas.

- **Postage & Courier Services**

\$325

These funds are for US Postal Service mailings, express mailings, and courier services beyond those provided under interagency supplies below.

- **Transcription**

\$1,900

These funds are for the transcription service contract to record and preserve Trustee Council meetings.

- **Recycling, Shredding and Water Service**

\$3,200

These funds are for recycling and shredding; and water service to provide coffee, tea, and water for meetings held at the EVOSTC office.

- **Interagency Contracted Services**

\$16,000

These funds are for the Trustee Office's share of the Reimbursable Services Agreement costs relating to the EPR Telecommunications, Computer Services, ADA, Central Mail and AKSAS & AKPAY charge-backs paid by all ADF&G divisions. These costs are based on the number of full time positions divided by the total cost.

COMMODITIES - \$22,000

- **Office Supplies**

\$6,500

These funds are for miscellaneous office supplies, paper, toner, meeting materials, etc. Also includes supplies needed to complete the official record.

- **Trustee Council Meetings**

\$3,500

These funds are for materials and incidentals for one teleconferenced and one in-person TC meeting.

- **Administrative Operations**

\$8,000

These funds are for unanticipated expenses due to the extensive tailoring of the budget.

- **Interagency Supplies**

\$4,000

These funds are for the Trustee Office's share of USGS costs including office supplies, postage usage, office equipment usage, Glen Olds Hall receptionist.

EQUIPMENT - \$2,000

These funds are to purchase equipment (i.e. fax, scanner, and /or printer) as needed to meet the needs of the EVOSTC office as equipment ages out.

AGENCY DISTRIBUTION:

Admin Management Cost Category	ADF&G	USGS	TOTAL
Personnel	\$446,576	\$0	\$446,576
Travel	\$5,500	\$0	\$5,500
Contractual	\$99,575	\$90,000	\$189,575
Commodities	\$18,000	\$4,000	\$22,000
Equipment	\$2,000	\$0	\$2,000
Subtotal	\$571,651	\$94,000	\$665,651
GA - 9%	\$51,449	\$8,460	\$59,909
Component Total	\$623,100	\$102,460	\$725,560

DATA MANAGEMENT - \$67,035

Cost Category	FY15 Total Budget for Comparison	FY16 Total Budget
Personnel	\$0	\$0
Travel	\$0	\$0
Contractual	\$54,000	\$58,500
Commodities	\$3,500	\$1,000
Equipment	\$5,000	\$2,000
Subtotal	\$62,500	\$61,500
GA - 9%	\$5,625	\$8,535
Total	\$68,125	\$67,035

(\$1,090 decrease: no anticipated equipment needs)

PERSONNEL - \$0**TRAVEL - \$0****CONTRACTUAL – \$58,500**

- Equipment Maintenance**

\$500

These funds are for minor equipment maintenance and repairs.

- IT Services RSA: Alaska Dept. of Fish & Game**

\$58,000

The funds are for supporting the IT needs of the Trustee Council office (\$44,000 for Sport Fish IT group and \$14,000 for DAS IT group).

COMMODITIES - \$1,000

- Computer Software, Hardware & Upgrades**

\$500

These funds are for necessary purchases and upgrades to computer hardware, software, software licenses, and networking equipment for the Trustee Council Office (i.e. annual Microsoft licensing Agreement).

- Equipment Supplies**

\$500

These funds are for miscellaneous supplies.

EQUIPMENT - \$2,000

These funds are for replacement of existing equipment and/or new equipment purchases.

AGENCY DISTRIBUTION

Data Management Cost Category	ADF&G TOTAL
Personnel	\$0
Travel	\$0
Contractual	\$58,500
Commodities	\$1,000
Equipment	\$2,000
Subtotal	\$61,500
GA - 9%	\$8,535
Component Total	\$67,035

SCIENCE PROGRAM – \$502,621

Cost Category	FY15 Total Budget for Comparison	FY16 Total Budget
Personnel	\$0	\$70,000
Travel	\$58,995	\$43,500
Contractual	\$216,620	\$347,620
Commodities	\$0	\$0
Equipment	\$0	\$0
Subtotal	\$275,615	\$461,120
GA - 9%	\$24,805	\$41,501
Component Total	\$300,420	\$502,621

(\$202,201 increase: support of ADF&G for science data personnel and Lingering Oil)

PERSONNEL – \$70,000

These funds are for ADF&G in support of data requests by EVOS researchers, information requests of the Science Panel, and archiving of historical data and monitoring activities.

TRAVEL - \$43,500

- Travel & Support**

\$6,500

This provides support and travel for science oversight, TC meetings, and symposia and to allow for unanticipated additional participants at science review sessions.

- Science Coordinator Travel**

\$3,000

This provides travel support costs for the EVOSTC Science Coordinator to represent EVOSTC at Trustee Council, PAC, annual Long-Term Programs' workshops and/or meetings, Science Panel, and other meetings as deemed necessary by the Executive Director.

- Science Panel Meetings**

\$34,000

These funds support travel for the Science Panel, Science Coordinator, and Executive Director (approximately 10-11 participants for 2 days). The Science Panel typically meets once a year, but due to FY16 reviews of the FY17-21 Invitation and the FY16 Project/Proposal submissions, two (2) Science Panel meetings are required in FY16. Costs for the Science Panel's participation [contractual services] are paid out of authorized contracts.

Spring 2016: Review of FY17 Invitation proposals.

\$17,000

Fall 2016: Review of revised FY17 Invitation proposals and FY17 Work Plan

\$17,000**CONTRACTUAL - \$347,620**

- Science Coordinator Contract: Catherine Boerner of Natura Consulting**

\$120,120

This contract provides science management services including project management, proposal coordination, implementation and oversight, and Work Plan support.

- **Science Panel**

\$75,000

The Science Panel provides advice and feedback to the Executive Director and Council. Their work includes: providing funding recommendations on scientific proposals to the Executive Director, providing assistance on special projects at the Executive Director's or Trustee Council's request, and participating at one in-person meeting.

The members are: Gary Cherr, Douglas Hay, Gordon Kruse, Steven Morgan, Roger Nisbet, Charles Peterson, and John Stachowicz. Each contract covers services provided for the period of February 1, 2016 through January 31, 2017, and payable by actual time invoiced. The contracts are set at **\$10,000 for current members.**

- **Peer Review Contracts**

\$2,500

To ensure the scientific integrity of findings, and to assist with the review of the Council's programs, the Trustee Council requires peer review by nationally-recognized experts within applicable scientific and technical disciplines.

- **Lingering Oil (LO) Update and LO Remediation Alternatives Paper**

\$150,000

Funding for a 2016 Update to the 2010 Lingering Oil report and for a paper to provide information regarding EVOS LO remediation alternatives. The papers are anticipated to be prepared for a review in late spring by the EVOSC Public Advisory Committee, followed by a Council review and meeting. The papers will be drafted and contributed to by Trust agency staff, with ADOL, ADEC, USGS and NOAA leading the effort. Contributors and reviewers are still being identified and lined up; the EVOSTC Executive Director will distribute the funding when contributors are confirmed.

COMMODITIES – \$0**EQUIPMENT – \$0****AGENCY DISTRIBUTION:**

Science Program Cost Category	ADF&G TOTAL	LO Update Agency to Be Determined	NOAA TOTAL	TOTAL
Personnel	\$70,000	\$0	\$0	\$70,000
Travel	\$41,500	\$0	\$2,000	\$43,500
Contractual	\$197,620	\$150,000	\$0	\$347,620
Commodities	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0
Subtotal	\$309,120	\$150,000	\$2,000	\$461,120
GA - 9%	\$27,821	\$13,500	\$180	\$41,501
Component Total	\$336,941	\$163,500	\$2,180	\$502,621

PUBLIC ADVISORY COMMITTEE (PAC) - \$18,094

Cost Category	FY15 Total Budget for Comparison	FY16 Total Budget
Personnel	\$6,909	\$7,100
Travel	\$9,500	\$6,500
Contractual	\$1,500	\$1,500
Commodities	\$1,000	\$1,500
Equipment	\$0	\$0
Subtotal	\$18,909	\$16,600
GA - 9%	\$1,702	\$1,494
Component Total	\$20,611	\$18,094

(\$2,517 decrease: PAC travel decreased due location of members)

PERSONNEL - \$7,100

Annual funds are provided for the **designated federal officer** (DFO - currently Philip Johnson) assigned to the PAC as required by the Federal Advisory Committee Act (FACA). This individual coordinates with the EVOSTC Associate Coordinator in the scheduling of meetings and reviews the developed agenda, prepares meeting minutes and presents outcomes to the EVOSTC Executive Director and TC Council, and provides assistance to the PAC Chair and the EVOSTC Restoration Office as needed.

TRAVEL - \$6,500

Travel support for **10** PAC members for one teleconferenced PAC meeting and to attend one in-person PAC meeting at an estimated average cost of \$650 per person per trip to include: airfare, ground transportation, per diem, and lodging.

CONTRACTUAL - \$1,500

These funds are for advertising PAC meetings in newspapers in the spill-affected areas.

COMMODITIES - \$1,500

These funds are for materials and incidentals for one teleconferenced and one in-person PAC meeting.

AGENCY DISTRIBUTION

PAC Cost Category	ADF&G	DOI-OEPC	Total
Personnel	\$0	\$7,100	\$7,100
Travel	\$6,500	\$0	\$6,500
Contractual	\$1,500	\$0	\$1,500
Commodities	\$1,500	\$0	\$1,500
Equipment	\$0	\$0	\$0
Subtotal	\$9,500	\$7,100	\$16,600
GA - 9%	\$855	\$639	\$1,494
Component Total	\$10,355	\$7,739	\$18,094

HABITAT PROTECTION PROGRAM - \$678,330

Cost Category	FY15 Total Budget for Comparison	FY16 Total Budget
Personnel	\$219,739	\$155,521
Travel	\$5,000	\$5,000
Contractual	\$380,800	\$461,800
Commodities	\$8,000	\$0
Equipment	\$0	\$0
Subtotal	\$613,539	\$622,321
GA - 9%	\$55,219	\$56,009
Component Total	\$668,758	\$678,330

(\$6,778 decrease: ADOL reduced to one quarter-time FTE funded position)

PERSONNEL - \$155,521

- ADOL**

\$34,521

Funds are provided for an RSA to cover salary costs for designated ADOL personnel (currently Jennifer Schorr) to provide legal oversight for habitat acquisitions, easements, timber rights, etc., and information to the public and Council regarding this program.

- ADNR**

\$90,000

Funds are provided for designated habitat personnel (currently Samantha Carroll) to oversee large and small parcel habitat acquisitions, easements, timber rights, etc., and provide information to the public and Council regarding this program (i.e. Habitat Acquisition Catalog update). ADNR also provides any needed determination regarding the State's long-term management of restoration lands.

- DOI-FWS/DOI-BLM**

\$31,000

Funds provided to assist with habitat acquisitions, easements, timber rights, etc.

DOI-FWS	\$25,000
DOI-BLM	\$6,000
Total	\$31,000

TRAVEL - \$5,000

Funds provided for necessary designated travel.

CONTRACTUAL - \$461,800

- EVOSTC HABITAT SUPPORT**

\$85,000

Funds are provided for contracted habitat support personnel (Lauri Adams of Adams Strategic Consulting) to provide services regarding habitat acquisitions, easements, timber rights, etc., and information to the public and Council regarding this program.

• **TRUST AGENCY HABITAT SUPPORT**

\$30,000

Funds are provided in support of agency efforts to bring viable proposals to the Council for consideration; expenses include the review of due diligence efforts (appraisal, appraisal review, environmental clearances, survey requirements, title reports, etc.) required by sponsoring agencies. The purchase of any interest in land requires additional Trustee Council review and approval.

ADNR	\$28,000
DOI-BLM	\$2,000
Total	\$30,000

• **HABITAT PROTECTION PROGRAM SUPPORT**

\$303,800*

(Includes \$91,800 for appraisal costs and expenses related to title review, hazmat review, survey review, and due diligence activities.

Funds are provided in support of Great Land Trust's efforts, through USFWS, to bring viable habitat proposals to the Council for consideration, as per the Proposal dated 09/01/15. The purchase of any interest in land requires Trustee Council review and approval.

• **ADNR - MAP UPDATE & INTERPRETIVE INFORMATION**

\$43,000

As the primary trust agency for the EVOSTC Habitat Protection Program, the Alaska Department of Natural Resources (DNR) is responsible for holding title for restoration lands and limited interests in lands, as funded by the Council. The DNR Land Administration Records (LAS) and the EVOSTC Habitat Protection and Acquisition Catalog require periodic review and updates of land status. The Catalog was last updated in 2006 and DNR, at the direction of the Council office, is currently working on an update. This task includes intensive title research and identifying LAS data that is incorrect with regard to EVOSTC-funded properties and includes researching what projects took place in the interim, researching each project to determine the interests acquired and the associated costs, writing project narratives and creating associated GIS maps, including resolution of land status discrepancies. Correcting this data will allow DNR reference maps to display accurate land status for such properties. Accurate record keeping and maintenance is vital to the overall management of EVOSTC lands and for the dissemination of information, including in responding to inquiries by the public, media and governmental agencies. These funds will be transferred to ADNR through an RSA (Reimbursable Service Agreement) when needed to perform the tasks.

COMMODITIES - \$0

EQUIPMENT - \$0

AGENCY DISTRIBUTION

Habitat Cost Category	ADF&G	ADOL	ADNR	DOI-FWS	DOI-BLM	Total
Personnel	\$0	\$34,521	\$90,000	\$25,000	\$6,000	\$155,521
Travel	\$2,500	\$0	\$2,500	\$0	\$0	\$5,000
Contractual	\$85,000	\$0	\$71,000	\$303,800	\$2,000	\$461,800
Commodities	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$87,500	\$34,521	\$163,500	\$328,800	\$8,000	\$622,321
GA - 9%	\$7,875	\$3,107	\$14,715	\$29,572	\$720	\$56,009
Component Total	\$95,375	\$37,628	\$178,215	\$358,392	\$8,720	\$678,330

TRUST AGENCY RESEARCH PROJECT MANAGEMENT AND FEDERAL FUNDS TRANSFER – \$252,849

Cost Category	FY15 Total Budget for Comparison	FY16 Total Budget
Personnel	\$310,372	\$230,972
Travel	\$1,000	\$1,000
Contractual	\$0	\$0
Commodities	\$0	\$0
Equipment	\$0	\$0
Subtotal	\$311,372	\$231,972
GA - 9%	\$28,023	\$20,877
Component Total	\$339,395	\$252,849

(\$86,546 decrease: Shifting from upfront forecasted funds to attaching funds to individual projects for support, such as NEPA analysis.)

PERSONNEL - \$230,972

Project Management – USGS & NOAA - \$130,972

Project Management funds to provide lead Trustee Agency staff with funds necessary to manage contracts and report on the status of projects; to facilitate communication between the agencies, Principal Investigators, and the Restoration Office; to assist with the annual financial audit; and perform other administrative functions necessary for implementation of projects authorized by the Trustee Council. Project management funds are also included below for management of multi-year projects that have been previously authorized.

DOI/USGS – Dede Bohn or other USGS staff	\$55,972
NOAA – Pete Hagen	\$5,000
NOAA – Shawn Carey	\$35,000
NOAA – Bonita Nelson	\$35,000
TOTAL	\$130,972

Project Management: ADF&G Herring Program Coordinator - \$75,000

This funding provides for partial support of an ADF&G Fisheries Specialist I to coordinate with the Council's Herring program. This position will provide review and feedback to the Council and work with the Program to ensure coordination and relevancy with ADF&G resource management and Council goals.

ADF&G – Sherri Dressel or other ADF&G staff	\$75,000
TOTAL	\$75,000

Trustee Council Investment Funds - Federal Account and Transfer - \$25,000

This funding provides for a Federal Budget Officer (currently Bruce Nesslage) to process Investment Fund transfers and account requests.

TRAVEL - \$1,000

This funding provides travel support for the Herring Program Coordinator to attend the annual HRM PI meeting in Anchorage.

CONTRACTUAL - \$0

COMODITIES - \$0

EQUIPMENT - \$0

AGENCY DISTRIBUTION:

Agency Project Management Cost Category	ADEC	ADF&G	ADNR	DOI/USGS	USFS	NOAA	FWS	DOI/SEC	Total
Personnel	\$0	\$75,000	\$0	\$55,972	\$0	\$75,000	\$0	\$25,000	\$230,972
Travel	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Contractual	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commodities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$76,000	\$0	\$55,972	\$0	\$75,000	\$0	\$25,000	\$231,972
GA - 9%	\$0	\$6,840	\$0	\$5,037	\$0	\$6,750	\$0	\$2,250	\$20,877
Component Total	\$0	\$82,840	\$0	\$61,009	\$0	\$81,750	\$0	\$27,250	\$252,849

TRUST AGENCY FUNDING - \$35,970

Cost Category	FY15 Total Budget for Comparison	FY16 Total Budget
Personnel	\$0	\$33,000
Travel	\$2,000	\$0
Contractual	\$0	\$0
Commodities	\$0	\$0
Equipment	\$0	\$0
Subtotal	\$2,000	\$33,000
GA - 9%	\$180	\$2,970
Component Total	\$2,180	\$35,970

PERSONNEL - \$33,000

Trustee Council staff support funding at the request of the Trustee.

ADF&G – David Rogers or other ADF&G staff	\$12,000
USFS – Ron Britton or other USFS staff	\$9,000
DOI /FWS – Veronica Varela or other FWS staff	\$12,000
TOTAL	\$33,000

TRAVEL - \$0**CONTRACTUAL - \$0****COMMODITIES - \$0****EQUIPMENT - \$0****AGENCY DISTRIBUTION**

Trustee Agency Cost Category	ADF&G	ADEC	ADOL	NOAA	FWS	USFS	DOI- SEC	Total
Personnel	\$12,000	\$0	\$0	\$0	\$12,000	\$9,000	\$0	\$33,000
Travel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contractual	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commodities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$12,000	\$0	\$0	\$0	\$12,000	\$9,000	\$0	\$33,000
GA - 9%	\$1,080	\$0	\$0	\$0	\$1,080	\$810	\$0	\$2,970
Component Total	\$13,080	\$0	\$0	\$0	\$13,080	\$9,810	\$0	\$35,970

ALASKA RESOURCES LIBRARY & INFORMATION SERVICES – \$239,961 (ARLIS)

Cost Category	FY15 Total Budget for Comparison	FY16 Total Budget
Personnel	\$146,212	\$159,243
Travel	\$0	\$3,000
Contractual	\$27,900	\$57,905
Commodities	\$0	\$0
Equipment	\$0	\$0
Subtotal	\$174,112	\$220,148
GA – 9%	\$15,670	\$19,813
Component Total	\$189,782	\$239,961

(\$50,179 increase: 20% of Librarian's time moved from Admin to ARLIS)

PERSONNEL – \$159,243

Position	Range /Step	Months	Monthly Cost	Total Cost
Librarian III – Helen Woods	20/A	9.5	\$9,067	\$86,137
ARLIS or UAA Staff		6	12,184	73,106
Personnel Total				\$159,243

Cost is with benefits. Librarian 12-month allocation split between ARLIS (80%) & Admin (20%)

Funding provides two librarians (80% Librarian III salary, plus 50% ARLIS/UAA staff salary) to meet the ongoing information and research needs of the Trustee Council staff, Public Advisory Committee, researchers, and the general public. Staff manages the EVOS collection at ARLIS and represents the Trustee Council on the ARLIS Management Team. With the reorganization in 2009-2011, the Restoration Program's need for ARLIS services was expected to diminish and ARLIS's funding was reduced. However, the Deepwater Horizon oil spill refocused attention on EVOS and increased the demand for EVOS-related information. Funding was increased in FY15 to ensure staffing levels were appropriate to meet the EVOS information needs of government agencies, NGOs, researchers, the media, and the public.

TRAVEL – \$3,000

Funding provided for training.

CONTRACTUAL – \$57,905

ARLIS EVOSTC Document Digitization Services

Funding continues the digitizing of EVOSTC office files begun in FY13. Phase 1 digitized the Restoration Planning Work Group and 1994 Restoration Plan Environmental Impact Statement Administrative Records (1990-1994) and was completed in January 2014. Phase 2 digitized the Project Files (1989-present) and Chief Scientist files (1992-2002) and was completed in January 2015. Phase 3 digitized files for the Habitat Protection Program (1993-present), Public Advisory Committee (1992-present), Scientific and Technical Advisory Committee (2000-2006), and Community Involvement (1996-2000). Phase 4 will digitize the EVOSTC Official Record (1991-present), and project data and other EVOS documents housed at ARLIS. See proposal dated 09/02/2015.

COMMODITIES – \$0

EQUIPMENT – \$0

AGENCY DISTRIBUTION:

ARLIS Cost Category	ADF&G Total
Personnel	\$159,243
Travel	\$3,000
Contractual	\$57,905
Commodities	\$0
Equipment	\$0
Subtotal	\$220,148
GA - 9%	\$19,813
Component Total	\$239,961



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of
Fish and Game**

DIVISION OF COMMERCIAL FISHERIES
Headquarters Office

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Fax: 907.465.2604

September 4, 2015

Exxon Valdez Oil Spill Trustee Council
4210 University Drive
Anchorage, AK 99508-4626

Exxon Valdez Oil Spill Trustee Council members:

I am writing to request \$70,000 in FY16 to help ADF&G meet data requests by EVOS researchers, information requests from the Science Panel, and archiving of historical data and monitoring activities so they are readily available for EVOS and ADF&G needs now and in the future.

The Alaska Department of Fish and Game has spent approximately \$200,000 annually on Prince William Sound herring research and monitoring. This includes \$30,000 of staff time to provide data and assistance for EVOS projects, but this amount of staff time has not been sufficient to meet the needs of EVOS researchers. As a result, there are outstanding requests from EVOS researchers and the Science Panel that have not been fulfilled. While ADF&G will continue to provide \$30,000 of staff time to assist with EVOS projects in FY16, the department is not able to increase the funding for staff time due to recent budget cuts and the \$30,000 alone will not be enough to provide EVOS researchers the time and support that they need. The \$70,000 would provide salary for existing ADF&G database and biologist staff (if their time can be reallocated to this project) or for a long-term, non-permanent hire to assist with:

- archiving of historical age-sex-length data into the ADF&G database,
- disseminating age-sex-length data to EVOS researchers for inclusion in the Herring Portal (EVOS database), and
- constructing an ArcGIS shape file with historical records of survey coverage and biomass estimates from ADF&G acoustics surveys as requested by the EVOS Science panel.

These funds would also enable ADF&G to respond more quickly to future EVOS data requests for age-sex-length and acoustic-coverage data. The allocation of funds would be:

Data type	Description of work	Value
Herring age-sex-length	Database configuration, data entry and proofing, dissemination to EVOS researchers	\$35,000
Acoustics coverage and biomass estimates	Construct ArcGIS shape file with historical acoustics data	\$29,220
9% General administration fee		\$5,780
Total		\$70,000

I believe these funds would facilitate providing EVOS researchers and the Science Panel information for which they have been waiting and would benefit both EVOS and ADF&G.

Thank you for your consideration.

Sincerely,



Sherri Dressel, Ph.D.
Statewide Herring Fisheries Scientist



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EVOSTC Great Land Trust Spill Area Ecosystem Habitat Conservation Project YEARS 4 (FY16) & 5 (FY17)

*Prepared for Exxon Valdez Oil Spill Trustee Council
September 1, 2015*

Project Summary

Great Land Trust (GLT) requests funding from the *Exxon Valdez* Oil Spill Trustee Council (EVOSTC) Habitat Acquisition Fund to continue work on multiple conservation projects that will implement habitat conservation actions to aid in the recovery and enhancement of the long term health and viability of those resources injured by the *Exxon Valdez* oil spill (EVOS) and spill area ecosystems. GLT carries out this work over a multi-year period. Beginning in 2013, the first year of the project, GLT focused on the Kodiak Afognak Archipelago area; the scope broadened to include all of the spill area in 2014, the second year of the project. Using a land conservation prioritization that GLT developed specifically for the Kodiak Afognak Archipelago, we identified multiple high ranking conservation projects and have begun due diligence and negotiations with landowners on six of the highest ranking projects. During year three, GLT completed outreach to all key landowners within the spill area and initiated several new projects. During years four and five, GLT will continue to do outreach with key landowners and initiate new projects and complete existing projects throughout the entire spill area.

GLT works closely with EVOSTC, United States Fish and Wildlife Service (USFWS), and the Alaska Departments of Natural Resources and Law in order to complete these projects. GLT actively seeks significant grant funding from other sources to compliment EVOS funding to carry out the top projects. Of the projects developed, we intend to complete or make substantial progress on at least two or three large-scale (greater than 1,000 acres) conservation projects with landowners in the entire spill area during years three and four.

Project Narrative

Statement of Need

This project seeks to contribute to the objectives of the EVOSTC to aid in the recovery and enhancement of the long term health and viability of the resources injured by the EVOS. This project will seek to acquire priority lands within the EVOS area and increase the capacity of the existing, established EVOS habitat program.

This proposal will provide funding for year four (FY16) of a multi-year project.

GLT has completed significant projects with a wide range of partners including the Municipality of Anchorage, the Mat-Su Borough, State of Alaska Department of Fish and Game, State of Alaska Department of Natural Resources and State Parks, USFWS, Army Corps of Engineers, NOAA, Alaska Native Corporations, Ducks Unlimited, Pacific Coast Joint Venture and numerous private businesses and landowners. GLT has experience raising and managing significant public and private funding, having completed nearly \$15 million in conservation projects over the last 48 months. GLT also has extensive experience with mitigation funding, having operated an In-lieu Fee program under a Memorandum of Understanding with the Army Corps of Engineers since 1998. As part of this program, GLT has completed 9 conservation projects and received hundreds of payments totaling over \$12 million. Two recent projects are described below.

The Campbell Creek Estuary Conservation Project:

GLT succeeded in raising \$7.5 million dollars to purchase and conserve Campbell Creek Estuary, the last undeveloped estuary of the original seven salmon streams in Anchorage. GLT worked with the Municipality of Anchorage and many other partners for three years to raise funds to purchase the 60-acre parcel and donate it to the Municipality as a new Natural Area; GLT retained a conservation easement. The Project conserved ½ mile of Campbell Creek's lower reaches including the Estuary and its critical tidal marsh habitat as well as 25 acres of coastal forest. This parcel also provides access to the Anchorage Coastal Wildlife Refuge. Project funding included dollars to clean up the property, develop a park plan, create a modest trailhead and gravel trails, as well as monitor and address the conservation needs of the property annually.

Knik Islands Conservation Project:

The Knik Islands Conservation Project was completed in the fall of 2011 as a partnership between GLT and Eklutna, Inc. The project permanently conserves nearly 4800 acres at the mouth of the Knik and Matanuska Rivers with a conservation easement. This land will remain under the ownership of Eklutna, Inc. and traditional uses such as hunting and fishing by Shareholders, and public access through permits, will continue. This property contains excellent habitat for all five species of salmon in Cook Inlet as well as many other wildlife species. In addition, the property provides a wildlife and recreational corridor between Palmer Hay Flats State Game Refuge and Chugach State Park. Scenic views of the property are well known by travelers crossing the Knik River Bridge on the Glenn Highway. This project was made possible through a collaborative effort with the Mat-Su Salmon Partnership, USFWS, the Army Corps of Engineers, NOAA Fisheries, Alaska Department of Fish and Game, and CIRI. Funding for this conservation easement was made possible through resources set aside to offset habitat losses associated with the expansion of the Port of Anchorage.

Update on Year 1- 3 Project Accomplishments

This FY2016 proposal will fund year four of a multi-year project. During year one, GLT accomplished numerous tasks from our list of deliverables for the grant. Using data from the Kodiak prioritization completed early in 2013, GLT staff met numerous times with key landowners, both in Kodiak and here in Anchorage. GLT staff also met with the Kodiak Borough Mayor, Manager and staff from Mental Health Trust Land Office. In addition, GLT

met multiple times with the realty staff at USFWS as well as Kodiak Refuge staff and numerous Fish and Game staff in Kodiak. GLT staff met with Kodiak Soil and Water Conservation District staff and staff at both Rep. Austerman's and Sen. Steven's Offices. GLT met with Alaska State Parks staff several times and consulted with staff at NOAA and The Conservation Fund regarding conservation projects on Kodiak. In gathering data for the prioritization we consulted with additional staff including individuals from Kodiak Island Borough, Koncor, Pacific Coast Joint Venture, Audubon Alaska and the others mentioned above.

During the grant period GLT made site visits to numerous properties and were accompanied by staff from Alaska State Parks and Alaska Department of Law in addition to representatives from the landowners on several visits. Potential projects that have emerged from the meetings and site visits include parcels on northern Afognak Island as well as parcels on Kodiak Island itself. GLT has obtained confirmation of landowner interest and ordered appraisals for a number of these parcels. Great Land Trust has also applied for and received \$1,000,000 matching funding from USFWS for one of the potential Afognak Island projects and is working on acquiring other matching funds for one or more of the projects on Kodiak Island.

During year two, GLT staff traveled to Kodiak several times to meet with agency staff and key landowners to continue work on due diligence activities and negotiations for a number of parcels. GLT continued working on the Northern Afognak Island and the Triplet Islands project – which was approved by the EVOS Trustee Council, the AK State Legislature, and the Governor – and also started more work on Kodiak projects. For the Northern Afognak and Triplets project, due diligence is nearly complete and a draft purchase and sale agreement has been completed. During this period GLT continued meetings with EVOS staff, federal agency realty officials including USFWS, NPS, and USFS, and State agency officials, and continued data collection and methodology development for a spill-wide area prioritization. Biologists, land managers, and agency partners were contacted to contribute data to the prioritization effort. Several meetings were held with stakeholders to provide comments on the draft prioritization maps for the entire spill area. In addition, landowners and regional and local government officials were contacted to obtain land status information for both surface and subsurface ownership for the entire spill area. Maps of the prioritization and land status are attached.

In year three, GLT staff traveled to Kodiak several times to meet with agency staff and key landowners to continue work on due diligence activities and negotiations for a number of parcels. GLT reached conceptual agreement with landowners on several projects and continues to negotiate those projects. The Northern Afognak Islands and Triplets project is moving forward with a draft purchase and sale agreement in review by the landowner and a subsurface valuation completed by the appraiser. A second Phase 1 was recently completed and a property survey of a portion of the property was completed during year three. It is anticipated that this project will close by the end of 2015.

GLT also met with a landowner who has holdings in the Kachemak Bay State Park area to develop potential projects. GLT presented to this landowner and the landowner is now reviewing several priority parcels for consideration. GLT has been working with State Parks and DNR officials to determine if they are willing to sponsor the project.

GLT also met with a landowner regarding a potential project on Northern Afognak Island, just east of the project already approved by the EVOSTC. This project was previously attempted with EVOS funds but failed due to valuation differences. GLT will order an appraisal for this project soon. GLT has been working with State Parks and DNR officials to determine if they are willing to sponsor the project. GLT has also been working with another landowner, pursuing the purchase of a 2,000-acre parcel on the western side of Northern Afognak Island. We anticipate ordering the appraisal in the next several months. GLT also met with landowners within Prince William Sound and the Kenai Fjords area. GLT has developed maps of subsurface and surface ownership throughout this area, which guide the selection process. And lastly, during year three, GLT met with NPS and a landowner with inholdings within Kenai Fjords National Park. The EVOS Trustee Council voted to support appraisals for eight parcels owned by this landowner. NPS has been working to secure an appraisal for all eight parcels this summer.

The Final Draft Prioritization was completed in June 2014. GLT will continue to work with agency staff and landowners to improve the data quality and prioritization results.

Project Goals and Objectives

GLT seeks to continue to permanently conserve important habitat in the EVOS-affected area with the acquisition of fee title properties of high conservation value. GLT will continue to implement a multi-year project within the entire spill area. GLT will continue negotiations and due diligence for high priority projects identified in the Kodiak Prioritization and will contact landowners of parcels with high-ranking conservation value in the entire spill area to determine their interest in habitat conservation. During the period of performance for this grant, GLT will develop up to 5 large acquisition projects within the EVOS area. GLT will contract a phased appraisal (described below) of the highest ranking parcels with willing landowners. GLT will seek matching funds for projects appropriate for EVOS funding, and working closely with partners, will complete or make substantial progress on at least 2-3 large scale conservation projects within the grant period.

Project Activities, Methods and Timetable

Funding Compliance

GLT intends to adhere to the following conditions regarding project methodology that have been previously approved by the council in prior years of the contract. The following conditions are from the original funding EVOSTC Resolution 13-03 and thereafter have been adopted by reference into the Proposal:

- a. The funds are to be used by GLT, as described in the Proposal, to facilitate the acquisition of lands and interests in lands (e.g., fee title, conservation easements, mineral rights, timber rights) important to the conservation and protection of marine and coastal resources, ecosystems, and habitats in order to aid in the overall recovery of, and to enhance the long-term health and viability of, those resources injured by the *Exxon Valdez* oil spill and the spill-area ecosystems;
- b. GLT shall pursue parcels only from willing sellers and the sellers shall complete the relevant Council nomination form;

- c. GLT shall pursue protection, including identification, appraisal, commitments and approvals, of any specific parcel only after consultation and agreement by the entities that would own or manage the interests in the parcel and with the U.S. Fish and Wildlife Service (USFWS), Alaska Department of Natural Resources (ADNR), and the Alaska Department of Law (ADOL);
- d. GLT shall ensure that any entity that would own or manage the interests in the parcel, as well as USFWS, ADNR, and ADOL, shall review and approve all conveyance documents and required actions, such as determining the required appraisal instructions, environmental reviews and site visits;
- e. GLT shall submit quarterly updates to ADNR, ADOL and the EVOSTC Executive Director in addition to the semi-annual reports it submits to the USFWS, as per the USFWS reporting schedule, and shall ensure the reports convey the information needed by USFWS, ADNR, ADOL and EVOSTC.
- f. GLT shall acquire parcels only after unanimous approval of the Council; the approval process shall include reasonable and adequate public notice about the proposed acquisition and an opportunity for public comment.

Great Land Trust proposes to carry out the project objectives in the EVOS area through a multi-step process:

1. Project Identification

GLT will use a recently completed conservation prioritization for the entire spill area to identify habitat with the highest conservation value (see Prioritization maps). These prioritizations incorporate the latest information on land ownership including all projects previously completed with EVOS funding. All unprotected private lands, in addition to State lands owned by Mental Health Trust, are ranked for their conservation value. The prioritization includes current bird distribution data for all special status species as well as subwatershed rankings for anadromous fish diversity throughout the spill area. GLT will continue to obtain feedback on the prioritizations from EVOS Trustees, staff, USFWS, ADFG, ADNR, ADOL, and other key landowners and government officials.

2. Landowner Contact

GLT will contact the landowners of high-ranking parcels to determine their willingness to sell fee simple or a conservation easement. This will also include discussions with the landowners regarding acreage and parcel configuration, timelines, and due diligence. GLT will meet frequently with agency and EVOSTC staff during this phase of the project to get feedback on the projects that seem to have the most promise.

3. Appraisal

GLT will contract a phased appraisal of the highest ranking parcels with willing landowners based on the meetings conducted in step two. The first phase of the appraisal will include a meeting with the appraiser after research has been conducted by the appraiser. The appraiser will report the expected high and low range of values for the value of the property. A full appraisal will be completed only if the initial range of values is acceptable to both the buyer and the seller.

4. Matching Funds Partner Outreach

GLT will seek matching funds for projects that appear to be a good fit for EVOS funding. This will include funding from sources including the Forest Legacy Program, USFWS National Coastal Wetlands Program, and private foundations. This process takes 6-18 months but can yield significant funding that may allow more acres to be purchased.

5. Final Project Completion

GLT will work closely with EVOS Trustee Council Staff, DNR, USFWS, ADNR, ADOL, and other partners to complete up to approximately \$100 million in high priority conservation projects with willing landowners in the Spill Area as part of this project.

Project Milestones:

February 1, 2015 – January 31, 2016

- Complete due diligence on 2-3 additional spill area projects.
- Submit additional spill area project packages to EVOSTC for full funding.

February 1, 2016 – January 31, 2017

- Complete due diligence on 2-3 additional spill area projects.
- Submit additional spill area project packages to EVOSTC for full funding and help facilitate or execute habitat protection transactions in collaboration with state and/or federal project sponsors

February 1, 2017 - January 31, 2018

- Co-complete due diligence on 2-3 additional spill area projects.
- Submit additional spill area project packages to EVOSTC for full funding and help facilitate or execute habitat protection transactions in collaboration with state and/or federal project sponsors

Budget:

		Year 4 (FY16)	Year 5 (FY17)
		Feb 1, 2016 – Jan 31, 2017	Feb 1, 2017 – Jan 31, 2018
GLT Staff	3 staff, 30hr/wk for 40 weeks @ \$50/hour	\$180,000	\$180,000
Travel	Airfare from ANC to KOD (or Prince William Sound, Alaska Peninsula, and other Spill area project locations) \$1,200/trip/staff @ 5 trips for 2 staff = \$4,800; travel within Travel via float plane @ \$650/hr @ 25 hrs= \$16,250; \$3,750 food, lodging, rental car.	\$32,000	\$32,000

Appraisal	Appraisals @ \$25,000 each	\$50,000	\$50,000
Phase I Environmental Site Assessment	Phase I ESA reports @ \$7,000 - \$10,000 each	\$27,000	\$27,000
Legal	@ \$370/ hr	\$14,800	\$14,800
Total		\$303,800	\$303,800

Anticipated Products/Outputs

Anticipated outputs for this grant include the prioritization and acquisition of high priority fee title properties within the EVOS area. In addition, some projects may be conservation easements held by USFWS or ADNR. Specific goals below:

- Substantial progress toward completion of fee title property acquisition of 30,000 acres within the EVOS area.
- Permanent protection of 5,000 acres of wetlands within the EVOS area.
- Permanent protection of up to 10 miles of coastline within the EVOS area.
- Permanent protection of up to 10 miles of anadromous streams within the EVOS area.

Project Monitoring and Evaluation

GLT will submit quarterly updates to USFWS, ADNR, ADOL, and EVOSTC on the status of the completion of project objectives. Upon completion of purchase of habitat with EVOSTC funding, a permanent conservation easement will be held by either ADNR or USFWS requiring annual monitoring of conservation values.

Description of Organization Undertaking the Project

GLT is Southcentral Alaska's regional land trust. It is an independent nonprofit land conservation organization founded by and for Alaskans in 1995. Our service area includes more than 50 percent of Alaska's total population and ranges from the Alaska Range in the North to Prince William Sound and Kodiak in the south. GLT is the only Alaska-based land trust working in Kodiak and is in an excellent position to work there because of our broad expertise. The other adjacent land trusts and national conservation organizations in Alaska were consulted prior to GLT's expansion to Kodiak and felt GLT was in the best position to work in this important area. GLT works in partnership with willing private and public landowners to permanently conserve special lands, signature landscapes, and waters essential to the quality of life and economic health of communities in the region. We seek to protect the integrity of the natural ecosystems, wetlands and streams, access to recreational lands, and conserve lands important for towns and cities.

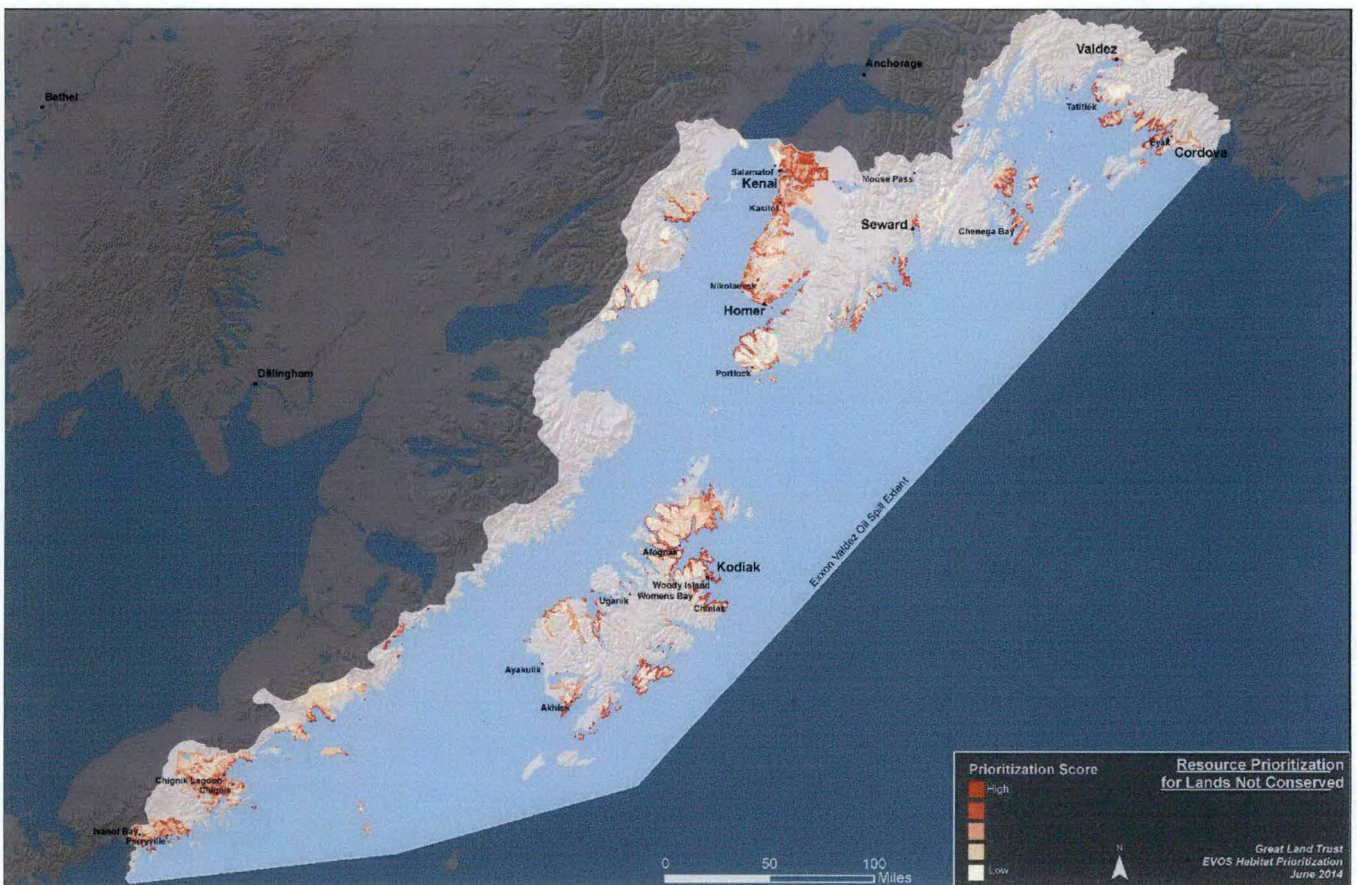
GLT, an accredited land trust, has extensive experience with wildlife habitat and wetland conservation projects. Since 1995, GLT has completed 33 land conservation projects totaling over 11,000 acres in southcentral Alaska, including over 45 miles of salmon streams. GLT has

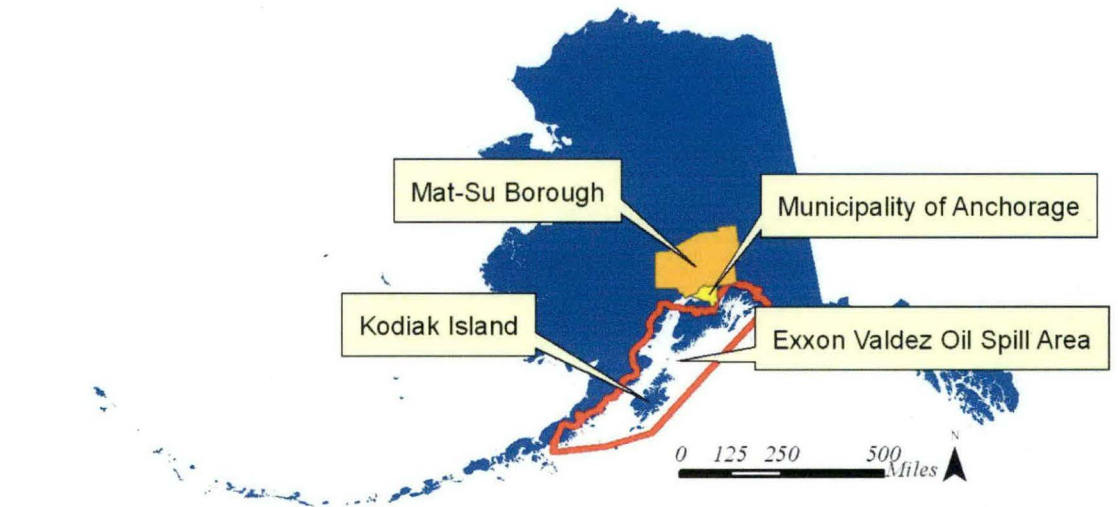
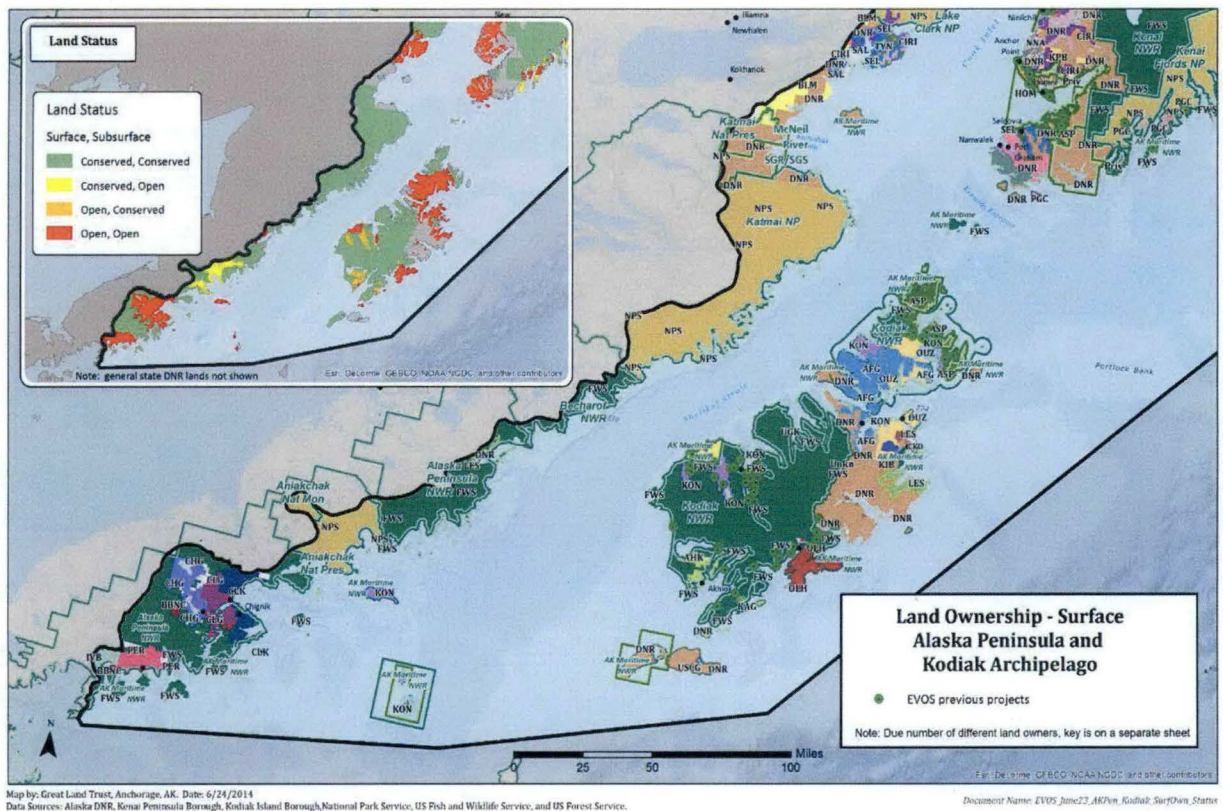
professional staff skilled at carrying out complex land transactions. GLT has been nationally recognized for wetland conservation successes including the LTA Living Lands Publication, the Coastal America 2007 Partnership Award, the US DOI Cooperative Conservation Award 2008 and was awarded the Outstanding Partner Award by the Region 7 Director of USFWS for 2011. In addition, GLT recently became the first land trust in Alaska and one of only 300 nationwide to achieve accreditation with the Land Trust Alliance Accreditation Commission.

Sustainability

Upon completion of purchase of habitat with EVOSTC funding, a permanent conservation easement will be held by either ADNR or USFWS.

Map of Project Area





Great Land Trust Service Area
Municipality of Anchorage, Mat-Su Borough, and the Exxon Valdez Oil Spill Affected Area

EVOSTC Document Digitizing Project

Phase 4:

EVOSTC Official Record (1991-Present)

September 2, 2015

PROPOSAL SUMMARY

In February 2013, the EVOS Trustee Council began a multi-phase project to digitize select EVOSTC files for ease and speed of retrieval, to facilitate web access where appropriate, save future storage/office space and expense, and ensure long-term preservation of information.

Phase 1: Completed: This phase was funded in February 2013 to digitize the administrative records of the Restoration Planning Work Group (RPWG) and Restoration Plan Final Environmental Impact Statements (FEIS) and was completed in December 2013.

Phase 2: Completed: Funded for FY14, this phase addressed a need identified by the National Center for Ecological Analysis and Synthesis (NCEAS) to digitally consolidate project information which could not be completely accommodated in the EVOSTC project database. This included correspondence documenting the administration of projects, letters of support, and publicity as well as project information predating the project database. The EVOSTC Project Files 1991-2009 and the Chief Scientist Files 1992-2002 have been digitized as the first step in consolidating the project information into one location. Additional EVOSTC database work is needed to complete the consolidation.

Phase 3: in progress: This phase was funded in FY15 to digitize the following active and/or historical file collections:

- Habitat Protection Program (1993-present)
- Public Advisory Committee (1992-present)
- Science and Technology Advisory Committee (2000-2006)
- Community Involvement (1996-2000)

The project is on schedule to be completed by January 31, 2016.

Phase 4 Proposal: This phase proposes to digitize the EVOSTC Official Record (1991-present), design ARLIS catalog retrieval structure, and create catalog records and finding aids for the file collections that comprise the EVOSTC Official Record.

PROPOSAL DETAILS

Need: Digitization of EVOSTC Official Record files for ease and speed of retrieval, to facilitate web access where appropriate, save future storage/office space and expense, and ensure long-term preservation of information.

Background: Alaska Resources Library and Information Services (ARLIS, www.arlis.org), is a special library focusing on the natural and cultural resources of Alaska and arctic areas. Established in 1997 and located on the campus of the University of Alaska Anchorage, ARLIS is an innovative partnership of state, federal and university entities whose primary purpose is to meet the information needs of its founding agencies: the Alaska Department of Fish and Game, Exxon Valdez Oil Spill Trustee Council, U.S. Bureau of Land Management, U.S. Bureau of Ocean Energy Management, U.S. Fish and Wildlife Service, U.S. National Park Service, U.S. Geological Survey and University of Alaska Anchorage. ARLIS is open to the public and also serves the university community, non-profit organizations and the private sector. ARLIS is directed by the ARLIS Management Team, which is responsible to the ARLIS Founders Board. The Board consists of directors from the above founding agencies.

ARLIS serves as the EVOSTC repository for EVOS-related materials and has housed this collection since the Trustee Council's Oil Spill Public Information Center became part of ARLIS in 1997. ARLIS also maintains the EVOSTC Public Record and public versions of the administrative records of the Restoration Planning Work Group (RPWG) and Restoration Plan Final Environmental Impact Statement (FEIS).

Scope: Phase 4 of the project will digitize the EVOSTC Official Record (1991-present). The final deliverables will be a collection of searchable full-text digital versions of the documents contained in these files, inclusion in the ARLIS catalog, and finding aids indexing the file collections within the EVOSTC Official Record. The digitized documents will be provided to the EVOSTC office to be added to the intranet by EVOSTC staff or associated IT staff. The digitized documents and finding aids will support EVOSTC staff in responding to questions pertaining to the Official Record; electronic files will reduce response time and ensure a complete response. The documents will be indexed in the ARLIS catalog, and will be ready to link to the ARLIS website and catalog for public availability. The linking of selected file collections via the ARLIS website and catalog is planned for Phase 5 of the EVOSTC Document Digitizing Project.

EVOSTC Official Record (1991-present): Volume – 107 boxes; 1600 inches; 320,000 pages.

The EVOSTC Official Record Files document the Trustee Council decision-making process. Comprised of 26 discrete categories of record types, and housed in twelve four-drawer file cabinets and several boxes, this file collection is largely letter- sized papers in folders or binders, with some documents contained with staples, clips, or rubber bands. Some items have comb or

glue bindings. The collection contains some handwritten items and notes, oversize documents, postcards and newspaper pages.

Process: Scanning will be performed from originals to ensure image quality and collection completeness. Non-print items, such as audio or video tapes, CDs or DVDs, and documents protected by copyright will not be scanned, but will be noted with an entry that will refer the user to a source for the item. Metadata will be input as specified for handwritten documents. Boxes of documents will be sent to ARLIS and returned to the EVOSTC office via the UAA courier.

EVOSTC staff will:

- Provide ARLIS with instructions as needed, including guidance on file names.
- Review the files to identify bound items without marginalia that have already been scanned.
- Provide extra copies of bound items without marginalia, as available, that will not require reassembly after scanning.
- Identify items protected by copyright that will not be scanned, and provide citations for these items, to be included in the digital collection.
- Box the files, label the boxes, and route them to ARLIS in batches via the UAA courier.
- Unbox and re-file the documents after scanning.
- After delivery of the digital documents, work with EVOSTC IT staff to add the files to the EVOSTC intranet.

ARLIS staff will:

- Design cataloging structure appropriate to the EVOSTC Official Record; create catalog records for each file collection
- Create finding aids for ease of use in locating needed records.
- Prepare the documents for scanning, including removing staples, other fasteners, and/or bindings.
- Scan each file into a separate electronic file, including all file folder contents, post-it notes, and the folder itself, if there are notes written on it or fastened to it.
- Apply Optical Character Recognition (OCR) software to each file for searchability.
- Provide each file with an appropriate file name via a specified naming convention that identifies the file collection and provides for ease of retrieval.
- Create metadata for handwritten documents, as needed.
- Provide quality assurance by reviewing each file for image quality and OCR.
- Re-fasten each document to pre-scanning condition and return to the original folder or binder.
- Return the folders and binders to the appropriate box and return the boxes to the EVOSTC office via the UAA courier.

- Deliver the digital documents to the EVOSTC office.

Final Deliverables: The final deliverables of Phase 4 of the EVOSTC Document Digitizing Project will be a collection of searchable full-text digital versions of the documents contained in the EVOSTC Official Record. The digitized documents will be provided to the EVOSTC office for addition to the intranet and website by EVOSTC staff or associated IT staff. Digitized documents will be indexed in the ARLIS catalog as 26 discrete file collection series, and will be held on the document servers as part of the ARLIS collection for public availability.

Timeline: This project will begin February 1, 2016 and be completed by January 31, 2017. Future phases will include scanning of continuing Official Record documents to maintain currency of the collection, and web linkage of documents for public access.

Budget:

Staffing	Tasks	Cost	Funding
Project labor	EVOSTC Official Record—107 boxes— Prep, scan, return documents to pre-scanning condition, QA, create metadata as needed, and collection transfers	\$325 per box (includes support services and supplies)	\$34,775
Librarians	Technical Services—Project Supervision/Cataloging oversight—214 hours	\$75/hour	\$16,050
	Cataloger – Index/Create catalog records—120 hours	\$59/hour	\$7,080
	Total		\$57,905

Exxon Valdez Oil Spill Trustee Council



DRAFT Work Plan for
Fiscal Year 2016

Issued September 29, 2015
Revised November 4, 2015



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USDA: http://www.usda.gov/wps/portal/usda/usdahome?navid=NON_DISCRIMINATION

NOAA: <http://www.eeo.noaa.gov/>

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ADF&G: <http://www.adfg.alaska.gov/index.cfm?adfg=home.oeostatement>

ADOL: <http://doa.alaska.gov/dop/eeo/>

ADEC: <http://doa.alaska.gov/dop/eeo/>

PLEASE COMMENT

You can help the Trustee Council by reviewing this draft work plan and letting us know your priorities for the Fiscal Year. You can comment by:

Mail: 4210 University Drive
Anchorage, AK 99508-4650
Attn: Draft Fiscal Year 2016 Work Plan

Telephone: 907-279-8012
1-800-478-7745
Collect calls will be accepted from fishers and boaters who call through the marine operator.

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Table of Contents

FY16 Proposal Funding Recommendations	1
Non-EVOSTC Program Proposals & Project Amendment Descriptions	5
EVOSTC Long-Term Monitoring Program (Gulf Watch Alaska) Project Descriptions	13
EVOSTC Long-Term Herring Monitoring and Research Program Project Descriptions	84
NOAA Harbor Protection Program Project Descriptions	140

FY16 Proposal Funding Recommendations

The funding described in this document is approximate; for funding amounts authorized by the Council, please see the Annual Funding Overview (AFO) for the appropriate fiscal year. The AFO is posted on the EVOSTC website after the fall Council meeting.

Page	Project Number	Principal Investigator	Project Title	FY16 Requested	FY16 Funding Amount Recommended				Trustee Council Approved
					Science Panel	Science Coordinator	PAC	Executive Director	
6	16120100	EVOS Admin	EVOS Administration	\$2,520,420	Not Reviewed	Not Reviewed	Fund	Fund	
7	16100853	Irons	Pigeon Guillemot Restoration Program	\$162,735	Fund	Fund	Fund	Fund	
14	16120114	McCammon	EVOSTC Long-Term Monitoring Program	\$2,530,400	Fund Reduced \$2,448,500*	Fund Reduced \$2,448,500*	Fund Reduced \$2,448,500*	Fund Reduced \$2,448,500*	
85	16120111	Pegau	PWS Herring Program	\$1,702,821	Fund	Fund	Fund	Fund	
141	16120112	Jennings	NOAA Harbor Protection – Project Management	\$8,448	Fund	Fund	Fund	Fund	
145	16120112-A	Patton	NOAA Harbor Protection – Cordova Clean Harbor	\$77,355	Fund	Fund	Fund	Fund	
TOTAL REQUESTED, RECOMMENDED & APPROVED				\$7,002,179	\$6,920,279	\$6,920,279	\$6,920,279	\$6,920,279	

**Indicates this review group recommends a Do Not Fund for Project #16120114-I, Hollmen*

EVOSTC Long-Term Monitoring Program Projects (Gulf Watch Alaska)

The funding described in this document is approximate; for funding amounts authorized by the Council, please see the Annual Funding Overview (AFO) for the appropriate fiscal year. The AFO is posted on the EVOSTC website after the fall Council meeting.

****The total for these projects can be found above under 16120114-McCammon***

Page	Project Number	Principal Investigator	Project Title	FY16 Requested	FY16 Approved	Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
24	16120114A	Batten	LTM Program - Continuous Plankton Recorders	\$73,100		Fund	Fund	Fund	Fund	
27	16120114B	Hoffman	LTM Program - Coordination and Logistics	\$288,100		Fund	Fund	Fund	Fund	
30	16120114C	Bishop	LTM Program - Seabird Abundance in Fall and Winter	\$86,300		Fund	Fund	Fund	Fund	
33	16120114D	Bochenek	LTM Program - Data Management	\$162,600		Fund	Fund	Fund	Fund	
38	16120114E	Campbell	LTM Program - Oceanographic Conditions in PWS	\$209,300		Fund	Fund	Fund	Fund	
41	16120114G	Doroff	LTM Program - Oceanographic Monitoring in Cook Inlet/Kachemak Bay	\$108,800		Fund	Fund	Fund	Fund	
44	16120114H	Holderied	LTM Program - Science Coordination and Synthesis	\$151,600		Fund	Fund	Fund	Fund	
47	16120114I	Hollmen	LTM Program - Conceptual Ecological Modeling	\$81,900		Do Not Fund	Do Not Fund	Do Not Fund	Do Not Fund	
51	16120114J	Hopcroft	LTM Program - Seward Line Monitoring	\$107,700		Fund	Fund	Fund	Fund	
54	16120114K	Kuletz	LTM Program - PWS Marine Bird Surveys	\$215,700		Fund	Fund	Fund	Fund	
57	16120114L	Konar	LTM Program - Ecological Communities in Kachemak Bay	\$47,400		Fund	Fund	Fund	Fund	
60	16120114M	Matkin	LTM Program - Long-term killer whale monitoring	\$132,300		Fund	Fund	Fund	Fund	

Page	Project Number	Principal Investigator	Project Title	FY16 Requested	FY16 Approved	Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
63	16120114N	Moran	LTM Program - Humpback Whale Predation on Herring	\$54,400		Fund	Fund	Fund	Fund	
66	16120114O	Piatt	LTM Program - Forage Fish Distribution, Abundance, and Body Condition	\$150,300		Fund	Fund	Fund	Fund	
69	16120114P	Weingartner	LTM Program - GAK1 Monitoring	\$122,500		Fund	Fund	Fund	Fund	
72	16120114R	Ballachey	LTM Program - Nearshore benthic systems in the Gulf of AK	\$331,900		Fund	Fund	Fund	Fund	
75	16120114S	Carls	LTM Program - Oil Level and Weathering Tracking	\$6,500		Fund	Fund	Fund	Fund	
78	16150114-T	Bochenek	LTM Program - Supplemental Data Management Support	\$126,000		Fund	Fund	Fund	Fund	
80	16120120	Jones	LTM Program - Data Management and Synthesis	\$73,900		Fund	Fund	Fund	Fund	

EVOSTC Long-Term Herring Monitoring and Research Program Projects

The funding described in this document is approximate; for funding amounts authorized by the Council, please see the Annual Funding Overview (AFO) for the appropriate fiscal year. The AFO is posted on the EVOSTC website after the fall Council meeting.

****The total for these projects can be found above under 16120111-Pegau***

Page	Project Number	Principal Investigator	Project Title	FY16 Requested	FY16 Approved	Science Panel	Science Coord.	PAC	Executive Director	Trustee Council
98	16120111A	Bishop	PWS Herring Program - Validation of Acoustic Surveys	\$145,297		Fund	Fund	Fund	Fund	
102	16120111C	Bochenek	PWS Herring Program - Data Management Support	\$23,980		Fund	Fund	Fund	Fund	
109	16120111E	Rand	PWS Herring Program - Expanded Herring Surveys	\$84,366		Fund	Fund	Fund	Fund	
113	16120111F	Rand	PWS Herring Program - Juvenile Herring Abundance Index	\$82,949		Fund	Fund	Fund	Fund	
117	16120111H	Hoover	PWS Herring Program - Outreach & Education	\$38,259		Fund	Fund	Fund	Fund	
121	16120111K	Hershberger	PWS Herring Program - Herring Disease Program	\$298,006		Fund	Fund	Fund	Fund	
124	16120111L	Heintz	PWS Herring Program - Herring Condition Monitoring	\$253,861		Fund	Fund	Fund	Fund	
128	16120111O	Pegau	PWS Herring Program - Coordination and Logistics	\$338,583		Fund	Fund	Fund	Fund	
131	16120111Q	Branch	PWS Herring Program - Population Dynamics Modeling	\$104,920		Fund	Fund	Fund	Fund	
136	16160111S	Bishop	PWS Herring Program - Herring Movement Study	\$272,600		Fund	Fund	Fund	Fund	
139	16160111T	Moffitt	PWS Herring Program - ASL Study & Aerial Milt Surveys	\$60,000		Fund	Fund	Fund	Fund	

**Non-EVOSTC Program Proposals &
Project Amendments**

Draft 11-4-15

Project Number: 16120100

Project Title: EVOSTC Annual Budget

Primary Investigator(s): Elise Hsieh, EVOSTC Executive Director
Linda Kilbourne, EVOSTC Administrative Manager

PI Affiliation: EVOSTC

Project Manager: ADFG

EVOSTC Funding Requested:

FY16
\$2,520,420

Abstract:

The budget structure is designed to provide a clearly identifiable allocation of the funds supporting Trustee Council activities. The program components are:

- Administration Management
- Data Management
- Science Program
- Public Advisory Committee (PAC)
- Habitat Protection Program
- Trustee Agency Project Management & Federal Funds Transfer
- Trustee Agency Funding
- Alaska Resources Library & Information Services (ARLIS)

The budget estimates detailed within those specified program components are projected based upon prior year actual expenditures and include the application of estimated merit step increases, as well as payroll benefits increases. Detailed 12-month budget component items cover necessary day-to-day operational costs of the *Exxon Valdez* Oil Spill Restoration Office and administrative costs associated with overseeing current Trustee Council program objectives.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Not Reviewed	Not Reviewed	Fund	Fund	

Project Number: 16100853

Project Title: Pigeon Guillemot Restoration Research in Prince William Sound

Primary Investigator(s): David Irons

PI Affiliation: USFWS

Project Manager: USFWS

EVOSTC Funding Authorized To Date: \$1,718,562

FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
\$317,000	\$284,300	\$48,400	\$0	\$281,000	\$0	\$0	\$396,656	\$391,206

Additional EVOSTC Funding Requested: \$427,411

FY16	FY17	FY18
\$162,735	\$139,968	\$124,708

Requests include 9% GA.

Total EVOSTC Funding (Authorized and Requested): \$2,145,973

Funding From Non-EVOSTC Sources:

FY14	FY15	FY16	FY17	FY18	Total Non-EVOSTC Funding
\$391,280	\$ 371,280	\$317,580	\$313,580	\$312,580	\$ 1,707,300

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/27/15.*

This project provides an opportunity to restore the population of Pigeon Guillemots (*Cephus columba*) in Prince William Sound, Alaska, which has fallen by more than 90% at the Naked Island Group since 1989. A restoration plan for Pigeon Guillemots in PWS was prepared to address the species' lack of population recovery following injury by the 1989 Exxon Valdez oil spill. Predation on nests and adults by mink is now the primary limiting factor for guillemot reproductive success and population recovery at the most important historical nesting site for guillemots in PWS (i.e., the Naked Island group). Mink on the Naked Island group are descended in part from fur farm stock and arrived on the island group during the 1980s. The goal of the project is to remove all mink from the Pigeon Guillemot nesting areas and allow for recovery to occur. We trapped for the first time in the winter and spring of 2014. Seventy-six mink were killed. During the 2015 trapping season 23 mink were killed in localized areas. The last three weeks only three females were trapped, none were pregnant although it was breeding season. That is an indication that there are so few mink left in the nesting areas that was difficult to find a mate. We expect it will take 3 trapping seasons to remove all mink from the nesting areas. After that will be conduct monitoring trapping to ensure the mink are gone from the nesting areas. This summer we counted over 90 pigeon guillemots, up from 74 last year, control islands did not have a similar increase. We did not expect to see this large of increase in birds this year. The warm water in the Gulf of Alaska may have contributed as other species were moving from the Gulf to PWS. We surveyed active nests and found about 30 confirmed nests and about 20 suspected nests, last year we found 11. Colonies are starting to form again with up to 6 nests in one

Draft 11-4-15

area. Productivity during the chick stage was high, around 80%, indicating that the adults could find enough food for their chicks. This winter and spring we will trap again.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16

Date: September 2015

Trapping of mink to promote restoration of pigeon guillemots is already a remarkable success story, well ahead of expected time frames for recovery. The project is well along to remove all mink from PIGU nesting sites, and a positive PIGU population response has already been observed. Documentation of population trends of predator and prey over the full 5-year course of this project will make for an excellent case study. However, over the long term, the question is whether this success will be temporary or sustained, given that mink remain on other parts of the islands. The Pls have made estimates of PIGU population doubling times as a result of mink eradication from nesting sites. Additionally, it would be informative to estimate mink population trends in the absence of an ongoing trapping program after the conclusion of this project. Ultimately, lacking a program to fully eradicate mink from these islands, redistribution of a rebounding mink population would be expected to once again cause a PIGU population decline over the long term. Population projections of both predator and prey may be useful to evaluate the merits and timeliness of future management agency decisions about predator controls.

Science Coordinator, Executive Director Comments – FY16

Date: September 2015

I concur with the Science Panel's comments.

Public Advisory Committee Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15

Date: September 2014

The Panel notes that the proposal is strong and well written and provides a level of detail that allows for constructive review. We do note the high cost of the mink trapping effort in relation to the number culled in FY14. We are concerned about the effectiveness of the project and its ability to achieve its goals in the long term given that eradication of mink will not be allowed.

Science Coordinator, PAC, Executive Director Comments – FY15

Date: September and October 2014

Draft 11-4-15

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund Contingent	Not Reviewed	Fund	Fund

Science Panel Comments – FY14

Date: September 2013

The panel recommends funding of this proposal. The panel notes that the proposal is strong and well-written and provides a level of detail that allows for constructive review. The panel does acknowledge that culling could be a temporary or on-going solution and a “money sink,” if continued into future years and that it is a substantial commitment to fund and monitor over time. However, it is active restoration, which is rare among submitted proposals, and it is an interesting scientific experiment.

Science Coordinator Comments – FY14

Date: September 2013

I concur with the science panel regarding the scientific merit of the proposal. I also echo the concerns of the Panel this is likely a temporary solution and a full cull would be needed to increase the population by the numbers cited in the proposal. Dr. Irons stated in his final report for Phase 1 of this project (Page 12):

“... because even a single mink can devastate a guillemot colony (U.S. Fish and Wildlife, unpubl. data), culling is unlikely to significantly reduce the level of guillemot nest predation or facilitate population recovery.”

Has something changed since the report was accepted that a limited cull would now be considered useful?

I also have several questions regarding the design of the project including: If the number of birds increases, are there any plans to determine if the increase was from the predator removal or other factors? The plan includes monitoring the population on Smith Island as a control which is currently mink-free. However, there is no monitoring plan discussed in the proposal. Will Smith Island be surveyed at the same time and frequency as Naked Island? The proposal states that ADFG is only willing to consider a limited cull at this time. If a complete removal is found to be necessary, would a permit to complete this work be possible or denied due to the mixed genetic stock of the mink on the Island?

At this time, I feel that the Council should postpone a funding decision until a final Environmental Assessment is provided by the PI and the question above regarding the limited cull is answered.

Public Advisory Committee – FY14

Date: October 2013

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Executive Director Comments – FY14

Date: September 2013

I concur with the Science Panel and support the concerns of the Science Coordinator. Due to the prospect of matching funds if this proposal is funded at this time and the opportunity for active restoration, I recommend funding, conditioned upon completion of the EA to the satisfaction of EVOSTC Executive Director and the coordinating agencies (USFWS, APHIS, ADFG, USFS).

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	No consensus	No comments	No consensus

Science Panel Comments – FY12

Date: June 2011

This proposal has been previously submitted to the EVOS Trustee Council and reviewed by the Science Panel.

Support for the work was strong among the Science Panel members. One concern that arose pertained to the question of whether the mink found today on Naked and nearby Islands in the Naked group are descendants of the animals introduced artificially or whether these are fully native mink with an intact natural genome. That question has now been answered with DNA analysis revealing a mixed genome, not reflecting a pure native stock. This answer would appear to satisfy the question of whether these mink are natural (no) and to allow the extermination to move forward, if supportable scientifically by the Science Panel and Trustee staff and if politically and financially acceptable to the Trustee Council.

Here we will provide a review of the adequacy of the science. First, it is noteworthy that PIGUs are the only bird species still listed as Not Recovering after EVOS. Second, the importance of Naked Island and its potential recovery to this species is evident – the Naked Island group held about 25% of the PIGU population in PWS prior to the spill despite representing only 2 % of the PWS shoreline. Third, the inference that mink represent the impediment to PIGU recovery on Naked is strong, based especially on comparison Smith Island where mink are absent and PIGU survival is good. Fourth, the contention that strong recovery of PIGUs on Naked would lead to spread and re-colonization of other suitable sites in PWS is a reasonable expectation, so restoration on Naked pays a wider dividend of recovery elsewhere in PWS. Fifth, we know that the introduced foxes are now gone from Naked so that isn't the problem. Sixth, the alternatives analysis is compelling in showing that no other restoration option would work and that eradication is the only solution. For example, providing more of the now reduced lipid-rich prey would be useless, resulting in feeding mink better not in enhancing PIGU survival and abundance. Culling would be a half-step and require costly intervention forever, and thus can be rejected as a viable restoration option. Seventh, elimination of predatory mammals on islands is a well-established practice to enhance ground-nesting seabirds and other birds. Consequently, this proposal makes good sense scientifically and addresses an ongoing restoration failure of importance. The only questions involve the costs and the potential use of dogs, if trapping fails to get every last mink in the eradication process. The costs are 2.4 Million or 1.3 Million if a National Wildlife Foundation match is obtained. We concur that these cost estimates are reasonable because a 3-5

Draft 11-4-15

year time frame is needed to complete the removal. So while high, the expenditures are likely justified. The use of dogs in the removal of mink seems to possibly conflict with animal rights as an unacceptably cruel practice.

Science Coordinator Comments – FY12

Date: June 2011

This proposal is scientifically compelling and builds on four years of work focused on this topic. While the idea of a direct restoration project is appealing, I am concerned that the total project cost is very high in relation to the total number of nests that they project will be added to the island complex.

Public Advisory Committee Comments – FY12

Date: July 2011

No project specific comments.

Executive Director Comments – FY12

Date: July 2011

I do not have a recommendation for this project. The project is very compelling because it potentially provides active restoration for an injured species. However, the high cost and speculation regarding the long-term outcome needs to be weighed carefully by the Council.

FY07 FUNDING RECOMMENDATIONS

Science Panel	Science Coordinator	PAC	Executive Director
Fund reduced	Not reviewed	Not reviewed	Fund reduced

Science Panel Comments – FY07

Date: Fall 2006

This proposal investigates the efficacy of direct restoration techniques for the pigeon guillemot population in PWS. They will genetically sample mink that reside on Naked Island Archipelago to determine if the population was introduced or native and make recommendations for a recovery plan for pigeon guillemots based on the findings. Pigeon guillemots are one of two non-recovered species and this project represents one of the few restoration based proposals that have been submitted. The genetic sampling of mink and studies examining the relative contribution of mink vs. other predators to pigeon guillemot survival and reproduction are important in evaluating mink removals as a potential restoration activity. However, there is some concern that removal of mink may not be an appropriate restoration activity if the mink are in fact native. Also, food limitation studies may be difficult to interpret with respect to restoration and are perhaps premature. Mink removal may still prove an effective restoration tool even if food quality is poor. Furthermore, given the likely annual variation in food supply, a lack of food in one year may not be a reasonable predictor of future food limitation. We recommend funding the initial year of this proposal and suggest that efforts be made to provide genetic evidence on mink at the end of that year so that reasoned decisions can be made regarding future funding.

Science Coordinator Comments – FY07

Date: Fall 2006

The Science Director is on a long-term detail from the FWS and must therefore, recuse herself from making recommendations on FWS proposals. The PI on this proposal is employed by the FWS.

Public Advisory Committee – FY07

Date: Fall 2006

Not Reviewed.

Executive Director Comments – FY07

Date: April 2006

Salaries and logistics are the major expenses of this proposal. Assuming mink predation on pigeon guillemots, any direct restoration will likely involve controlling the mink population on Naked Island. Before this can be undertaken a determination must be made whether the mink population is indigenous or introduced. Therefore, I only recommend funding the minimum mink capture and genetic testing program necessary to determine where the population is indigenous or introduced. I further recommend local trappers and logistics be utilized in this effort to reduce expense.

**EVOSTC Long-Term Monitoring
Program Projects**

Draft 11-4-15

Project Number: 16120114

Project Title: EVOSTC Long-Term Monitoring Program (Gulf Watch Alaska)

Primary Investigator(s): Molly McCammon

PI Affiliation: AOOS

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$11,377,860

FY12	FY13	FY14	FY15
\$2,904,600	\$2,675,800	\$ 2,994,400	\$2,803,060

Additional EVOSTC Funding Requested: \$2,530,400

FY16
\$2,530,400

Requests include 9% GA.

Total EVOSTC Funding (Authorized and Requested): \$ 14,028,100

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$1,886,000	\$1,738,000	\$1,823,000	\$1,902,000	\$1,636,000	\$8,985,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

The goal of the Long-term Monitoring (LTM) program, known as Gulf Watch Alaska, is to provide sound scientific data and products that inform management agencies and the public of changes in the environment and the impacts of these changes on Exxon Valdez oil spill (EVOS) injured resources and services. The five-year program includes: 1) four monitoring components (environmental drivers, benthic, pelagic, lingering oil); 2) data management services; 3) integrated syntheses of data; 4) historic data recovery and syntheses; and 5) science outreach.

The program has six primary objectives:

1. Sustain and build upon existing time series in the EVOS-affected regions of the Gulf of Alaska.
2. Provide scientific data, data products and outreach to management agencies and a wide variety of users.
3. Develop improved monitoring for certain species and ecosystems.
4. Develop science synthesis products to assist management actions, inform the public and guide monitoring priorities for the next 20 years.
5. Enhance connections between the Gulf Watch Alaska and Herring Research and Monitoring (HRM) programs.
6. Leverage partnerships with outside agencies and groups to integrate data from broader efforts.

Some highlights from our progress in year 4 of the program include:

- Completed all project sampling and program annual reports through year 3
- Updated and added information to the program website (www.gulfwatchalaska.org) and data portal
- Completed and submitted program synthesis report and response to comments
- Held successful annual meeting and synthesis workshop, presented and participated in the joint programs science meeting in February
- Collaborated with the HRM program in joint synthesis reports, program meetings, and program reports

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16

Date: September 2015

The Science Panel was pleased to see that the two programs are closely integrating. It is expected that cross program publications and further integration, both on a practical and on a scientific level, will occur in the next 5 year plan, as noted in the Panel's comments from September 2014.

The administrative program management component for the program is very high cost with no detail on the need for these expenditures.

Science Coordinator, Executive Director Comments – FY16

Date: September 2015

I concur with the Science Panel's comments.

Public Advisory Committee Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15

Date: September 2014

This year, the Panel was pleased to see improvement in this year's proposals regarding QA/QC of data collection and integration of projects, including the oceanography proposals and proposals by Matkin, Moran and Arimitsu & Piatt. The revised reporting forms also prompted greater inclusion of benchmark results, publications and changes to work plans. The Panel was also pleased to see that the Science Advisory Panel has been selected and is actively providing feedback to the Program. The Panel appreciates the PIs initial efforts to engage junior scientists and continues to encourage post-

Draft 11-4-15

docs being integrated into the programs.

Next year, the Panel would still like to see improvements in:

Inclusion of fundamental information

The Panel would like to see the inclusion of fundamental information regarding the 1) approach, design and analysis of studies and 2) explicit statements of how analyses are answering major questions. This key information is essential to evaluating proposals, and we expect to see brief descriptions included in the next proposals. We are not requesting that detailed descriptions be provided to the degree exhibited in original proposals or publications; PIs should use their expertise to identify and include essential, fundamental information that should be included to facilitate review. Good examples of the level of expected detail include the proposals by Carls, Jones, Piatt and the Marine Debris Removal proposal by Pallister (available on the EVOSTC website).

The Panel appreciates that any additional requests for information in proposals can be perceived as onerous and that the Panel had indicated in prior years that they did not want the entire original proposal text included every year. However, the minimal, essential information requested should not take long to incorporate and could remain in subsequent proposals. From a Panel perspective, proposals cannot be evaluated without key, fundamental information on major hypothesis in part so changes to the design can be considered in proper context. We appreciate your efforts in refining your multi-year proposal submissions.

Coordination & Collaboration/Synthesis

The Panel appreciated the programs' explicit statements recognizing the synergisms among project efforts. It is clear that most projects are already working together where it is practical or advantageous to the achieving the goals of individual projects. We also appreciated that the programs recognized the need to integrate data across projects to arrive at a synthetic view of the status and trends of the PWS ecosystem, including more information on conceptual models and the synthesis of existing datasets that promise the necessary integration across projects. However progress in these areas will need to be more explicit and more fully developed, and details provided to the Panel were too limited to be able to truly evaluate progress in this area. We look forward to seeing synthesis (integrated data synthesis, not just conceptual synthesis) both within and across projects at the February synthesis meeting and view this as a critical checkpoint to assess progress of the program toward a synthetic understanding.

Science Coordinator Comments – FY15

Date: September 2014

I concur with the Science Panel's overall comments. The Program has clearly worked hard over the past field seasons to better integrate the projects, refine the administrative and outreach activities, and collect and maintain the scientific data.

PAC, Executive Director Comments – FY15

Date: October 2014

I concur with the Science Panel and Science Coordinator.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

The science panel appreciates the general approach of the LTM program but feels that more basic information was needed to fully evaluate the potential success of the program. Our comments below, and for several individual projects, highlight examples that would have benefitted from the inclusion of additional information for developing more informative proposals and progress reports. The panel looks for more informative proposals and progress reports in the future. Our goal is to provide feedback that may strengthen the program while it is still in its formative stage of implementation.

****Proposals by Matkin on killer whales, Moran on humpback whales, and Carls & Lindeberg on benthic monitoring were all praised by the Science Panel for their importance, inclusion of detail, and significant progress.***

Proposals were lacking in detail, hindering their evaluation

There was not enough information provided for the Science Panel to evaluate the proposals and offer substantive suggestions. In order to evaluate proposal merits, the Science Panel wanted to see more detail, including:

- Sampling design, locations and methods, including QA/QC of data collection
- Approach to data analysis including statistical methods and/or relevant contrasts
- Explicit statement of how analyses will answer the major questions
- A discussion of results to date and any adjustments in project design in view of results
- Explicit statement of how individual project results relate to or will be integrated into the broader program
- The proposals should be reviewed as a whole by someone from the group before submission.

The panel, EVOSTC and agency staff will be looking at options for providing brief guidance and/or a form for the programs in advance of proposal drafting and submission to clarify expectations. When EVOSTC staff has a draft form or guidance, we will circulate it to the Team Leads for their feedback. There was also initial discussion regarding reporting which we will also circulate if it is further developed.

An overall review by an outside expert in physical oceanography and climate would be useful.

In the current round of proposals, the need to describe physical oceanographic forcing was rarely described. Several proposals generally provided vague language, in some cases they cut and pasted text from the overarching and original 2012 proposal.

There is uneven treatment and an apparent lack of collaboration among the four oceanography projects in LTM. The Weingartner (GAK1) and Hopcroft (Seward Line) proposals are well thought out and collaborative. However, Campbell and Doroff proposals should be more collaborative and

Draft 11-4-15

thorough, including physical measurements; they are also unclear on instrument calibration and data QA/QC. There is no evidence of collaboration with trained physical oceanographers or reference to the PWS sampling stations in the Hopcroft proposal. An overall review of the physical oceanography and climate aspects of LTM (and, to a lesser extent, herring) would be useful.

Outside expert for oceanography review - some suggestions for trained oceanographers who work with biologists include: John Largier, UC Davis/Bodega Marine Laboratory, Steven Bogard, SWFSC-NMFS, and Jack Barth, OSU.

Publications

The Science Panel encourages investigators to publish their results in peer-reviewed journals to make their hard-won results available to wider scientific audience. This encouragement especially applies to young investigators who are establishing their careers. They may quickly become unable to compete for other jobs. We anticipate the FY17 Invitation will include an expectation to publish.

Data Management

The Science Panel is concerned about progress on data management. The data management proposal drew heavily on their old proposal without including sufficient updated evidence of interactions between the programs' PIs and the data management team. In addition, there does not appear to be a data management policy or QA/QC policy created as the programs approach Year Three. In addition, no milestones were reported in the newly submitted proposals, so it was difficult to gauge how much progress had been made in the last two years. Moreover, it was not clear how data would be available for synthesis. The panel recommends that the Council condition funding upon the creation of a credible and detailed data management policy and a QA/QC policy and include clear milestones in for their proposal.

Regarding a QA/QC policy: such a document is a basic need of any data management. We note too that instruments commonly need to be calibrated before and after use to be able to adjust for measurement drift, if it occurs. With two separate data centers operating under the EVOSTC program it is crucial that a high level of QA/QC be maintained. The Science Panel is concerned that adequate attention is not being devoted to this fundamental aspect of data management. It is particularly important that to assemble complete metadata to ensure that long-term data sets can be verified and understood once the current participants have moved on to new positions. For example, EPA and NSF require detailed data management and QA/QC plans as part of all proposals. Large monitoring programs, such as NSF's LTER and oceanographic programs, devote considerable time and effort to addressing these critical needs.

Example: As a specific example, the Ocean Tracking Network (OTN) has four nearly full-time people creating metadata forms that are required to be filled out, submitted and checked for QA-QC before data can be added to the database. Since OTN is currently adding equipment to tracking arrays in PWS, it would be particularly appropriate at this time to arrange communication between senior OTN data managers with EVOSTC program data PIs to ensure that data standards are adequate. As with OTN, and as emphasized in the initial funding of the EVOSTC programs, skilled data management resulting in data that can be relied upon by the scientific community and resource agencies will ultimately determine the long-term success and influence of the programs. The contact at OTN is Bob

Draft 11-4-15

Branton (bob.branton@gmail.com) or (bob.branton@dal.ca).

Attrition of Experienced Personnel

The panel notes that it may be a challenge to replace experienced personnel retiring or transitioning out of the programs, but the need for their expertise remains. To address these changes, the panel suggests that the programs partner their junior PIs with newly recruited, experienced scientists. Where difficulties exist in filling key positions, the panel also suggests strategically tapping outside experts to review projects and provide consultation and setting up a Post-Doc training program for the LTM and Herring projects. As experienced personnel leave the program either through retirement or departure, the salary savings could fund this kind of activity.

Potential Resource - The panel encourages the programs to consider options for developing concepts for postdoctoral programs that can help address these issues. The panel and the programs' internal panels and advisory groups can provide assistance in identifying potential post doc candidates who may be helpful to the programs. Intergovernmental Personnel Assignments and perhaps NRC Research Associate post-docs may also be a source for additional expertise and post-doc work.

Synthesis in Advance of February 2015 Workshop

There is concern from our review of the proposals that the programs are postponing work on synthesis until just before the Workshop. The programs should think through and create a step-by-step route and design for their 2015 synthesis so there is sufficient field time to work on it. This plan should include mechanisms and process. The part of synthesis that involves creation of and testing of models is best done by an iterative process in which modeling is sequentially tested by reference to new data and the models revised accordingly.

There was also a suggestion to focus on cross-cutting topical issues, such as acoustics and calibration. PIs with different expertise could be paired to initiate and encourage actual synthetic analyses and presentation in contrast to single PI presentations on isolated projects or topics.

Examples for pairings include: disease and physiology, and modeling of herring movements and disease.

Inter-project cooperation and communication

The Science Panel acknowledges and salutes the efforts made to coordinate logistics of field projects, especially following a long period when PIs worked relatively independently on most projects. However we are not convinced that some of the individual projects are as well connected as they should be, in terms of communication among PI's. This comment is based on an apparent lack of connectivity among some of the proposals.

Program Science Panel and Upcoming 2015 Synthesis

*See also Synthesis in Advance of February 2015 Workshop, above.

Proposal Objective 2. Assist with Scientific Review Panel

"Setup of the panel has been delayed in order to make the most effective use of panel members' time in advance of the synthesis workshop. Planning of the synthesis workshop begins in the final two quarters of year 2; the panel will be established by the end of year two (approximately one year in

Draft 11-4-15

advance of the synthesis workshop)."

This is a major problem. Bringing an outside science review into projects makes changes difficult (because of already established long-term monitoring protocols). Some of these aspects should have been established in Year 1 rather than just before a major synthesis workshop in Year 3. The Science Panel suggests they establish a group that reviews the developed monitoring and integration plans and how they support synthesis.

Regarding the Program's Science Panel:

What is its status? Their influence and guidance is not apparent; guidance, integration is needed. The LTM Program's internal Science Panel should be already composed, constituted and advising by now.

Science Coordinator Comments – FY14

Date: September 2013

I concur with overall comments of the Science Panel. I agree with the Panel's comments regarding the overall poor quality of the proposals. Most proposals made no effort to even change the dates of their tasks and deliverables making it almost impossible to determine where the project was in meeting its objectives. I am also particularly concerned by the lack of a functioning science advisory committee this far into the program. The creation of this group was a requirement of the FY12 Invitation for Proposals under which this program was funded. ***I would recommend to the Council that funding of the administrative portion of this program be withheld until a plan is in place for a program science advisory body.***

Public Advisory Committee Comments – FY14

Date: October 2013

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Executive Director Comments – FY14

Date: October 2013

I concur with the Science Panel and their extensive comments noted above and support the concerns of the Science Coordinator.

Trustee Council Comments – FY14

Date: October 2013

The Council requests the Team Leads and PIs within the Long-Term Programs in Project numbers 14120111 and 14120114 work with EVOSTC staff to address Science Panel and EVOSTC staff comments in the Fiscal Year 2014 Work Plan and participate in a Long Term Programs' Data Review Meeting with EVOSTC and Trust Agency Staff.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

I concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund
April 2011	Fund	Fund	Fund	Fund

Science Panel Comments – FY12**Date: July 2011 – Individual Panel Member Comments****Individual Comment 1:**

Seabird monitoring costs double in year 3 – The explanation is clear, although the basis for why two surveys may be needed in year 3 and what is lost when only 1 is done is unclear. Cost breakdown for Coordination, data management, outreach, and administration – The suite of activities included under this heading is now explicit as are the total costs associated with each one in the budgets provided. I wish to note, however, the “conceptual modeling” project of Hollmen does not fall into any of these categories – it is a scientific study, not an administrative service, outreach activity, coordination, or data management task, and should be reviewed as such. In that context, I examined the Hollmen proposal and have some concerns. Although intended to be “conceptual modeling”, I find no mention of any concepts in the proposal. I cannot find indication of the methodological approaches to be used and why they were chosen. For example, will this be a Bayesian process? Will modeling be ecosystem based? Will ECOPATH or something analogous be employed? There are no literature citations in this proposal. For 395K over 5 years, more detail would seem to be called for. I cannot find a CV included for the PI, Hollmen. Does she have modeling experience, and, if so, in what types of models?

Synthesis concerns – the PIs provide a thoughtful and compelling response to this issue, providing an excellent overview and demonstrating potential for meaningful syntheses.

Data management – The PIs make a strong case for the cost efficiencies associated with leveraging that lower the costs of the data management for EVOS Trustee projects by joining with AOOS in a coordinated effort with a single consultant-provider. The response also makes a justifiable case for why teaming up with AOOS makes sense – because of their presumed permanence as compared to other science programs. I am impressed that Phil Mundy chairs the AOOS external advisory

Draft 11-4-15

committee and concur that he has the experience and wisdom to provide rational advice and guidance. Nevertheless, the bottom line after all is said and done is – Does Axiom deliver the data products that are acceptable to the scientists it is serving. This response document appears to argue that the scientists that participate in the Monitoring Program are indeed satisfied. So that helps me side with continuing the relationship with Axiom. Nevertheless, this document implies a willingness to interact with NCEAS and to discuss their recommendations for improvements in all aspects of Axiom's data management services and I think that facilitating that set of interactions in a meaningful way (meaning to sufficient depth and not just superficial) is important for piece-of-mind given delays in delivery of reports from Axiom on past EVOS Trustee contracts. I am also curious to know of the outstanding final reports have indeed been completed successfully at this time. I see argued in this response document that the past scientist clients of AXIOM are satisfied with the company's services, which addresses one major issue raised by the Science Panel.

Date: April 2011

This proposal is well presented and provides a thorough long-term monitoring program for the spill area. The team is experienced and well -qualified to complete the proposed work. The outreach and education strategies and partnerships are well thought-out and have the potential to provide effective means to disseminate information and engage community members in understanding the results of the integrated monitoring program. The potential future development of a citizen monitoring program would provide another effective strategy. The Science Panel was especially impressed with the section called 'cross-cutting' that showed the linkages with the Herring Program. Gathering and making data available will be the keystone of this program. The Science Panel expressed serious concerns about past performance of some participants and that the data management team does not have sufficient expertise or scientific guidance to deliver a useable data system. In addition, it is not clear at all there is a plan for the inclusion of structurally diverse data: where and how will such data be organized so that relevant data and metadata from a broad array of disciplines can be assembled in one database. The panel viewed this as this as an informatics problem that, if not resolved at the onset, will jeopardize the long-term program. There is a very clear need to overcome critical technological impediments to accomplishing synthetic, integrative environmental science, while at the same time promoting more open access to information and data sharing. It is critical that this database be open source and be compliant with the Knowledge Network for Bio-complexity metadata compliant with Ecological Metadata Language. In addition, there should be a plan from the outset as to how to incorporate this data into NPRB's GOAIERP program at the end of the first five-year contract cycle.

Therefore, we strongly recommend that the Council provide assistance from an organization such as the National

Center for Ecological Analysis and Synthesis (NCEAS) for peer review and technical assistance to the data management team. With regard to the separate lingering oil monitoring proposal included within the Program proposal, the Panel has no objection to the funding of this additional project.

Science Coordinator Comments – FY12

Date: April 2011

I agree with the Science Panel and Executive Director. I also have serious concerns regarding the

Draft 11-4-15

data program and would encourage the Council to assist the team by providing funding for a collaborator to assist the data team in their development of the data program. My concerns regarding the proposed contractor are based on a poor past performance with meeting deadlines and producing deliverables. I also believe that the final product would greatly benefit if Axiom was given assistance from a group that has experience working with large heterogeneous data sets.

The PI's that are included in this program proposal have extensive experience gathering data in PWS and have contributed to several long-term data sets that will be the foundation of this program. The team's quick response to our data set questions demonstrates their ability to work together and to openly share information with their fellow researchers.

Public Advisory Committee – FY12

Date: April 2011

The PAC supports funding the LTM project proposal, noting that the PAC agrees with the Science Coordinator in that there are serious concerns regarding the data program and would encourage the Council to assist the project team by providing funding for a comprehensive review of the data program. The motion passed, with dissent by Brune and Bauer, based on Axiom's current past due deliverables.

It was moved by French, second by Studebaker, that the PAC supports the Science Panel recommendation for additional funding for the LTM project to consider the effects of lingering oil. Passed unanimously.

Executive Director Comments – FY12

Date: April 2011

There has been strong concern about the program's data manager serving the entire program. Since April, the data manager's work has been favorably reviewed, has submitted late deliverables to the Council and several data management options have been produced by this program and outside entities. These options presented are in conjunction with leaders in the field of heterogeneous scientific database management and are excellent options. I recommend the Council pursue one of these options to ensure successful management of the data produced by this and past Council-funded efforts.

Project Number: 16120114-A

Project Title: LTM Program - Continuous Plankton Recorders

Primary Investigator(s): Sonia Batten

PI Affiliation: SAHFOS

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$ 1,190,600

FY02-FY11	FY12	FY13	FY14	FY15
\$984,300	\$0	\$66,800	\$68,800	\$70,700

Additional EVOSTC Funding Requested: \$73,100

FY16
\$73,100

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$1,263,700

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$94,700	\$148,000	\$180,800	\$169,000	\$592,500

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

Many important species forage outside of Prince William Sound for at least some of their life history (herring, salmon, birds and marine mammals for example) so an understanding of the productivity of these shelf and offshore areas is important to understanding and predicting fluctuations in resource abundance. The Continuous Plankton Recorder (CPR) has sampled a continuous transect extending from the inner part of Cook Inlet, onto the open continental shelf and across the shelf break into the open Gulf of Alaska monthly through spring and summer since 2004. There are also data from 2000-2003 from a previous transect. The current transect intersects with the outer part of the Seward Line and provides complementary large scale data to compare with the more local, finer scale plankton sampling on the shelf and in PWS. We are continuing to sampling this transect spring through fall each year with monthly resolution. Resulting data will enable us to identify where the incidences of high or low plankton are, which components of the community are influenced, and whether the whole region is responding in a similar way to meteorological variability. Evidence from CPR sampling over the past decade suggests that the regions are not synchronous in their response to ocean climate forcing. The data can also be used to try to explain how the interannual variation in ocean food sources creates interannual variability in PWS zooplankton, and when changes in ocean zooplankton are to be seen inside PWS. The CPR survey is a cost-effective, ship-of-opportunity based sampling program supported in the past by the EVOSTC that includes local involvement and has a proven track record.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund
April 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-B

Project Title: LTM Program - Administration, Science Review Panel and PI Meeting Logistics, and Outreach and Community Involvement

Primary Investigator(s): Katrina Hoffman

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$1,130,000

FY12	FY13	FY14	FY15
\$263,300	\$274,700	\$298,600	\$293,400

Additional EVOSTC Funding Requested: \$288,100

FY16
\$288,100

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$1,418,100

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et al. To achieve fiscal efficiency, the Prince William Sound Science Center (PWSSC) serves as the administrative lead and fiscal agent for the consortium implementing this program known as Gulf Watch Alaska (GWA). As fiscal agent and administrative lead, PWSSC is responsible for: managing award contracts for all non-Trustee Agency projects within the program; ensuring the program and projects adhere to all reporting policies, practices and timelines as required by the EVOSTC and NOAA; serving as a liaison between the program and EVOSTC staff; coordinating travel and logistics for principal investigator annual meetings; coordinating travel and logistics for outreach efforts; participating in an annual audit; and providing administrative support to the outreach and community involvement component of the GWA program. The Outreach and Community Involvement component is coordinated by the Alaska Ocean Observing System. We also coordinate with the Herring Research and Monitoring Program on data sharing, administration and outreach.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16**Date: September 2015**

The high cost of the program administration is of concern to the Panel.

Science Coordinator, Executive Director Comments – FY16**Date: September 2015**

I concur with the Science Panel's comment.

Public Advisory Committee Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15**Date: September 2014**

There is discussion of the website being the primary outreach tool for the team, yet the site does not appear to be regularly updated or provide much information for the general public on the Program

Science Coordinator Comments – FY15**Date: September 2014**

I concur with the Panel's concerns regarding the outreach program. The website is being used as the "primary source of information" but there is very little information that would be of use to the general public. The publications page is blank and there are no links to the Delta Sound Connection article mentioned in the proposal.

PAC, Executive Director Comments – FY15**Date: October 2014**

We concur with the Science Panel and Science Coordinator.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

This proposal demonstrates a good range of activities, is well written and explained. Very good elaboration on the level of partnering and how partnerships work. The project has good advisory committees, but could use some evaluation of the impacts of its public educational programs – are they reaching the intended audience, etc. The budget may be inadequate to support evaluation costs.

Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director, Trustee Council Comments – FY13**Date: September 2012**

There are no project specific comments.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund
April 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-C

Project Title: LTM Program - Seabird Abundance in Fall and Winter

Primary Investigator(s): Mary Anne Bishop

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$ 294,600

FY12	FY13	FY14	FY15
\$51,700	\$78,600	\$80,900	\$83,400

Additional EVOSTC Funding Requested: \$86,300

FY16
\$86,300

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$380,900

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$10,500	\$45,500	\$63,500	\$63,500	\$63,500	\$246,500

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Gulf Watch Alaska Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et.al. The vast majority of seabird monitoring in areas affected by the Exxon Valdez oil spill has taken place around breeding colonies during the reproductive season, a time when food is generally at its most plentiful. However, seabirds spend most of the year widely dispersed. Late fall through winter are critical periods for survival as food tends to be relatively scarce or inaccessible, the climate more extreme, light levels reduced, day length shorter and water temperatures colder. Post-spill ecosystem recovery and changing physical and biological factors all have the potential to affect PWS seabird populations. Of the seabirds that overwinter in PWS, nine species were initially injured by the Exxon Valdez oil spill, including three species that have not yet recovered (marbled murrelet, Kittlitz's murrelet and pigeon guillemot). Here we propose to continue to monitor from 2012 through 2016 seabird abundance, species composition, and habitat associations using multiple surveys (up to 5 surveys per season) during late fall and winter. The data will improve our predictive models of seabird species abundance and distribution in relation to biological and physical environmental factors. In addition, by monitoring the top-down forcing by seabirds, a major source of herring predation, this project will complement the suite of PWS Herring Research & Monitoring studies, including improved mortality estimates for herring population models. This project is part of the pelagic component within the integrated Gulfwatch Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et. al. Our project uses as observing platforms the vessels associated with the LTM

Draft 11-4-15

Humpback Whale surveys, PWS Herring Research & Monitoring Juvenile Herring Abundance Index and integrates the seabird observations with those studies. In addition, our projects uses vessels associated with Alaska Dept. of Fish and Game October PWS shrimp surveys, and PWS Science Center February acoustic array cruises.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15

Date: September and October 2014

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14

Date: September 2013

The proposed objectives are to characterize the spatial and temporal distribution of seabirds in PWS during late fall and winter and relate the presence of seabirds with prey distributions from hydro-acoustic surveys for identifying winter habitat of seabirds and improving estimates of herring consumption in winter. The panel feels that improved resolution of sampling during summer, when seabirds are nesting and most accurately censused, may be more fruitful than conducting expansive surveys during the winter. Given the overlap of investigators on the summer and winter surveys, we encourage them to consider conducting annual rather than biannual surveys in summer by scaling back winter surveys.

Science Coordinator, Executive Director, Trustee Council Comments – FY14

Date: September and October 2013

I concur with the Science Panel.

Public Advisory Committee Comments – FY14

Date: October 2013

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Draft 11-4-15

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund
April 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-D

Project Title: LTM Program – Data Management

Primary Investigator(s): Rob Bochenek

PI Affiliation: Axiom Consulting

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$ 682,200

FY12	FY13	FY14	FY15
\$190,800	\$163,400	\$164,000	\$164,000

Additional EVOSTC Funding Requested: \$162,600

FY16
\$162,600

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$844,700

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$683,000	\$640,000	\$620,000	\$500,000	\$500,000	\$2,943,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project supplies the EVOS Long Term Monitoring (LTM) effort with critical data management support to assist study teams in efficiently meeting their objectives and ensuring data produced or consolidated through the effort is organized, documented and available to be utilized by a wide array of technical and non-technical users. This effort leverages, coordinates and cost shares with a series of existing data management projects which are parallel in scope to the data management needs of the long term monitoring program. In the first two years, this project would focus on providing informatics support to streamline the transfer of information between various study teams and isolate and standardize historic data sets in the general spill affected area for use in retrospective analysis, synthesis and model development. These efforts would continue into year three through five but efforts would also focus on developing management and outreach applications for the data and data products produced from the LTM program.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15**Date: September 2014**

It was encouraging for the Science Panel to hear via a conference call with Kris Holderied, Tammy Neher, and Scott Pegau that the standardized forms for metadata submission had been recently modified, and that a more refined version is now available to investigators. The Panel is hopeful that this will facilitate all investigators' compliance on submission of both metadata and data in a timely manner (within one year of collection) as agreed upon when accepting funding from EVOSTC.

Science Coordinator Comments – FY15**Date: September 2014**

I concur with the Science Panel's comments. I understand the challenges of achieving data compliance with the individual projects and would be happy to assist if desired.

PAC, Executive Director Comments – FY15**Date: October 2014**

We concur with the Science Panel and Science Coordinator comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund Conditional	Fund Conditional	Not Reviewed	Fund Conditional	Fund Conditional

Science Panel Comments – FY14**Date: September 2013**

Progress is listed as "Data is being archived on the Workspace by investigators in the program..." and "Data from the past two field seasons will be ingested into the data management system. We will continue to refine and expand the information available through the Herring data portal."

Please specify what data have been incorporated. Also, the demonstration of progress is not adequate. More detail is essential. Failing that, this project should be suspended. An inventory of all data proposed to be incorporated eventually into the program should be drawn up and an accounting of progress on incorporating the listed data sets should be reported annually, including any changes to the inventory of target datasets.

The Science Panel is concerned about progress on data management. The data management proposal drew heavily on their old proposal without including sufficient updated evidence of interactions between the programs' PIs and the data management team. In addition, there does not

Draft 11-4-15

appear to be a data management policy or QA/QC policy created as the programs approach Year Three. In addition, no milestones were reported in the newly submitted proposals, so it was difficult to gauge how much progress had been made in the last two years. Moreover, it was not clear how data would be available for synthesis. The panel recommends that the Council condition funding upon the creation of a credible and detailed data management policy and a QA/QC policy and include clear milestones in for their proposal.

A QA/QC policy is a basic need of any data management. We note too that instruments commonly need to be calibrated before and after use to be able to adjust for measurement drift, if it occurs. With two separate data centers operating under the EVOSTC program it is crucial that a high level of QA/QC be maintained. The Science Panel is concerned that adequate attention is not being devoted to this fundamental aspect of data management. It is particularly important that to assemble complete metadata to ensure that long-term data sets can be verified and understood once the current participants have moved on to new positions. For example, EPA and NSF require detailed data management and QA/QC plans as part of all proposals. Large monitoring programs, such as NSF's LTER and oceanographic programs, devote considerable time and effort to addressing these critical needs.

Example: As a specific example, the Ocean Tracking Network (OTN) has four nearly full-time people creating metadata forms that are required to be filled out, submitted and checked for QA-QC before data can be added to the database. Since OTN is currently adding equipment to tracking arrays in PWS, it would be particularly appropriate at this time to arrange communication between senior OTN data managers with EVOSTC program data PIs to ensure that data standards are adequate. As with OTN, and as emphasized in the initial funding of the EVOSTC programs, skilled data management resulting in data that can be relied upon by the scientific community and resource agencies will ultimately determine the long-term success and influence of the programs. The contact at OTN is Bob Branton (bob.branton@gmail.com) or (bob.branton@dal.ca).

Science Coordinator, Executive Director Comments – FY14

Date: September and October 2013

We concur with the Science Panel.

Public Advisory Committee Comments – FY14

Date: October 2013

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14

Date: October 2013

The Council requests the Team Leads and PIs within the Long-Term Programs in Project numbers 14120111 and 14120114 work with EVOSTC staff to address Science Panel and EVOSTC staff comments in the Fiscal Year 2014 Work Plan and participate in a Long Term Programs' Data Review Meeting with EVOSTC and Trust Agency Staff.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Modify	Modify		Modify

Science Panel Comments – FY12**Date: June 2011**

The Pls make a strong case for the cost efficiencies associated with leveraging that lower the costs of the data management for EVOS Trustee projects by joining with AOOS in a coordinated effort with a single consultant-provider. The response also makes a justifiable case for why teaming up with AOOS makes sense – because of their presumed permanence as compared to other science programs. I am impressed that Phil Mundy chairs the AOOS external advisory committee and concur that he has the experience and wisdom to provide rational advice and guidance. Does Axiom deliver the data products that are acceptable to the scientists it is serving. This response document appears to argue that the scientists that participate in the Monitoring Program are indeed satisfied. So that helps me side with continuing the relationship with Axiom. Nevertheless, this document implies a willingness to interact with NCEAS and to discuss their recommendations for improvements in all aspects of Axiom's data management services and I think that facilitating that set of interactions in a meaningful way (meaning to sufficient depth and not just superficial) is important for piece-of-mind given delays in delivery of reports from Axiom on past EVOS Trustee contracts. I see argued in this response document that the past scientist clients of AXIOM are satisfied with the company's services, which addresses one major issue raised by the Science Panel.

Science Coordinator Comments – FY12**Date: June 2011**

I agree with the Science Panel and Executive Director. I also have serious concerns regarding the data program and would encourage the Council to assist the team by providing funding for a collaborator

Draft 11-4-15

to assist the data team in their development of the data program. My concerns regarding the proposed contractor are based on a poor past performance with meeting deadlines and producing deliverables. I also believe that the final product would greatly benefit if Axiom was given assistance from a group that has experience working with large heterogeneous data sets

Public Advisory Committee – FY12

Date: July 2011

Issues raised by the Science Panel, Trustee Council staff, and the PAC called for additional work and collaboration to assist with establishment of a data management system that includes accessible scientific data as well as public information. French noted that he had no problem with either NCEAS or Woods Hole—he questioned Axiom’s role and staying power. French said he supported the NCEAS and Axiom collaboration. Chairman Eilo summed the PAC interest in the Trustee Council implementing a solid data management, synthesis, and public access system.

Executive Director Comments – FY12

Date: July 2011

There has been strong concern about the program’s data manager serving the entire program. Since April, the data manager’s work has been favorably reviewed, has submitted late deliverables to the Council and several data management options have been produced by this program and outside entities. These options presented are in conjunction with leaders in the field of heterogeneous scientific database management and are excellent options. I recommend the Council pursue one of these options to ensure successful management of the data produced by this and past Council-funded efforts.

Project Number: 16120114-E

Project Title: LTM Program –Monitoring of oceanographic conditions in PWS

Primary Investigator(s): Robert Campbell

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$ 832,300

FY12	FY13	FY14	FY15
\$238,100	\$193,200	\$197,300	\$203,700

Additional EVOSTC Funding Requested: \$209,300

FY16
\$209,300

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$1,041,600

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$23,300	\$23,300	\$23,300	\$145,000	\$135,000	\$349,900

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et. al. This project is intended to provide physical and biological measurements that may be used to assess bottom-up impacts on the marine ecosystems of Prince William Sound. Specifically, it is proposed to deploy an autonomous profiling mooring in central Prince William Sound that will provide high frequency (~daily) depth-specific measurements of physical (temperature, salinity, turbidity), biogeochemical (nitrate, phosphate and silicate) and biological (Chlorophyll-a concentration) parameters, over the course of the growing season (focused on the vernal and autumn blooms). Several regular vessel surveys are also proposed to provide ground-truth data for the mooring, and to attempt to capture some of the spatial variability in PWS. As well as the mooring site, the surveys will visit all four of the SEA bays to maintain ongoing EVOSTC funded time series measurements at those sites and to support proposed herring research (Pegau et. al). The major entrances (Hinchinbrook Entrance and Montague Strait) will also be visited. The surveys will make the same suite of measurements as the mooring, and will also collect water and plankton samples. This project will also link significantly with the herring research efforts proposed by Pegau et al.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Draft 11-4-15

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

The physical measurements are very important in a project of this kind. There is little evidence that the nuances of the physical oceanography – from instrument calibration, data QA, interpretation of results, and relationships to other similar programs – are in place. There is no reference to or integration with the UA (University of Alaska) physical oceanographers from the GulfWatch (GAK1) program or to the physical measurements being made in PWS in the Seward Line program, or the historical physical oceanography conducted by the PWSSC that describes water mass movements from the shelf into Hitchinbrook Entrance and through PWS.

For the moored instrument, calibration is a concern. The proposal states that instruments will be calibrated annually. Typically they should be calibrated before and after each deployment, and the data corrected for drift of the instruments. Has a physical oceanographer been consulted on this? The concern is that the physical data will be assumed to be accurate and will be used for various purposes without adequate QA/QC.

There is not a lot of specificity on how the plankton will be handled, net sizes or other factors. Need further information on target species, and it would be good to show how this relates to Hopcroft's Seward line project, particularly those EVOSTC funded samples taken in PWS, and to Batten's continuous plankton recorder results. There is no evidence of this in the Collaboration and Cooperation section of the proposal.

Science Coordinator, Executive Director Comments – FY14**Date: September and October 2013**

We concur with the Science Panel.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14**Date: October 2013**

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: July 2011**

There are no project specific comments.

Project Number: 16120114-G

Project Title: LTM Program – Long-term monitoring of oceanographic conditions in Cook Inlet/Kachemak Bay

Primary Investigator(s): Angela Doroff and Kris Holderied

PI Affiliation: ADFG, NOAA

Project Manager: ADFG, NOAA

EVOSTC Funding Authorized To Date: \$669,500

FY12	FY13	FY14	FY15
\$191,900	\$177,400	\$166,500	\$133,700

Additional EVOSTC Funding Requested: \$108,800

FY16
\$108,800

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$778,300

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$282,000	\$180,000	\$180,000	\$255,000	\$255,000	\$1,152,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services. This project is designed to assist in the evaluation of recovery and restoration of injured resources in the foot print of the Exxon Valdez oil spill (EVOS). It is important to know if oceanic conditions and changes in the Gulf of Alaska are synchronous with near-shore trends, and monitoring at multiple sites will help discern such relationships. Mapping currents and water mass movements of a region contributes to our understanding of patterns in the abundance and diversity of marine plankton, invertebrates, fish, birds, and mammals in coastal Alaska. We are mapping the waters in lower Cook Inlet and Kachemak Bay to understand the intrusions of the Alaska Coastal Current and to identify spatial and temporal changes in this region and relate these observations to injured resources. Developing an understanding of the structure of the physical oceanography will help us understand the connectivity of water movement and potential plankton transport between lower Cook Inlet and Kachemak Bay. By determining the local species of phytoplankton and zooplankton and understanding their seasonal distribution we will begin to understand the biological patterns associated with upper trophic levels of the nearshore marine system. Information from this project will also be useful to local mariculture operations, subsistence harvesters of hard shell clams and other invertebrates, NOAA Regional Ocean Circulation Model applications, and monitoring programs for harmful algal blooms.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

The Science Panel agrees that mapping the waters of lower Cook Inlet and Kachemak Bay to understand the effects of intrusions of the Alaska Coastal Current and variation of other currents on phytoplankton and zooplankton distribution and abundance is a valuable part of long-term ecosystem monitoring.

Questions arose about the ability to meet this objective with the proposed unbalanced sampling design. Sampling transects 3, 4, 6, and 7 (Kachemak Bay and lower Cook Inlet) will be reduced from quarterly in the first three years of the project to three times in Y4 and twice in Y5 due to budget constraints, thereby limiting the scope of analysis among years. Would a different, but inter-annually consistent, design provide a more powerful, thorough, and rigorous analysis of temporal and spatial variation under these budget constraints? Alternatives might include reducing the: (1) sampling frequency of transects to three times per year throughout the study, (2) the number of stations along transects to maintain quarterly sampling or (3) the number of transects to maintain quarterly sampling. We advise that this sampling plan be carefully re-evaluated and justified.

Concerns were also expressed about the collection and handling of physical measurements – are instruments appropriately calibrated, and how are data handled (QA/QC)? Evidence of collaboration with other physical measurement programs (GAK1, Seward Line) and the relationship to (and use of?) the results of the new Seward Line PWS stations were of interest. Are the physical oceanography measurements in the program designed to take into account the gyre and counter-gyre in Kachemak Bay?

Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator Comments – FY13**Date: September 2012**

I concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

Executive Director Comments – FY13**Date: September 2012**

I concur with the Science Panel.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-H

Project Title: LTM Program – Science Coordination and Synthesis

Primary Investigator(s): Kris Holderied

PI Affiliation: NOAA

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$556,900

FY12	FY13	FY14	FY15
\$123,500	\$139,000	\$148,300	\$146,100

Additional EVOSTC Funding Requested: \$151,600

FY16
\$151,600

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$708,500

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$13,000	\$13,000	\$13,000	\$13,000	\$13,000	\$65,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et al (2011). This project explicitly provides for science coordination and syntheses of data from our long-term monitoring program (Gulf Watch Alaska), as well as incorporating an interdisciplinary framework into program development and implementation. The science coordination and synthesis component of our integrated program improves linkages between monitoring in different regions (Prince William Sound, Gulf of Alaska shelf, lower Cook Inlet) as well as between disciplines in a given region, as a way to better discern the impacts of environmental change on restoration and continued recovery of injured resources. Science coordination includes facilitating program planning and sharing of information between principal investigators, developing annual reports on the science program, and coordinating ongoing evaluation of the overall program. Science synthesis efforts help integrate information across the entire program and are closely coordinated with the conceptual ecological modeling and data management teams in our integrated program.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-I

Project Title: LTM Program – Conceptual Ecological Modeling

Primary Investigator(s): Tuula Hollmen

PI Affiliation: ASLC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$349,200

FY12	FY13	FY14	FY15
\$83,100	\$91,900	\$95,600	\$78,600

Additional EVOSTC Funding Requested: \$81,900

FY16
\$81,900

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$431,000

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Gulf Watch Alaska Long-term Monitoring of Marine Conditions and Injured Resources and Services program. We will develop conceptual ecological models to support the synthesis and planning relating to the long term monitoring program in Prince William Sound, outer Kenai coast, and lower Cook Inlet/Kachemak Bay. We will summarize system components, processes, and influences into a synthetic framework and develop submodels to support programmatic integration across its components. Conceptual models will assist in identification of data needs and development of long term monitoring priorities. Through refinement of models, they will also demonstrate progress in understanding of ecosystem structure and function through the Gulf Watch Alaska program. The conceptual models will provide a framework for development of numerical and quantitative models of system function and responses to external influences. Finally, the conceptual models will provide a communication tool among scientists, resource managers, policy-makers, and the general public, and will provide visualization tools to support outreach efforts of the Gulf Watch Alaska program.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Do Not Fund	Do Not Fund	Do Not Fund	Do Not Fund	

Science Panel Comments – FY16

Date: September 2015

The Science Panel feels that insufficient progress has been made and we note that previous comments have not been adequately addressed. The Panel recognizes the importance and key integrative role that this proposal should play; however, we have received essentially the same minimal information in consecutive annual reports from the PIs indicating limited progress. The Conceptual Model presented at the February meeting was a disappointment. Upon request, the Panel received the "in press" paper, but the modest example of the zooplankton-herring-whale sub-model does not provide adequate evidence that stated overall goals and milestones are being addressed. The Panel had expected that the model would have been fully articulated earlier in the five-year cycle, tested and refined, and then modified, as indicated as an "iterative" process in the initial proposal. It's clear at this point that the only product is a diagram depicting hypothesized / expected links among entities in the ecosystem that is descriptive and does not draw on legacy data or recent Program data. Given that these issues have been raised annually, it is not clear how completing the objectives in this year (producing sub-models) will further our understanding of the system.

Science Coordinator, Executive Director Comments – FY16

Date: September 2015

I concur with the Science Panel's comments.

Public Advisory Committee Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15

Date: September 2014

The Panel appreciated that the conceptual model could provide significant integration, however the Panel remained concerned about the lack of detail on the conceptual models. It is important for the Panel to better understand what exactly the conceptual modeling approaches, how they are implemented, and specifically how they make use, and will in the future make use, of the data collected by other projects. The details of the organizing model (and sub-models described in the conference call) and its value for guiding future work must be demonstrated at the upcoming synthesis meeting; otherwise the Panel is unlikely to recommend continued funding for this work beyond FY15.

Science Coordinator, PAC, Executive Director Comments – FY15

Date: September and October 2014

We concur with the concerns of the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund Conditional	Fund Conditional	Not Reviewed	Fund Conditional	Fund

Science Panel Comments – FY14**Date: September 2013**

From the CV, there is no evidence that the PI has experience as a synthetic ecological modeler. Her CV and publications suggest that she is more of an avian physiologist. It is unclear how their web-based visualization and data exploration tools differ from those of the data management group and NCEAS. Is there unnecessary duplication? Also, it appears that there are no plans to achieve the objectives until the very end of the 5-yr program. This is not acceptable, as it leaves inadequate time for iterative model evaluation and refinement.

This modeling project is very important to the overall program. However, it lacks evidence of any progress two years into the project and offers no vision of what can and will be done. No milestones have been tied to ongoing costs for this project. The proposals include an integration component but the submissions were boilerplate. More explicit information that sets out a road map is needed, not necessarily a longer submission. The programs are focused on monitoring but the programs should still have forward-thinking research. There should also be an adaptive process that allows the programs to set out a conceptual model, which is continuously updated and refined as its accuracy is challenged by new data and the PIs should develop a collection of reasonable hypotheses. To address these problems, the panel recommends the formation of a Conceptual Modeling Group, drawn from the programs' existing PIs who are already involved in the programs and known for their synthetic vision: Piatt, Pegau, Weingartner, Hopcroft and Jeep Rice. Examples of synthesis can be found on the Internet, including Chesapeake Bay, George's Bank and Steve Brandt's spatially explicit modeling of habitat quality and fish growth. Daniel Pauly and Tom Okey have been involved in an ECOPATH-ECOISM modeling of the PWS food web.

Science Coordinator, Executive Director Comments – FY14**Date: September and October 2013**

We concur with the Science Panel.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14**Date: October 2013**

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel Comments – FY12**Date: June 2011 – Individual Panel Member Comments****Individual Comment 1:**

I examined the Hollmen proposal and have some concerns. Although intended to be “conceptual modeling”, I find no mention of any concepts in the proposal. I cannot find indication of the methodological approaches to be used and why they were chosen. For example, will this be a Bayesian process? Will modeling be ecosystem based? Will ECOPATH or something analogous be employed? There are no literature citations in this proposal. For 395K over 5 years, more detail would seem to be called for. Does the PI have modeling experience, and, if so, in what types of models?

Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-J

Project Title: LTM Program – Seward Line Monitoring

Primary Investigator(s): Russ Hopcroft

PI Affiliation: UAF

Project Manager: ADFG

EVOSTC Funding Authorized To Date: \$362,300

FY12	FY13	FY14	FY15
\$98,100	\$59,900	\$100,500	\$104,000

Additional EVOSTC Funding Requested: \$107,700

FY16
\$107,700

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$470,200

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$300,000	\$300,000	\$600,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

The ocean undergoes year-to-year variability in the physical environment, superimposed on longer-term cycles, and potential long-term trends. These variations influence ocean chemistry, and propagate through the lower trophic levels, ultimately influencing fish, seabirds and marine mammals. Over the past 50 years the Northern Pacific appears to have undergone at least one clear "regime shift", while the last 18 years have seen multi-years shifts of major atmospheric indices, leaving uncertainty about what regime the coastal Gulf of Alaska is currently in. Regime shifts are often expressed as fundamental shifts in ecosystem structure and function, such as the 1976 regime shift that resulted in a change from a shrimp dominated fisheries to one dominated by pollock, salmon and halibut. Long-term observations are also critical to describe the current state, and natural variability inherent in an ecosystem at risk of significant anthropogenic impact. Given the potential for such profound impacts, this proposal seeks to continue multidisciplinary observations which began in 1997 along the Seward Line and in PWS that assess the current state of the Northern Gulf of Alaska, during 2012-2017. Such observations form critical indices of ecosystems status that help us understand some key aspects of the stability or change in upper ecosystems components for both the short and longer-term. By analogy, the weather has been studied for more than a hundred years, yet regular observations are still needed to know what is happening and what can be expected in the near future.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/June 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-K

Project Title: LTM Program – Continuing the Legacy: Prince William Sound Marine Bird Population Trends

Primary Investigator(s): Kathy Kuletz and Robb Kaler

PI Affiliation: USFWS

Project Manager: USFWS

EVOSTC Funding Authorized To Date: \$465,800

FY12	FY13	FY14	FY15
\$206,500	\$24,200	\$211,100	\$24,200

Additional EVOSTC Funding Requested: \$215,700

FY16
\$215,700

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$681,700

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$56,000	\$22,000	\$56,000	\$22,000	\$56,000	\$212,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et al. and spans 1989-2014, and includes 13 years of boat-based surveys aimed at monitoring population trends of marine birds and mammals in Prince William Sound after the Exxon Valdez oil spill. Data collected will be used to examine trends from summer to determine whether populations in the oiled zone are increasing, decreasing, or stable, as well as to examine overall population trends for the Sound. Data collected from 1989 to 2012 indicated that pigeon guillemots (*Cephus columba*) and marbled murrelets (*Brachyramphus marmoratus*) are declining in the oiled areas of Prince William Sound. We have found high inter-annual variation in numbers of some bird species and therefore recommend continuing to conduct surveys every two years. These surveys are the only ongoing means to evaluate the recovery of most of these injured marine bird species. Surveys would also benefit the benthic monitoring and forage fish monitoring aspects of the Long-term Monitoring Project as well as the Herring Project.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

The Science Panel agrees that continuing the long-term monitoring of marine birds in Prince William Sound (since 1989) is important, given that some species (pigeon guillemots and marbled murrelets) are still declining in oiled areas. We also agree that the high inter-annual variation in numbers of some bird species is problematic, and hence, we question whether maintaining biennial sampling is sufficient to detect trends in recovery. Annual sampling may be needed to better couple variation in bird abundances with ocean conditions, and thereby improve our understanding of factors affecting the recovery of bird populations in PWS; however, it also would increase the budget substantially. In light of this, we recommend that the Pls review the purpose and goals of sampling and that the sampling frequency be carefully reconsidered, in part by using a power analysis of impacts of alternative survey frequencies.

Science Coordinator Comments – FY14**Date: September 2013**

In concur with the Science Panel but I do not agree that more frequent sampling may be necessary.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Executive Director Comments – FY14**Date: October 2013**

I concur with the Science Panel but do note that the sampling frequency has been reviewed by the Panel in the past with varied recommendations. Suffice to say, issues regarding budget and purpose remain and should be continued to be revisited by the Pls.

Trustee Council Comments – FY14**Date: October 2013**

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel Comments – FY12**Date: June 2011 – Individual Panel Member Comments****Individual Comment 1:**

Seabird monitoring costs double in year 3 – The explanation is clear, although the basis for why two surveys may be needed in year 3 and what is lost when only 1 is done is unclear

Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-L

Project Title: LTM Program – Long-term monitoring of Ecological Communities in Kachemak Bay: a comparison and control for PWS

Primary Investigator(s): Brenda Konar

PI Affiliation: UAF

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$192,500

FY12	FY13	FY14	FY15
\$48,100	\$48,200	\$48,100	\$48,100

Funding includes 9% GA

Additional EVOSTC Funding Requested: \$47,400

FY16
\$47,400

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$239,900

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et. al. As part of this component, we monitor rocky intertidal, seagrass and clam gravel beach systems as well as the sea otter abundance and diet in Kachemak Bay. This component is complementary to work being conducted under this program in Prince William Sound and Katmai.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-M

Project Title: LTM Program – Long-term killer whale monitoring

Primary Investigator(s): Craig Matkin

PI Affiliation: North Gulf Oceanic **Project Manager:** NOAA

EVOSTC Funding Authorized To Date: \$405,100

FY12	FY13	FY14	FY15
\$7,200	\$132,300	\$132,300	\$132,300

Additional EVOSTC Funding Requested: \$132,300

FY16
\$132,300

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$536,100

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$23,500	\$23,500	\$23,500	\$23,500	\$23,500	\$117,500

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

The proposed project is a continuation of the annual monitoring of AB pod and the AT1 population killer whales in Prince William Sound-Kenai Fjords. These groups of whales suffered significant losses at the time of the oil spill and have not recovered at projected rates. Monitoring of all the major pods and their current movements, range, feeding habits, and contaminant levels will help determine their vulnerability to future perturbations, including oil spills. The project also extends the scope of the basic monitoring to include an innovative satellite tagging program used to examine habitat preference, feeding ecology and assist in relocating whales for feeding studies. It continues examination of feeding habits using observation, prey sampling and innovative chemical techniques. The study will delineate important habitat, variations in pod specific movements and feeding behavior within a temporal and geographic framework. We will examine the role of both fish eating and mammal eating killer whales in the near-shore ecosystem and their impacts on prey species. Community based initiatives, educational programs, and programs for tour boat operators will continue to be integrated into the work to help foster restoration by improving public understanding and reducing harassment of the whales.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-N

Project Title: LTM Program – Long-term monitoring of humpback whale predation on Pacific herring in Prince William Sound

Primary Investigator(s): John Moran

PI Affiliation: NOAA

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$537,400

FY12	FY13	FY14	FY15
\$127,400	\$128,800	\$139,600	\$141,600

Additional EVOSTC Funding Requested: \$54,400

FY16
\$54,400

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$591,800

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$83,500	\$74,700	\$75,000	\$78,500	\$25,000	\$336,700

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et. al. We will evaluate the impact by humpback whales on Pacific herring populations in Prince William Sound. Following protocols established during the winters of 2007/08 and 2008/09 (EVOSTC project PJ090804). We will continue to monitor the seasonal trends and abundance of humpback whales in Prince William Sound. Prey selection by humpback whales will be determined through acoustic surveys, visual observation scat analysis and prey sampling. Chemical analysis of blubber samples (stable isotopes and fatty acid analysis) will provide a longer term perspective on whale diet and shifts in prey type. These data will be combined in a bioenergetic model to determine numbers of herring consumed by whales, with the long term goal of enhancing the age structure modeling of population with better estimates of predation mortality.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

This proposal was praised by the Science Panel for their importance, inclusion of detail, and significant progress.

Science Coordinator, Executive Director Comments – FY14**Date: September and October 2013**

We concur with the Science Panel.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14**Date: October 2013**

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-O

Project Title: LTM Program – Monitoring long-term changes in forage fish distribution, abundance, and body condition in PWS

Primary Investigator(s): John Piatt

PI Affiliation: USGS

Project Manager: USGS

EVOSTC Funding Authorized To Date: \$817,400

FY12	FY13	FY14	FY15
\$209,900	\$202,500	\$202,500	\$202,500

Additional EVOSTC Funding Requested: \$150,300

FY16
\$150,300

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$967,600

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$297,200	\$297,200	\$297,200	\$297,200	\$72,200	\$1,261,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et. al. In response to a lack of recovery of wildlife populations following the Exxon Valdez Oil Spill (EVOS), and evidence of natural background changes in forage fish abundance, there was a significant effort to document forage fish distribution, abundance, and variability in Prince William Sound (PWS) since the 1990's. We proposed to adopt some of these earlier sampling techniques, and also incorporate new methods to monitor forage fish in Prince William Sound with fishing and acoustic surveys of forage fish, and to measure indices of forage fish condition. In this last year of the project, we will not conduct field work. We will complete analysis of all data collected in FY12-15 and produce a final report on methods for long-term monitoring of forage fish distribution, abundance and condition in Prince William Sound.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15**Date: September 2014**

The Panel commends the PI's on the high degree of collaboration with projects in both Programs.

Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-P

Project Title: LTM Program – GAK1 Monitoring

Primary Investigator(s): Tom Weingartner

PI Affiliation: UAF

Project Manager: ADFG

EVOSTC Funding Authorized To Date: \$456,700

FY12	FY13	FY14	FY15
\$109,500	\$112,500	\$115,700	\$119,000

Additional EVOSTC Funding Requested: \$122,500

FY16
\$122,500

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$579,200

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et. al.

This program continues a 45-year time series of temperature and salinity measurements at hydrographic station GAK 1. The data set, which began in 1970, now consists of monthly CTDs and a mooring with 6 temperature/conductivity recorders throughout the water column. The project monitors two important Alaska Coastal Current ecosystem parameters that will quantify and help understand interannual and longer period variability in: a) Temperature and salinity throughout the 250 m deep water column, and b) Near surface stratification.

In aggregate these variables are basic descriptors of the Alaska Coastal Current, an important habitat and migratory corridor for organisms inhabiting the northern Gulf of Alaska, including Prince William Sound

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16**Date: September 2015**

The Panel appreciated the PI providing really good documentation of how the data collected was used in publications and management activities. To date they report 36 papers that have used or cited these data, 2/3 of which address fisheries issues.

Science Coordinator, Executive Director Comments – FY16**Date: September 2015**

I concur with the Science Panel's comments.

Public Advisory Committee Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Draft 11-4-15

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-R

Project Title: LTM Program – Long-Term Monitoring: Nearshore Benthic Ecosystems in the Gulf of Alaska

Primary Investigator(s): Brenda Ballachey

PI Affiliation: USGS

Project Manager: USGS

EVOSTC Funding Authorized To Date: \$1,228,000

FY12	FY13	FY14	FY15
\$282,400	\$304,100	\$331,900	\$309,600

Additional EVOSTC Funding Requested: \$331,900

FY16
\$331,900

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$1,559,860

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$274,000	\$274,000	\$274,000	\$274,000	\$274,000	\$1,370,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of Gulf Watch Alaska: Integrated Long-Term Monitoring of Marine Conditions and Injured Resources and Services. For the Nearshore ecosystem component, we have implemented a long-term monitoring program at five locations across the GOA, including sampling areas in Western, Northern and Eastern Prince William Sound (PWS), Kenai Fjords National Park, and Katmai National Park and Preserve. Additional nearshore sampling as part of Gulf Watch Alaska is ongoing in Kachemak Bay (Project 12120114-L) and is closely coordinated with this project. The Gulf Watch Alaska nearshore program is integrated with nearshore monitoring implemented in 2006 by the National Park Service to cost-effectively monitor nearshore ecosystems across the central and western Gulf of Alaska, including spill-affected areas, and provide information on recovery and restoration of injured resources. We propose to (1) continue sampling Katmai NPP, Kenai Fjords NP, and Western PWS in 2016 (all 3 areas previously sampled in multiple years starting in 2006), and (2) sample Eastern PWS in 2016 (previously sampled in 2012 and 2014). We will continue to coordinate with the ongoing nearshore monitoring program in Kachemak Bay. Monitoring metrics include marine invertebrates, kelps, sea grasses, birds, mammals, and physical parameters. In addition to taxa-specific metrics, monitoring includes recognized important ecological relations that include predator-prey dynamics, measures of nearshore ecosystem productivity, and contamination. The nearshore benthic monitoring program also will integrate physical data collected in PWS, along the GOA shelf and in Cook Inlet, under the Environmental Drivers component of the GWA long-term monitoring program.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120114-S

Project Title: LTM Program – Lingering Oil - Extending the Tracking of oil levels and weathering (PAH composition) in PWS through time

Primary Investigator(s): Mark Carls

PI Affiliation: NOAA

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$210,600

FY12	FY13	FY14	FY15
\$19,600	\$13,100	\$8,700	\$169,200

Additional EVOSTC Funding Requested: \$6,500

FY16
\$6,500

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$217,100

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

This project is a component of the integrated Long-term Monitoring of Marine Conditions and Injured Resources and Services submitted by McCammon et al. The goal was to provide the EVOSTC with an assessment of persistent Exxon Valdez oil in Prince William Sound, describe its chemical characteristics, and initiate a routine, long-term monitoring program that will resample the same sites every five years over the next 20 years. The field work for the first sampling was completed earlier this year and laboratory analyses are underway. Beach sampling was similar to surveys conducted by Auke Bay Laboratories during 2001 to 2005. Sediment samples were collected to estimate amounts of remaining oil and passive samplers were deployed to provide information about biologically available oil. Objectives are to complete the laboratory analysis and 1) fingerprint oil, 2) determine oil sources, 3) report oil persistence and weathering over decades, 4) determine biological availability, 5) produce a synthesis report, and 6) archive hydrocarbon data in the Trustee-sponsored hydrocarbon database. These data, together with the recently completed retrospective analysis of biomarkers (which are the most environmentally persistent components of the oil), will help investigators understand potential exposure levels (past and present) and linkages to species at higher trophic levels.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Draft 11-4-15

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

This is one of the few projects presenting data, and it was “refreshing.” The hydrocarbon database is important to assess environmental damage in the event of another oil spill, and it may be still relevant to biological assessments of long-term oil impacts and perhaps to re-opener disputes. The PI’s indicate that there are not enough funds for complete updating and QA/QC of the database with 1-person/yr effort. If so, arrangements should be made to correct this oversight. If the solution is to request additional funds, then a detailed supplemental proposal should fully justify this request. In general, the Science Panel requests that fundamental information on the numbers and locations of sampling be included in future project proposals and reports.

Science Coordinator, Executive Director Comments – FY14**Date: September and October 2013**

We concur with the Science Panel.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior. We

Draft 11-4-15

have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13

Date: September 2012

We concur with the Science Panel.

Public Advisory Committee Comments – FY13

Date: September 2012

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12

Date: June 2011

There are no project specific comments.

Project Number: 16150114-T

Project Title: LTM Program – Supplemental Data Management

Primary Investigator(s): Rob Bochenek

PI Affiliation: Axiom Consulting **Project Manager:** NOAA

EVOSTC Funding Authorized To Date: \$121,800

FY12	FY13	FY14	FY15
\$0	\$0	\$0	\$121,800

Additional EVOSTC Funding Requested: \$126,000

FY16
\$126,000

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$247,800

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

The EVOSTC Long Term Monitoring (LTM) and Prince William Sound Herring Research and Monitoring (PWS Herring) programs propose an ambitious monitoring and research agenda. These efforts could facilitate a more thorough understanding of the effects of the oil spill if the new data and information on the spill-affected ecosystems are effectively managed and collated along with historical data on these systems. Based on feedback acquired from the EVOSTC Science Panel and staff, we propose a supplemental data management effort to execute on major tasks that have been deemed of high importance but are not being addressed by existing data management projects supporting EVOSTC programs (Projects 1412011D and 1412011C). This project proposes to increase the data management support for both LTM and PWS Herring programs by establishing a data coordinator position to improve metadata quality and best practices. Furthermore, this project will develop mechanisms to transfer and integrate LTM and PWS Herring program data products into DataONE.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund Reduced	Fund Reduced	Fund Reduced	Fund Reduced	Fund Reduced

Science Panel Comments – FY15**Date: September 2014**

The possibility of AOOS joining the DataOne system was discussed at the March 2014 Data Meeting as a way to ensure that the data collected as part of the Programs would be available to the widest audience possible. After reviewing the submitted proposal and the budget clarification provided, we would support the funding of the Data Coordinator position and the tasks associated with becoming a DataOne node. The Data Coordinator position should only be funded for the task of preparing the resource maps for data collected as part of the Council funded Programs. We would recommend that the funding of the NODC and OBIS Submission and associated staff time be considered at a later date.

Science Coordinator Comments – FY15**Date: September 2014**

I concur with the Science Panel and recommend funding for Tasks 1 and 2 for FY15. The total I recommend for funding is \$121,802 for FY15 which includes 9% GA.

PAC, Executive Director Comments – FY15**Date: October 2014**

We concur with the Science Panel and Science Coordinator.

Project Number: 16120120

Project Title: LTM Program –Collaborative Data Management and Holistic Synthesis of Impacts and Recovery Status Associated with EVOS

Primary Investigator(s): Matthew Jones

PI Affiliation: NCEAS

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$1,632,800

FY12	FY13	FY14	FY15
\$416,800	\$464,700	\$372,100	\$379,200

Additional EVOSTC Funding Requested: \$73,900

FY16
\$73,900

Requests include 9% GA

Total EVOSTC Funding (Authorized and Requested): \$1,706,700

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

The AOOS-led Long-Term Monitoring (LTM) and the PWSSC-led Herring Research and Monitoring (HRM) programs propose an ambitious monitoring and research agenda over the next five years. These efforts could facilitate a more thorough understanding of the effects of the oil spill if the new data and information on the spill-affected ecosystems are effectively managed and collated along with historical data on these systems, and then used in a comprehensive synthesis effort. We propose a collaboration among NCEAS and the AOOS LTM and HRM teams to help build an effective data management cyber-infrastructure for proposed monitoring efforts and organize these data with historical data, including previous EVOSTC-funded efforts, to prepare for synthesis and ensure all data are organized, documented and available to be used by a wide array of technical and non-technical users. Building on the LTM and HRM syntheses and modeling efforts and the 20-year historical data from EVOSTC projects and any available current data, NCEAS would convene two cross-cutting synthesis working groups to do a full-systems analysis of the effects of the 1989 oil spill on Prince William Sound and the state of recovery of the affected ecosystems.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15**Date: September 2014**

The Panel strongly encourages the two NCEAS working group leads attend the February 2015 Program synthesis meeting.

Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator Comments – FY14**Date: September 2 and October 013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Executive Director Comments – FY14**Date: October 2013**

NCEAS appears to be working quickly to process the inherently difficult historical data recovery in preparation for their future synthesis efforts, and in spite of what appears to be a more limited involvement regarding collaborating on methods for processing current data. There remains unanimous Panel concern regarding the Programs' data management, as captured in the FY12 Panel comments below.

Trustee Council Comments – FY14**Date: October 2013**

The Council requests the Team Leads and PIs within the Long-Term Programs in Project numbers 14120111 and 14120114 work with EVOSTC staff to address Science Panel and EVOSTC staff comments in the Fiscal Year 2014 Work Plan and participate in a Long Term Programs' Data Review Meeting with EVOSTC and Trust Agency Staff.

Draft 11-4-15

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel Comments – FY12**Date: April 2011**

These comments are from the two Science Panel members that have been tasked by the panel to work with the EVOSTC staff on the data management and synthesis topic. The Panel does not believe that Axiom currently has the capacity to conduct the most effective management of the data. The biological investigations produced by the suite of projects included in this proposal package generate data that are challenging to code in ways that facilitate their combination with other data such as physical or chemical variables. The discipline that handles these challenges is known as informatics. The Science Panel views the inexperience of Axiom personnel as a critical problem. This concern does not imply inadequate capability of the key staff of Axiom. It is a reflection of their limited experience. Consequently, establishing a partnership between Axiom and NCEAS makes sense because Matt Jones and NCEAS are willing to share their cutting-edge expertise. NCEAS is the "National" Center for Ecological Analysis and Synthesis and the principals of the NCEAS proposal are leaders in this field. Pairing NCEAS with Axiom, would promote information sharing of NCEAS' expertise, such emerging data standards as DateOne and on a suite of data manipulation and synthesis tools, such as meta-analysis methods. This information transfer represents critical capacity building within Alaska that would greatly benefit EVOSTC, AOOS, NPRB, and other important research and monitoring enterprises. The willingness of NCEAS to collaborate with Axiom is evident from their proposals and discussions with Rob Bochenek, Elise, Molly, and others. Nevertheless, the most creative and appealing aspect of the proposal provided by NCEAS, and which builds on technical metadata processing that NCEAS excels in, relates to the second phase of work – the synthesis activities. Some syntheses have indeed been supported by the EVOS Trustee Council over the years.

Draft 11-4-15

These include very important outputs of the program – a synthesis of novel oil toxicity mechanisms in pink

salmon by Rice et al. 2003; a book edited by Spies that placed the oil and natural resources of coastal Alaska in a context of changing climate; reviews of the delayed and indirect mechanisms by which EVOS oil caused ecological injuries by Peterson et al. (2003); and reviews of multi-year EVOS oil persistence on Alaskan beaches by Short and colleagues.

Phase II of the NCEAS proposal promises facilitation of just such synthesis outputs. This activity is extremely important for both the Herring and especially the Long-term Monitoring programs. The Panel recommends funding of this Phase II, under conditions that reflect engagement of the PIs from these two programs to develop the questions to be addressed and help select the experts who will participate in the study groups and synthesis efforts. The Panel notes that failure to solve the problem of creating an enduring depository for EVOS-Trustee funded data is a long-standing problem. At least 10 year ago, the EVOS Trustee Council and staff endorsed the responsible and ethically necessary principle that each study funded by the Council must deliver all resulting data in electronic form to the council staff as part of their final reporting obligations. Despite this mandate, there exists now no data base of the historically-funded projects. This issue has great capacity to embarrass the Council and the memory of the past failures motivates the Panel to recommend finally solving this problem by engaging the undeniable expertise and preeminence of NCEAS to collaborate in this venture.

Science Coordinator Comments – FY12

Date: April 2011

I concur with the Science Panel and strongly recommend that this proposal be funded. Data may be the single largest legacy of these programs and it is critical that the work starts on the strongest foundation possible.

Public Advisory Committee – FY12

Date: July 2011

Issues raised by the Science Panel, Trustee Council staff, and the PAC called for additional work and collaboration to assist with establishment of a data management system that includes accessible scientific data as well as public information. French noted that he had no problem with either NCEAS or Woods Hole—he questioned Axiom’s role and staying power. French said he supported the NCEAS and Axiom collaboration. Chairman Eilo summed the PAC interest in the Trustee Council implementing a solid data management, synthesis, and public access system.

Executive Director Comments – FY12

Date: July 2011

I also strongly concur with the Science Panel and science coordinator. The PAC was also strongly in favor of this very important collaboration, historical data recovery and the synthesis work.

**EVOSTC Long-Term Herring Monitoring
and Research Program Projects**

Draft 11-4-15

Project Number: 16120111

Project Title: PWS Herring and Monitoring Program

Primary Investigator(s): Scott Pegau

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized to Date: \$5,087,050

FY12	FY13	FY14	FY15
\$1,027,390	\$1,264,759	\$1,429,195	\$1,365,678

Additional EVOSTC Funding Requested: \$1,241,321

FY16
\$1,241,321

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$6,328,343

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$154,731	\$0	\$154,731

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/21/15.*

The goal of the Herring Research and Monitoring program is to improve the predictive models of herring stocks through observations and research. The program is designed around a twenty year time frame with changes in emphasis of the process studies every five years. During this period we have four objectives to help us move towards our goal. They are: Provide information to improve input to the age-structure-analysis (ASA) model, or test assumptions within the ASA model. Inform the required synthesis effort. Address assumptions in the current measurements. Develop new approaches to monitoring.

A combination of monitoring and process studies will be used to address these objectives. The monitoring projects follow changing conditions and provide inputs to modeling efforts. The process studies are designed to be much shorter and to answer a very specific question. The monitoring components include tracking the prevalence of disease, aerial surveys, increased adult biomass surveys, and juvenile condition and biomass surveys. All of the monitoring components address the first objective.

There are eighteen studies that range in length of one to five years designed to address the different objectives. To address the first objective we are examining the age that fish join the spawning stock, the genetic structure, and examining the approaches available to model herring stocks. To address the second objective we are working on gathering relevant datasets and providing visualization,

conducting an analysis using the herring scale library owned by ADF&G, and providing coordination between projects to examine the connectivity. To address the third objective there are intensive studies of juvenile condition and acoustic estimates of juvenile populations, trying to determine if immigration may impact our surveys, providing validation to the acoustic surveys, and conducting laboratory studies of disease. We are looking to herring tagging, disease forecasting, and non-lethal acoustic validation to address the last objective.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16

Date: September 2015

The Science Panel was pleased with the progress of the individual projects and the overall Program. The Panel is gratified to see several new and younger scientists with fine and promising records of past preparation and accomplishments. For example, the progress made already by Dr. Rand to work through the backlog of samples left after the departure of Tom Kline is impressive. Dr. Pegau's active leadership is critical to the study's success and especially to achieving important syntheses among separate projects.

Science Coordinator, Executive Director Comments – FY16

Date: September 2015

I concur with the Science Panel's comments.

Public Advisory Committee Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15

Date: September 2014

This year, the Panel was pleased to see improvement in this year's proposals regarding QA/QC of data collection and integration of projects, including the proposals by Bishop and Pegau (aerial survey). The revised reporting forms also prompted greater inclusion of benchmark results, publications and changes to work plans.

Next year, the Panel would like to see improvements in:

Inclusion of fundamental information

The Panel would like to see the inclusion in proposals of information regarding the 1) approach, design and analysis of studies and 2) explicit statements of how analyses are answering major questions. This key information is essential to evaluating proposals, and we expect to see brief

Draft 11-4-15

descriptions included in the next set of proposals. We are not requesting that detailed descriptions be provided to the degree exhibited in original proposals or publications; PIs should use their expertise to identify and include essential, fundamental information that should be included to facilitate review. Good examples of the level expected detail include the GulfWatch proposals by Carls, Jones, and Piatt and the Marine Debris Removal proposal by Pallister (available on the EVOSTC website).

The Science Panel would also appreciate having more detail about how the herring programs contribute to the existing and proposed herring assessment process and model. In particular it would be useful to have a short paragraph on each of the tuners used in the model: spawn assessments and acoustic data.

The Panel appreciates that any additional requests for information in proposals can be perceived as onerous and that the Panel had indicated in prior years that they did not want the entire original proposal text included every year. However, the minimal, essential information requested should not take long to incorporate and could remain in subsequent proposals. From a Panel perspective, proposals cannot be evaluated without key, fundamental information on major hypothesis and models, in part so changes to the design can be placed in proper context. We appreciate your efforts in refining your multi-year proposal submissions.

Planning Succession Necessitated by Attrition of Experienced Personnel

This continues to be an area of concern for the Panel. The departure of Michele Buckhorn, who serves as the lead PI for three of the twelve submitted projects, could have a large impact on the overall success of the Program. We understand from our discussion with Scott that they are working to address the issue but feel that this highlights the issue of a need for junior scientists to be trained within the projects so smooth transitions in scientific personnel.

The Panel continues to support efforts to increase future capacity with regard to PIs turnover and continues to encourage that post-docs be integrated into the programs.

Improved data submission by Herring Program PIs

We understand that many PIs in the Herring program are behind in providing metadata and data to the central data repository. With the new forms that have been developed, and the availability of assistance from Axiom staff, it is important for each PI to comply with the data submission requirements set forth as a condition of their funding.

Coordination & Collaboration/Synthesis

The Panel appreciated the programs' explicit statements recognizing the synergisms among project efforts. It is clear that most projects are already working together where it is practical or advantageous to the achieving the goals of individual projects. We also appreciated that the programs recognized the need to integrate data across projects to arrive at a synthetic view of the status and trends of herring populations in PWS. However progress in these areas will need to be more explicit and fully developed. Details provided to the Panel were too limited to be able to truly evaluate progress in this area. Discussion on the conference call with the PI was encouraging in that details of the stock models will be provided to the panel in advance of the February synthesis meeting. We look forward to seeing synthesis both within and across projects at the February

Draft 11-4-15

synthesis meeting and view this as a critical checkpoint to assess progress of the program toward a synthetic understanding.

Future Consideration

(1) Early life history. There appears to be no effort made to examine distribution of herring larvae. Larval surveys, especially when spread over time and space can be revealing about species composition and in some instances could provide auxiliary indices of abundance (such as CALCOFI). A focus of the predecessor SEA Program at PWSSC involved how physical transport of herring larvae may play important roles in transporting them to rearing and nursery areas, thereby influencing survival and abundance patterns. Some linkage back to those concepts may be fruitful, especially given the extent of physical oceanographic information now available.

(2). Age at maturity. It would be a relatively simple matter to examine the maturity of herring captured in the late winter. By this time any herring that is set to mature will have developing gonads that can be examined macroscopically – and even histologically, using oocyte diameter as a criterion of maturation. Have such simple and inexpensive approaches been considered?

(3). Spawn Assessments. The questions that arise from spawn assessments are (1) the completeness in time and space; (2) the continuity of the survey effort over time, especially with changes in available resources; (3) the use of mile-‘days’ instead of cumulative distance, which is the measure used in most other parts of the coast, in the US and Canada. For acoustic surveys, similar questions arise, especially about the continuity over time, etc. The issue of stock assessment of herring, as one of the key forage species in PWS, is vital to much of the entire EVOSTC work and it is difficult to provide adequate assessment without larger agency-level effort. The existing PIs are highly qualified and well regarded, but it is clear that the development of a revised model will take some time. There may be other, independent, sources that might provide such a revised model in the interim. Have such sources been considered?

(4). Climate change. Climate change may affect various biological attributes of fish populations including growth and susceptibility of disease, etc.

(5). Anthropogenic changes. The impacts of anthropogenic changes related to fisheries, either extractive fishing or fish culture, could be useful.

Science Coordinator Comments – FY15

Date: September 2014

I concur with the Panel’s overall comments. I commend the Program for their high-level of coordination and collaboration both within the Program and with the local community. I would also be interested in more detail regarding the incorporation of the projects data into the existing and proposed ASA model.

PAC, Executive Director Comments – FY15

Date: October 2014

We concur with the Science Panel and Science Coordinator.

Draft 11-4-15

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013****Proposals were lacking in detail, hindering their evaluation**

There was not enough information provided for the Science Panel to evaluate the proposals and offer substantive suggestions. In order to evaluate proposal merits, the Science Panel wanted to see more detail, including:

- Sampling design, locations and methods, including QA/QC of data collection
- Approach to data analysis including statistical methods and/or relevant contrasts
- Explicit statement of how analyses will answer the major questions
- A discussion of results to date and any adjustments in project design in view of results
- Explicit statement of how individual project results relate to or will be integrated into the broader program
- The proposals should be reviewed as a whole by someone from the group before submission.

The panel, EVOSTC and agency staff will be looking at options for providing brief guidance and/or a form for the programs in advance of proposal drafting and submission to clarify expectations. When EVOSTC staff has a draft form or guidance, we will circulate it to the Team Leads for their feedback. There was also initial discussion regarding reporting which we will also circulate if it is further developed.

Publications

The Science Panel encourages investigators to publish their results in peer-reviewed journals to make their hard-won results available to wider scientific audience. This encouragement especially applies to young investigators who are establishing their careers. They may quickly become unable to compete for other jobs. We anticipate the FY17 Invitation will include an expectation to publish.

Data Management

The Science Panel is concerned about progress on data management. The data management proposal drew heavily on their old proposal without including sufficient updated evidence of interactions between the programs' PIs and the data management team. In addition, there does not appear to be a data management policy or QA/QC policy created as the programs approach Year Three. In addition, no milestones were reported in the newly submitted proposals, so it was difficult to gauge how much progress had been made in the last two years. Moreover, it was not clear how data would be available for synthesis. The panel recommends that the Council condition funding upon the creation of a credible and detailed data management policy and a QA/QC policy and include clear milestones in for their proposal.

Regarding a QA/QC policy: such a document is a basic need of any data management. We note too that instruments commonly need to be calibrated before and after use to be able to adjust for measurement drift, if it occurs. With two separate data centers operating under the EVOSTC program it is crucial that a high level of QA/QC be maintained. The Science Panel is concerned that adequate

attention is not being devoted to this fundamental aspect of data management. It is particularly important to assemble complete metadata to ensure that long-term data sets can be verified and understood once the current participants have moved on to new positions. For example, EPA and NSF require detailed data management and QA/QC plans as part of all proposals. Large monitoring programs, such as NSF's LTER and oceanographic programs, devote considerable time and effort to addressing these critical needs.

Example: As a specific example, the Ocean Tracking Network (OTN) has four nearly full-time people creating metadata forms that are required to be filled out, submitted and checked for QA-QC before data can be added to the database. Since OTN is currently adding equipment to tracking arrays in PWS, it would be particularly appropriate at this time to arrange communication between senior OTN data managers with EVOSTC program data PIs to ensure that data standards are adequate. As with OTN, and as emphasized in the initial funding of the EVOSTC programs, skilled data management resulting in data that can be relied upon by the scientific community and resource agencies will ultimately determine the long-term success and influence of the programs. The contact at OTN is Bob Branton (bob.branton@gmail.com) or (bob.branton@dal.ca).

Attrition of Experienced Personnel

The panel notes that it may be a challenge to replace experienced personnel retiring or transitioning out of the programs, but the need for their expertise remains. To address these changes, the panel suggests that the programs partner their junior PIs with newly recruited, experienced scientists. Where difficulties exist in filling key positions, the panel also suggests strategically tapping outside experts to review projects and provide consultation and setting up a Post-Doc training program for the LTM and Herring projects. As experienced personnel leave the program either through retirement or departure, the salary savings could fund this kind of activity.

Potential Resource - The panel encourages the programs to consider options for developing concepts for postdoctoral programs that can help address these issues. The panel and the programs' internal panels and advisory groups can provide assistance in identifying potential post doc candidates who may be helpful to the programs. Intergovernmental Personnel Assignments and perhaps NRC Research Associate post-docs may also be a source for additional expertise and post-doc work.

Synthesis in Advance of February 2015 Workshop

There is concern from our review of the proposals that the programs are postponing work on synthesis until just before the Workshop. The programs should think through and create a step-by-step route and design for their 2015 synthesis so there is sufficient field time to work on it. This plan should include mechanisms and process. The part of synthesis that involves creation of and testing of models is best done by an iterative process in which modeling is sequentially tested by reference to new data and the models revised accordingly.

There was also a suggestion to focus on cross-cutting topical issues, such as acoustics and calibration. PIs with different expertise could be paired to initiate and encourage actual synthetic analyses and presentation in contrast to single PI presentations on isolated projects or topics. *Examples for pairings include:* disease and physiology, and modeling of herring movements and disease.

Herring Program Advisory Group, academic position suggestion

Some additional expertise that could assist with this group are Tim Essington (UW) and Alec McCall, SWFSC would also be a good choice for membership. *See also Attrition of Experienced Personnel, above.

Defining program priorities

There is a basic requirement of the herring program to develop a credible and defensible program/project to assess herring abundance. In practice this means the implementation of a modern stock assessment model. This requirement supersedes all others because virtually all other projects in the herring program, and some in the GulfWatch program, are dependent on the confidence levels associated with the herring assessments. Such assessment is essential even in the absence of any commercial fishery of in Prince William Sound, because herring abundance will impact so much of the ecology of other species.

Stock assessments usually are done by an agency, such as ADFG, but because of the importance of herring it is reasonable for other experts to develop a state-of-the-art age-structured stock assessment (ASA) model tailored for PWS herring, perhaps to be done cooperatively with ADFG. From the proposals this seems to be happening, but, in the opinion of the Science Panel, not rapidly enough. The concern with delay is that it will be difficult to fully appreciate many of the ecological processes of Prince William Sound unless there is a reasonable understanding of the abundance of herring. In other words, the scientific value of nearly all of the herring projects depends partly on the reliability of the herring assessments. Typically, an age-structure-assessment (ASA) model requires a 'tuner' or an independent dataset that provides a time-series index of abundance (i.e., to tune the model). For PWS herring there may be only two options: a time series of (i) spawn data or (ii) acoustic data. The problem is complex, because the time series of these two datasets are of differing length. Perhaps there are other data options, but the modelers need to ensure that they understand the strengths and limitations of all the data they use in the model. This is a task that requires experience.

It is important to note that, while acoustic estimates of abundance of herring are commonly used around the world, they seldom are used as stand-alone independent measures of biomass. Instead, they usually contribute time-series data to more complex models that incorporate age structure data and other information. If the available time series data (from spawn or acoustics) are not suitable for an ASA model, then other assessment models or approaches must be considered – and presumably this could involve acoustic approaches, or even simple models based mainly on spawn abundance data. Therefore a firm recommendation of the Science Panel is that the direction and requirements of the stock assessment process, through ASA models, should be clarified and evaluated as soon as possible.

We wish to further elaborate about why all the other herring projects are secondary in importance to stock abundance estimation. It is because much of the biology and life history of herring is impacted by density-dependent processes and this, in turn, can affect growth, maturation, migration, condition, disease and recruitment – all subjects of the proposals in the herring program. Herring abundance also affects other fauna, especially seabirds and marine mammals. Therefore, the Science Panel recommendation is that the assessment of herring abundance should get top priority, and proceed as vigorously and rapidly as possible. This is not to say that the other projects are unworthy or should

Draft 11-4-15

stop - on the contrary. The assessment project, while vital, is among the most scientifically routine of the lot, because it involves the implementation of existing protocols and methodologies. That does not mean it is simple or easy to do, but it is not a 'hypothesis testing' enterprise in the usual sense. Nevertheless, the products of assessments will provide a basis for better science for almost all of the other projects. The common element on all the other projects, with the possible exception of some acoustics projects, is that they aim to determine why and how herring populations change – physiologically or ecologically. In a sense their value is dependent on the rigor of the herring abundance assessments.

What are the implications of this recommendation?

- (1) The project on ASA modeling work should be acknowledged as a priority (even a pre-requisite) among the other herring projects. It needs to be implemented rapidly because its requirements could impact that way that other projects develop, especially acoustic projects.
- (2) The immediate implication is that the development of a functional herring ASA model should be proceeding much more rapidly than indicated in the progress report. If this task cannot be implemented in a timely manner, then the herring program should consider other ways of getting this work done.
- (3) A longer-term implication is that some of the closely related projects that might provide input data to the ASA, especially some of the acoustic projects, could require modification or reconsideration. If the age-structured model cannot incorporate the acoustic data, as it is presently acquired, then the design of the acoustic programs should be adjusted and re-evaluated. However, this cannot be determined until the ASA model is functional and evaluated.
- (4) Once the ASA model is functional, then it should be formally reviewed by 1-2 independent (outside) experts to evaluate its formulation, application and efficacy. Such a review is a common practice and should culminate in a report that documents the review findings. This report would then provide direction about the data requirements for a reliable ASA model of PWS herring. (Note: this was a recommendation in the 2011 Science Panel report).
- (5) If the fully-developed ASA model cannot provide acceptable results because of the limitations of the input data, then other approaches to herring biomass assessments must be considered. These could include simpler models that rely more directly on acoustics or spawn deposition.

Inter-project cooperation and communication

The Science Panel acknowledges and salutes the efforts made to coordinate logistics of field projects, especially following a long period when PIs worked relatively independently on most projects. However we are not convinced that some of the individual projects are as well connected as they should be, in terms of communication among PI's. This comment is based on an apparent lack of connectivity among some of the proposals.

Project gap: microchemistry

The panel noted that the PWS herring population could have important spatial structure that might go undetected by genetic analysis of microsatellites. This could occur if PWS herring consist of a meta-population with spatially separate sub-populations that, nevertheless, have sufficient genetic exchange to preclude genetic detectable differentiation. Therefore it is important to re-examine this issue because the previous genetic work, conducted more than a decade ago, had a short duration and a limited number of probes. Based on the previous genetic study in Prince William Sound, and

Draft 11-4-15

similar but more recent genetic analyses of other herring populations in the eastern Pacific, the panel does not anticipate that the current genetic studies will demonstrate new evidence of genetic variation within PWS. Instead these studies will probably provide important confirmatory evidence of a lack of genetic differentiation detectable within different parts of the Sound. Such evidence, however, would not necessarily mean that PWS herring lack any spatial variation.

It is possible that PWS herring constitute a meta-population consisting of several sub-populations that may have spatially distinct life histories for parts of their lives. If so, these populations could have different growth rates, and population parameters. Knowledge of such possible spatial structure is integral to understanding factors affecting the abundance of PWS herring. The absence of such understanding represents an ongoing gap in the program. Such a gap could be addressed by analyses of microchemistry of otoliths. Time spent by herring in different bays within PWS and the surrounding region, could be reflected in the chemical composition of otoliths that can be detected by analyses of microchemistry. This approach would have linkages to several other projects. Thus, the microchemistry approach would provide helpful new insights to ongoing projects while improving linkages among them.

The panel is aware of difficulties associated with previous attempts to examine microchemistry of herring. We acknowledge that microchemistry must be used carefully as a research tool, but point out that it can be a powerful and informative approach when done properly. For this reason we suggest that the herring program could consider the incorporation of this approach. For technical reasons, explained below, we further suggest that the optimal approach would be the examination of otoliths.

Regarding scales vs. otoliths: Herring scales may not be a good tissue for microchemistry, but otoliths may be useful. The main problem with scales is that herring resorb calcium and other minerals from their scales as they mature sexually. The effect does not interfere with annulus formation on scales but it could confound comparisons of putative population groups. This is not a concern for otoliths where, in theory, the chemical signatures are retained unchanged with age/time. The main concern with otolith collections is that they need to be collected and stored carefully prior to analysis. As they dry, otoliths tend to develop hairline cracks that can accumulate extraneous material – which again can confound results. *Potential Resource* - The current director of the UAF Alaska Stable Isotope Facility is Matt Woller. He is well respected and is an excellent collaborator. See: <http://ine.uaf.edu/werc/asif/>

Forage Fish

The Science Panel supports the enhanced attention to estimating population abundances of important forage fish in the Long-term Monitoring/Gulf Watch Project, while noting that the Herring Program will also be sampling forage fishes acoustically and during net tows, such as those planned to ground-truth acoustic signals. Except for herring itself, the early studies of EVOS impacts on the PWS ecosystem unfortunately failed to establish population assessment on any of the forage fishes of known significance to supporting higher-order predators: sand lance, capelin, and eulachon in particular. The Piatt project in LTM/Gulfwatch can serve as the centerpiece study of forage fish to which information gathered by PIs on other projects could be transferred to provide enhanced knowledge of abundances and dynamics of forage fishes.

Science Coordinator Comments – FY14**Date: September 2013**

I concur with the Science Panel. I commend this program for its dedication to using local community resources when appropriate and its efforts to work together as a team. I concur with the Panel's comments regarding the overall poor quality of the proposals. Most proposals made no effort to even change the dates of their tasks and deliverables making it almost impossible to determine where the project was in meeting its objectives.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Executive Director Comments – FY14**Date: October 2013**

I concur with the Science Panel and Science Coordinator.

Trustee Council Comments – FY14**Date: October 2013**

The Council requests the Team Leads and PIs within the Long-Term Programs in Project numbers 14120111 and 14120114 work with EVOSTC staff to address Science Panel and EVOSTC staff comments in the Fiscal Year 2014 Work Plan and participate in a Long Term Programs' Data Review Meeting with EVOSTC and Trust Agency Staff.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
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Draft 11-4-15

June/July 2011	Fund	Fund	Fund	Fund
April 2011	Fund	Fund	Fund	Fund

Science Panel Comments – FY12

Date: June 2011 – Individual Panel Member Comments

Individual Comment 1:

Linkages among the projects are done in a thoughtful and detailed fashion. I see huge progress in how well the leaders of the herring program are viewing this Program as a whole and integrating its pieces. I commend the PIs. Specifically, the logistic coordination is compelling and achieves cost efficiencies as well as intellectual linkages. The temporal staging of various research efforts is likewise logical and well-conceived. And I concur that the acoustics studies do involve three different efforts with different gear, sampling methods, and targets, so that any synergies are limited, largely to whether adult herring are encountered during sampling targeting juveniles and this is addressed.

Date: April 2011

This program seeks to add to the existing body of knowledge that began under the PWS Herring Survey program in FY10. The proposed projects will provide both new and continuing information regarding the current status of herring in PWS. The data collected under this program will be made available to researchers and the public and will provide critical information for resource managers. The continuation of current outreach and education strategies from the PWS Herring Survey projects and the additional strategies in the proposal have the potential to provide effective means to disseminate information and engage the fishing community and other community members in understanding the results of the integrated monitoring program.

The Panel recommends funding most components of this proposal, but reiterates the same serious concern about the data management components. Again the Science Panel strongly recommends that the Council provide assistance from an organization such as the National Center for Ecological Analysis and Synthesis (NCEAS) for peer review and technical assistance to the data management team.

The success of this proposal will depend on the reliability of herring spawn surveys which are not part of the present groups of proposals. Herring assessments in PWS, and everywhere else in the eastern Pacific, use spawn surveys as an essential part of the assessment. The approach currently used in PWS differs from all others in the use of miledays, whereas all other jurisdictions use a static measure of spawn, once spawning is completed. Also, the completeness of the spawn surveys has been questioned. (Note: these comments should not be construed as criticism of ADFG or their staff because the panel recognizes the effort and dedication made by such staff. On the contrary, the comments and recommendations related to spawn surveys should be seen as an initiative to provide assistance to field staff associated with herring assessment. The benefits of such assistance will accrue both to the science and management of PWS herring). Nearly all of the proposals are predicated on the availability of reliable herring spawning biomass assessments that are, in turn, dependent on accurate spawn surveys. To provide credible support for these proposals and for management advice future estimation of spawn must be made with a level of accuracy that consistent with that used in other jurisdictions. To provide credible management advice future estimation of spawn must be made with a level of accuracy that is required to support the assessments. There are concerns that

substantial amounts of spawn may have gone undetected in some years and that some of the past spawn estimates may have been made inaccurately through error in the estimated width and density of spawn. Such concerns may not be valid but there is no way to determine this without additional work. Therefore to evaluate whether the accuracy and reliability of present and past estimation of herring spawn in PWS is accurate, we recommend developing diver-assisted surveys. The Science Panel noted that diver surveys, yielded different results in the past (details provided in Recommendations to Team Leader). This would also include an assessment model and biological sampling review. Herring Stock Assessment Modeling: A Science Panel Recommendation for Review Success of the herring program will depend on the reliability of ADF&G herring spawn surveys. Nearly all of the proposals are predicated on the availability of reliable herring spawning biomass assessments that are, in turn, dependent on accurate herring assessments.

Herring assessments in PWS, like everywhere else in the eastern Pacific, use spawn surveys as an essential part of the assessment. The approach used in PWS, however, differs from all others in that PWS uses mile-days, whereas all other jurisdictions use a static measure of spawn, once spawning is completed. Herring assessments also rely on accurate bio-sampling for estimates of size and age of herring. Recently, the completeness of the spawn surveys has been questioned and many have questioned the reliability of the present assessments. Additional effort may be required for all aspects of herring assessments to ensure that they are done well and are well-regarded. These comments above should not be construed as criticism of ADFG or their staff, as their present staff is clearly dedicated and hard-working.

Science Coordinator Comments – FY12

Date: April 2011

I concur with the Science Panel. I also have serious concerns regarding the data program and would encourage the Council to assist the team by providing funding for a comprehensive review of the data program. I also concur with the Science Panel that the fundamental data that will be utilized by the program should be rigorously reviewed to ensure the best possible platform for the herring projects. I do believe that the data that has been gathered by ADF&G for PWS herring has been carefully gathered and reviewed. I would like to continue working with staff at ADF&G to determine what actions would have the greatest benefit to both the herring program and ADF&G managers. The possible addition of a staff position at ADF&G that would work closely with herring program would be of tremendous value to both the program and the management agency.

Public Advisory Committee – FY12

Date: July 2011

The Science Panel said the response to their concerns and further coordination was good. The Alaska Department of Fish and Game will partially fund a herring liaison position. Improved modeling techniques will be included as a separate project (PI is Branch). Torie Baker stated that this type of effort is what is needed to help resource managers in their decision-making. It was moved by French, second by Anderson Faulkner that the PAC concurs with the Science Panel recommendation to fund the Branch modeling project. There were no objections.

Date: April 2011

The PAC supports funding the herring project proposal, noting that the PAC agrees with the Science Coordinator in that there are serious concerns regarding the data program and would encourage the Council to assist the project team by providing funding for a comprehensive review of the data

Draft 11-4-15

program, and (amendment moved by Baker, second by Andersen Faulkner) further, the PAC supports additional discussions with the Alaska Department of Fish and Game on the use of the recommended dive surveys. The motion passed, with dissent by Brune and Bauer, based on Axiom's current past due deliverables.

The group discussed the herring proposal and the added value of the NCEAS data management addition. Catherine Boerner stated that the data was the "gold mine" of many of these projects, and needed to be made available over the long term—and the NCEAS team will assist in making this happen. Baker raised a question about the use of "outside" consultants versus Alaskans, and how the two would work together. Hsieh said that NCEAS is experienced in working with diverse groups and it was her impression, thus far, that Axiom would also be amenable to working with NCEAS. Brune questioned past due delivery of a product by Axiom, noting the Trustee Council policy to not fund organizations which were behind in deliverables—he believes Axiom should not be awarded additional work when there are outstanding deliverables, and that this sets a dangerous precedent. Fandrei agreed that this was an issue. Hsieh said she expected the outstanding deliverable to come in May. French said it was important that data not be proprietary so it would be publicly available. Amanda Bauer asked if there were other organizations that Axiom did work for. Hsieh mentioned several State and Federal agencies that are Axiom clients.

Executive Director Comments – FY12

Date: July 2011

There has been strong concern about the program's data manager serving the entire program. Since April, the data manager's work has been favorably reviewed, has submitted late deliverables to the Council and several data management options have been produced by this program and outside entities. These options presented are in conjunction with leaders in the field of heterogeneous scientific database management and are excellent options. I recommend the Council pursue one of these options to ensure successful management of the data produced by this and past Council-funded efforts.

In addition, the program and ADF&G have discussed what actions would enhance the program's value to the management of herring. Both entities recommend the Council fund 70% of an ADF&G biometrician III or a fisheries scientist I to coordinate with the herring program and to also focus on a modeling effort. This is included in our draft administrative budget and has the strong support of individual Science Panel members. We have continued to decrease our admin budget, but are also positioning our staff and agency staff to support the long-term programs.

Project Number: 16120111-A

Project Title: PWS Herring Program - Validation of Acoustic Surveys for Pacific Herring Using Direct Capture

Primary Investigator(s): Mary Anne Bishop

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$447,746

FY12	FY13	FY14	FY15
\$68,016	\$90,579	\$148,022	\$141,046

Additional EVOSTC Funding Requested: \$145,297

FY16
\$145,297

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$592,960

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/14/15.*

Acoustic surveys provide a relatively low-cost, remote sensing tool to estimate species-specific fish biomass and abundance. Interpreting acoustic data requires accurate ground truthing of acoustic backscatter to confirm species and length frequency of insonified targets. Pelagic trawls are the recommended method for validating species composition and for obtaining relatively unbiased information on length frequency distribution, age, and other biological information. Here we propose to use a low-resistance, light-weight midwater sweeper trawl capable of towing speeds (up to 3 knots) as a method to ground truth acoustic surveys for juvenile herring. Our pelagic trawl surveys will take place in conjunction with and onboard the same vessel as two studies in the PWS Herring Research and Monitoring program: Juvenile Herring Abundance Index (years 2-5) and Acoustic Consistency: Intensive Surveys of Juvenile Herring (year 3). In addition, this project will validate acoustic surveys associated with the PWS Herring Research and Monitoring Program: Expanded Adult Surveys (years 2-5). For the adult herring surveys, Alaska Dept. Fish and Game has required gillnets and jigging for validation in lieu of trawls. Our project will provide data on species composition and length frequency to aid in the interpretation of current and historical acoustic surveys. Juvenile herring samples collected during our pelagic trawl surveys will be distributed to six projects within the integrated herring program: condition index, energetics, growth, disease, juvenile herring abundance index, juvenile herring intensive surveys. Adult herring are being collected in spring to validate the expanded adult herring acoustic surveys as well as for two additional studies in the herring research program:

Draft 11-4-15

age at first spawn and herring genetics. Adult herring samples will also be provided to Alaska Dept. Fish and Game for the adult herring age-structure-analyses model. Our trawls will also provide fishery-independent surveys for non-herring species, thus increasing our knowledge of pelagic fishes in Prince William Sound.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15

Date: September 2014

There is evidence of substantial, well-executed field work, and excellent support and integration with other projects.

Science Coordinator, PAC, Executive Director Comments – FY15

Date: September and October 2014

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14

Date: September 2013

It seems that Dr. Bishop is performing a 'service' to the other PI's, but an essential one, especially in the collection of herring samples. For this service the Science Panel applauds her efforts. It would be useful to know, however, how much of the total effort is actually dedicated to acoustic work. This proposal contributes to the cumulative cost of acoustic work in Prince William Sound – so between the three proposals by PI Buckhorn, and this, the total annual effort and cost of acoustic work is significant. This may be appropriate if acoustics has a central role by providing key data for annual abundance estimates. The rationale for this proposal is to validate an acoustic target using a single beam sounder. This is valid in the context of the present program but there may be a more fundamental question that has not been addressed – although it is not directed specifically at this project. Is the acoustic equipment being used the best for the job? If acoustic estimates were used as the ASA tuning index, how would any change(s) in the acoustic surveys (survey protocols, or equipment) affect the temporal integrity of the index? Similar questions were posed in the 2011

Science Panel report.

A different question: There is an interesting excerpt from the proposal: "We recognize that a major deficit in the existing PWS Herring Survey program is the lack of an effective means of validating the acoustic signal. Fortunately, if we can establish through direct capture of insonified fish that certain patterns in echograms can be interpreted as different year classes of herring, *then we may be able to reanalyze historical acoustic measurements to better understand changes in juvenile herring populations.*" The suggestion is that acoustic strength estimates, obtained by field measurements in from this project, could be used to adjust results from past herring surveys. It is not clear who would do this retrospective analysis. Regardless, such a contribution would be welcome - with the caveat that the rationale and methodology must be documented and accessible, preferably in a published report.

Science Coordinator, Executive Director Comments – FY14

Date: September and October 2013

We concur with the Science Panel.

Public Advisory Committee Comments – FY14

Date: October 2013

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14

Date: October 2013

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13

Date: September 2012

Due to the change in the funding cycle, the program only began their work four months prior. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13

Date: September 2012

We concur with the Science Panel.

Public Advisory Committee Comments – FY13

Date: September 2012

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: June 2011**

There are no project specific comments.

Project Number: 16120111-C

Project Title: PWS Herring Program – Data Management Support

Primary Investigator(s): Rob Bochenek

PI Affiliation: Axiom Consulting

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$307,162

FY12	FY13	FY14	FY15
\$130,800	\$130,800	\$22,345	\$23,217

Additional EVOSTC Funding Requested: \$23,980

FY16
\$23,980

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$331,142

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$21,200	\$0	\$21,200

FY15 Non-EVOSTC funding from FY15 proposal.

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/10/15.*

This project supports the EVOS Integrated Herring Research Program with critical data management support to assist study teams in efficiently meeting their objectives and ensuring data produced or consolidated through the effort is organized, documented and available to be utilized by a wide array of technical and non-technical users. This effort leverages, coordinates and cost shares with a series of existing data management projects, cyber-infrastructure and partnerships which contribute capacity and information to this effort. During year one and two, this project would focus on providing informatics support to streamline the transfer of information between various study teams and isolate and standardize historic data sets in the general spill affected area for use in retrospective analysis, synthesis and model development. This work would scale down in year three thru five to provide support for general project level data management and archival.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16**Date: September 2015**

The Science Panel appreciates that there was progress in data assimilation and posting. We look forward to continued progress and request clarification on the current status and major bottlenecks of the process. The graph showing the number of files was descriptive; however the Panel would like some context to understand the potential scale of the vertical axis on that figure. What is the total number of expected files? The Panel also wanted to have a better descriptor of the nature of data uploaded that goes beyond files including the type of files, number of datasets, and the percentage of data from the current herring program has been submitted to the workspace by individual project PIs. What fraction of what has been submitted is non-compliant (lacking metadata, QA/QC, etc.)? What fraction has been submitted and is awaiting uploading? It feels like the overall project should have a grid of dataset by year with a key showing the status of each dataset. This would allow easy visualization of both the scope and status of the project.

Science Coordinator, Executive Director Comments – FY16**Date: September 2015**

We concur with the Science Panel's comments.

Public Advisory Committee Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15**Date: September 2014**

It was encouraging for the Science Panel to hear via a conference call with Program Science Leads that the standardized forms for metadata submission had been recently modified, and a more refined version is now available to investigators. However, it was discouraging to learn that not all investigators were compliant on submission of both metadata and data in a timely manner (within one year of collection) as agreed upon when accepting funding from EVOSTC. In the future we see submission of required data and metadata as a condition of funding renewal.

Science Coordinator Comments – FY15**Date: September 2014**

I concur with the Science Panel and would be willing to assist with data compliance if desired.

PAC, Executive Director Comments – FY15**Date: October 2014**

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund Conditional	Fund Conditional	Not Reviewed	Fund Conditional	Fund

Science Panel Comments – FY14**Date: September 2013**

Progress is listed as “Data is being archived on the Workspace by investigators in the program...” and “Data from the past two field seasons will be ingested into the data management system. We will continue to refine and expand the information available through the Herring data portal.” Please specify what data have been incorporated. Also, the demonstration of progress is not adequate. More detail is essential. Failing that, this project should be suspended. An inventory of all data proposed to be incorporated eventually into the program should be drawn up and an accounting of progress on incorporating the listed data sets should be reported annually, including any changes to the inventory of target datasets. The science panel is concerned about progress on data management. The data management proposal drew heavily on their old proposal without including sufficient updated evidence of interactions between the programs’ PIs and the data management team. In addition, there does not appear to be a data management policy or QA/QC policy created as the programs approach Year Three. In addition, no milestones were reported in the newly submitted proposals, so it was difficult to gauge how much progress had been made in the last two years. Moreover, it was not clear how data would be available for synthesis. The panel recommends that the Council condition funding upon the creation of a credible and detailed data management policy and a QA/QC policy and include clear milestones in for their proposal.

Regarding a QA/QC policy: such a document is a basic need of any data management. We note too that instruments commonly need to be calibrated before and after use to be able to adjust for measurement drift, if it occurs. With two separate data centers operating under the EVOSTC program it is crucial that a high level of QA/QC be maintained. The Science Panel is concerned that adequate attention is not being devoted to this fundamental aspect of data management. It is particularly important that to assemble complete metadata to ensure that long-term data sets can be verified and understood once the current participants have moved on to new positions. For example, EPA and NSF require detailed data management and QA/QC plans as part of all proposals. Large monitoring programs, such as NSF’s LTER and oceanographic programs, devote considerable time and effort to addressing these critical needs. Example: As a specific example, the Ocean Tracking Network (OTN) has four nearly full-time people creating metadata forms that are required to be filled out, submitted and checked for QA-QC before data can be added to the database. Since OTN is currently adding equipment to tracking arrays in PWS, it would be particularly appropriate at this time to arrange communication between senior OTN data managers with EVOSTC program data PIs to ensure that data standards are adequate. As with OTN, and as emphasized in the initial funding of the EVOSTC programs, skilled data management resulting in data that can be relied upon by the scientific community and resource agencies will ultimately determine the long-term success and influence of the programs. The contact at OTN is Bob Branton (bob.branton@gmail.com) or (bob.branton@dal.ca).

Science Coordinator, Executive Director Comments – FY14**Date: September and October 2013**

We concur with the Science Panel.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

Trustee Council Comments – FY14**Date: October 2013**

The Council requests the Team Leads and PIs within the Long-Term Programs in Project numbers 14120111 and 14120114 work with EVOSTC staff to address Science Panel and EVOSTC staff comments in the Fiscal Year 2014 Work Plan and participate in a Long Term Programs' Data Review Meeting with EVOSTC and Trust Agency Staff.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund
April 2011	Modify	Modify	Modify	Modify

Science Panel Comments – FY12**Date: April 2011**

Gathering and making data available will be the keystone of this program. The Science Panel expressed serious concerns about past performance of some participants and that the data management team does not have sufficient expertise or scientific guidance to deliver a useable data

system. In addition, it is not clear at all there is a plan for the inclusion of structurally diverse data: where and how will such data be organized so that relevant data and metadata from a broad array of disciplines can be assembled in one database. The panel viewed this as this as an informatics problem that, if not resolved at the onset, will jeopardize the long-term program. There is a very clear need to overcome critical technological impediments to accomplishing synthetic, integrative environmental science, while at the same time promoting more open access to information and data sharing. It is critical that this database be open source and be compliant with the Knowledge Network for Biocomplexity metadata compliant with Ecological Metadata Language. In addition, there should be a plan from the outset as to how to incorporate this data into NPRB's GOAIERP program at the end of the first five-year contract cycle.

Therefore, we strongly recommend that the Council provide assistance from an organization such as the National Center for Ecological Analysis and Synthesis (NCEAS) for peer review and technical assistance to the data management team. With regard to the separate lingering oil monitoring proposal included within the Program proposal, the Panel has no objection to the funding of this additional project. The Panel does not believe that Axiom currently has the capacity to conduct the most effective management of the data. The biological investigations produced by the suite of projects included in this proposal package generate data that are challenging to code in ways that facilitate their combination with other data such as physical or chemical variables. The discipline that handles these challenges is known as informatics. The Science Panel views the inexperience of Axiom personnel as a critical problem. This concern does not imply inadequate capability of the key staff of Axiom. It is a reflection of their limited experience. Consequently, establishing a partnership between Axiom and NCEAS makes sense because Matt Jones and NCEAS are willing to share their cutting-edge expertise. NCEAS is the "National" Center for Ecological Analysis and Synthesis and the principals of the NCEAS proposal are leaders in this field. Pairing NCEAS with Axiom, would promote information sharing of NCEAS' expertise, such emerging data standards as DateOne and on a suite of data manipulation and synthesis tools, such as meta-analysis methods. This information transfer represents critical capacity building within Alaska that would greatly benefit EVOSTC, AOOS, NPRB, and other important research and monitoring enterprises. The willingness of NCEAS to collaborate with Axiom is evident from their proposals and discussions with Rob Bochenek, Elise, Molly, and others. Nevertheless, the most creative and appealing aspect of the proposal provided by NCEAS, and which builds on technical metadata processing that NCEAS excels in, relates to the second phase of work – the synthesis activities. Some syntheses have indeed been supported by the EVOS Trustee Council over the years. These include very important outputs of the program – a synthesis of novel oil toxicity mechanisms in pink salmon by Rice et al. 2003; a book edited by Spies that placed the oil and natural resources of coastal Alaska in a context of changing climate; reviews of the delayed and indirect mechanisms by which EVOS oil caused ecological injuries by Peterson et al. (2003); and reviews of multi-year EVOS oil persistence on Alaskan beaches by Short and colleagues. Despite these valuable legacies, more synthesis is needed into the future, including on herring, where numerous potential explanations for its lack of recovery exist and a growing body of diverse data requires synthesis to extract now cryptic insights.

Phase II of the NCEAS proposal promises facilitation of just such synthesis outputs. This activity is extremely important for both the Herring and especially the Long-term Monitoring programs. The Panel recommends funding of this Phase II, under conditions that reflect engagement of the PIs from

Draft 11-4-15

these two programs to develop the questions to be addressed and help select the experts who will participate in the study groups and synthesis efforts. The Panel notes that failure to solve the problem of creating an enduring depository for EVOS-Trustee funded data is a long-standing problem. At least 10 year ago, the EVOS Trustee Council and staff endorsed the responsible and ethically necessary principle that each study funded by the Council must deliver all resulting data in electronic form to the council staff as part of their final reporting obligations. Despite this mandate, there exists now no data base of the historically-funded projects. This issue has great capacity to embarrass the Council and the memory of the past failures motivates the Panel to recommend finally solving this problem by engaging the undeniable expertise and preeminence of NCEAS to collaborate in this venture.

Science Coordinator Comments – FY12

Date: April 2011

I concur with the Science Panel. I also have serious concerns regarding the data program and would encourage the Council to assist the team by providing funding for a comprehensive review of the data program. I also concur with the Science Panel that the fundamental data that will be utilized by the program should be rigorously reviewed to ensure the best possible platform for the herring projects. I do believe that the data that has been gathered by ADF&G for PWS herring has been carefully gathered and reviewed. I would like to continue working with staff at ADF&G to determine what actions would have the greatest benefit to both the herring program and ADF&G managers. The possible addition of a staff position at ADF&G that would work closely with herring program would be of tremendous value to both the program and the management agency.

Public Advisory Committee – FY12

Date: July 2011

Issues raised by the Science Panel, Trustee Council staff, and the PAC called for additional work and collaboration to assist with establishment of a data management system that includes accessible scientific data as well as public information. In response, the National Center for Ecological Analysis and Synthesis (NCEAS) submitted a proposal to work with Axiom (a subcontractor to AOOS), and the Woods Hole Oceanographic Institution also submitted a proposal. Elements of both options were reviewed and discussed. Data management generally consumes about 30% of a research program budget; the costs for including one of these options for assistance remain within that range. French noted that he had no problem with either NCEAS or Woods Hole—he questioned Axiom's role and staying power. McCammon said that Axiom would be a subcontractor to AOOS, had been doing cutting edge work, and was committed to the project—they have a 4-year contract. She also stated that the AOOS Board was committed to the project. French said he supported the NCEAS and Axiom collaboration. Eilo summed the PAC interest in the Trustee Council implementing a solid data management, synthesis, and public access system

Date: April 2011

Brune questioned past due delivery of a product by Axiom, noting the Trustee Council policy to not fund organizations which were behind in deliverables—he believes Axiom should not be awarded additional work when there are outstanding deliverables, and that this sets a dangerous precedent. Fandrei agreed that this was an issue. Hsieh said she expected the outstanding deliverable to come in May. French said it was important that data not be proprietary so it would be publicly available. Amanda Bauer asked if there were other organizations that Axiom did work for. Hsieh mentioned

several State and Federal agencies that are Axiom clients. PAC agrees with the Science Coordinator in that there are serious concerns regarding the data program and would encourage the Council to assist the project team by providing funding for a comprehensive review of the data program.

Executive Director Comments – FY12

Date: July 2011

There has been strong concern about the program's data manager serving the entire program. Since April, the data manager's work has been favorably reviewed, has submitted late deliverables to the Council and several data management options have been produced by this program and outside entities. These options presented are in conjunction with leaders in the field of heterogeneous scientific database management and are excellent options. I recommend the Council pursue one of these options to ensure successful management of the data produced by this and past Council-funded efforts.

Project Number: 16120111-E

Project Title: PWS Herring Program – Expanded Adult Herring Surveys

Primary Investigator(s): Peter Rand

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$249,579

FY12	FY13	FY14	FY15
\$6,540	\$84,366	\$68,125	\$90,579

Additional EVOSTC Funding Requested: \$84,366

FY16
\$84,366

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$333,976

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/14/15.*

Prince William Sound herring stock biomass estimates from hydroacoustic surveys provide a direct measure of the stock abundance for use in the age-structured assessment (ASA) model that is the forecasting tool used for management. Prior to 2001, the hydroacoustic surveys were conducted exclusively by the Prince William Sound Science Center (PWSSC). Since 2001, the effort has been shared between PWSSC and the Cordova office of Alaska Department of Fish and Game (ADF&G). While the ADF&G considers the hydroacoustic surveys to be critical (Steve Moffitt, personal communication) the lack of a commercial herring fishery in PWS since 1998 has reduced management priorities for herring. Thus the PWSSC contribution has become critically important for the long-term, especially if a future fishery appears only a remote possibility. With the level of effort available over the past several years, PWSSC and ADF&G individually have achieved herring biomass estimates with a precision of about $\pm 30\%$, which is insufficient for management purposes. However, the combined effort currently meets management requirements for precision. Current stock assessment efforts by ADF&G resource managers in PWS focus on the largest spawning aggregations. The objective of this study is to increase the current survey area of adult spawning beyond the Port Gravina and Fidalgo areas to provide a more precise estimate of spawning biomass. We propose to extend the PWSSC acoustic surveys to help identify the relative contributions of additional spawning aggregations over temporal and spatial scales. This will help establish more accurate estimates of the total herring biomass in PWS and provide an alert to changes in biomass in different regions. Beginning in FY2013 and continuing until 2016, hydroacoustic surveys will be conducted in late spring (April-May) to assess

adult spawning biomass. ADF&G will continue to conduct direct sampling for age/length/weight. Additional direct capture will be conducted at adult spawning sites (See Bishop proposal).

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY15

Date: September 2014

An extract from the Executive Summary states is as follows: *“With the level of effort available over the past several years, PWSSC has achieved herring biomass estimates with a precision of about $\pm 30\%$. This level of precision is insufficient for management purposes. There is concern that some concentrations of fish are not located and surveyed under current levels, in which case the estimate is biased, a factor not incorporated into variance calculations for precision.”*

What level of precision would be acceptable for ADF&G? If, as indicated in the report, that the biomass estimates (based on incomplete acoustic data) may be unduly conservative, then it follows there should be some estimate of the time required to attain a degree of completeness that would be acceptable. Such clarification would be useful.

Science Coordinator, PAC, Executive Director Comments – FY15

Date: September and October 2014

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14

Date: September 2013

If acoustic information is to be used for annual herring assessments (by ADFG or anyone else) then it would seem reasonable that there were some meaningful communication between the people doing the survey and those doing the assessments (see specific comments on the previous proposal).

Is there a data source, or database on areas that were ‘historically surveyed’? If so, what or where is it? Will it be made available to the data synthesis projects? Has there been any effort made to report

on these data? Because of PI departures, a very junior, although promising scientist without any peer-reviewed publications, is left alone to execute this project. The Science Panel urges engagement of a more senior experienced partner to help guide and enhance this project.

It is gratifying to see that samples from Kayak Island were made available to geneticists. However, there does not appear to be any reference to this in the genetics proposal.

Science Coordinator, Executive Director Comments – FY14

Date: September and October 2013

We concur with the Science Panel.

Public Advisory Committee Comments – FY14

Date: October 2013

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14

Date: October 2013

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13

Date: September 2012

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator Comments – FY13

Date: September 2012

I concur with the Science Panel.

Public Advisory Committee Comments – FY13

Date: September 2012

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

Executive Director Comments – FY13

Date: September 2012

I concur with the Science Panel.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12

Date: April 2011

There are no project specific comments.

Project Number: 16120111-F

Project Title: PWS Herring Program – Juvenile Abundance Index

Primary Investigator(s): Peter Rand

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$321,223

FY12	FY13	FY14	FY15
\$90,143	\$80,115	\$66,054	\$84,911

Additional EVOSTC Funding Requested: \$82,949

FY16
\$82,949

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$404,172

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/14/15.*

Management of the Pacific herring stock in Prince William Sound is based primarily on an age-structured-assessment (ASA) model. The current model, developed in 2005, incorporates both hydroacoustic estimates of the adult herring biomass and an index of the male spawning, called the "mile-days of spawn". Unfortunately, the forecast is based on measurements from the previous year and does not have a direct measure of future age 3 recruitment. Current knowledge suggests that most mortality occurs during the first winter of life, so the relative recruitment may be fixed by the end of the first year. Consequently, estimates of relative abundance of age 1 and age 2 fish should provide an index of future recruitment. An index of age 0 fish would also provide a forecast of recruitment if additional information were available on the magnitude of the first year mortality. We will conduct annual fall surveys (FY2013-2016) of 8 bays; four of which will be the Sound Ecosystem Assessment bays. This will maintain a continual database from these locations. The other 4 bays will be selected based upon the survey results of the current EVOSTC FY10 Herring Survey Project (# 10100132). Surveys will be conducted using 120 kHz split-beam hydroacoustic unit in a stratified systematic survey design (Adams et al. 2006). For this study, direct capture will be directed to size and species composition. A midwater trawl will be used to sample randomized transects within each strata.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Draft 11-4-15

Science Panel Comments – FY16

Date: September 2015

The proposal is basically sound but some of the text of this proposal may generate more confusion than clarity. While it is correct to state that the ASA model (which 'hindcasts' or provides 'after-the-fact' estimates of spawning biomass), cannot account for future recruitment, it is important to understand that this is a limitation that applies to most ASA models, on herring or other species. Usually assessment biologists attempt to use some form of a 'stock-recruitment' function to provide an estimate of new recruits, usually considered to be the numbers of sexually maturing fish that join the adult population for the first time, probably mainly at age three (~36 months) when they mature sexually. A different approach to estimating recruitment may involve an empirical estimate - or relative index - of the numbers of juvenile fish in the population. Such empirical estimates of juveniles could be based on fishing surveys (CPUE) or acoustic surveys.

If juvenile abundance could be estimated a year or two before recruitment, perhaps at age 1 (or between ~6-17 months) or age two (~17-30 months) then this also could be used in anticipation of the spawning at age 3. There are now several instances of regular juvenile surveys that are used for such empirical estimation in various herring populations. In the Strait of Georgia an estimate of age 0+ juveniles from synoptic surveys made in September can provide a useful index of relative recruitment strength nearly 2.5 years before recruitment occurs. There are other examples of this approach in European herring populations.

Based on the comments above, I suggest that the clarity of the proposal might be improved if it were to provide some of this context.

Another general consideration about this proposal is that while valid, desirable and useful, juvenile surveys are not necessarily vital for annual assessments. There are alternative approaches to estimate annual recruitment based on stock-recruitment models. Such approaches are commonly used but usually because there are no alternatives. Also, for relatively short-lived fish such as herring, the size of the recruiting cohort can constitute a large component. So, while it is better to have empirical estimates of recruitment, they are not always available. Further, it may take some time to establish such a relationship. For example, the time required to develop a comparison of age 0+ juveniles (say in late winter at age 6 months) and subsequent recruits (at age 36 months), with five data points in a regression, will be about 8 years: 7.5 years between the first juvenile survey (of cohort n) and the year of recruitment of age three fish (of cohort $n+5$) - and perhaps another six months to gather all of the data to make the ASA assessment in Year $n+5$.

Science Coordinator, Executive Director Comments – FY16

Date: September 2015

I concur with the Science Panel's comments and suggestions.

Public Advisory Committee Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15**Date: September 2014**

The two projects, Juvenile Herring Abundance & Juvenile Intensive Surveys, have been in place for several years but the 2015 proposals did not provide any information on past results. Why is that?

Science Coordinator Comments – FY15**Date: September 2014**

This project has provided status updates in its 2012 and 2013 Annual Reports. The proposal requirements did not request a discussion of past results.

PAC, Executive Director Comments – FY15**Date: October 2014**

No project specific comment. Science Coordinator's comments are noted.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Draft 11-4-15

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: April 2011**

There are no project specific comments.

Project Number: 16120111-H

Project Title: PWS Herring Program – Outreach & Education

Primary Investigator(s): Haley Hoover

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$115,649

FY12	FY13	FY14	FY15
\$16,459	\$30,520	\$32,700	\$35,970

Additional EVOSTC Funding Requested: \$38,259

FY16
\$38,259

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$153,908

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$50,000	\$50,000	\$65,000	\$65,000	\$65,000	\$295,000

FY12 – FY15 Non-EVOSTC funding from FY15 proposal; FY16 amount from proposal section VI-C.

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/14/15.*

The Outreach & Education project is designed to enhance the PWS Herring Program research activities by showcasing their relevancy, broadening their applicability and extending their impact to people in the community. PWSSC educators will work with PWS Herring Research and Monitoring principal investigators (PI) and project collaborators to prepare public education materials that communicate the purpose, goals and results of the research program to “non-scientist” audiences and stakeholders in communities in and beyond the spill affected area.

Outreach and education products will extend and transfer Pacific herring and marine ecosystem information to inform the public of local research activities and improve their ecological and ocean science literacy.

The specific objectives of this proposal, which includes the outreach and education components of the PWS Herring Research and Monitoring Program, are to:

1. Disseminate PWS herring research information and lessons learned in this program to individuals, groups, policy makers, resource managers and institutions in PWS, including the effected fishing community.
2. Extend and transfer PWS herring research-based outreach and education products to general

audiences in and beyond the spill affected areas of PWS.

3. Integrate community involvement into the planning and sampling programs through citizen science opportunities and public workshops

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15

Date: September 2014

The Science Panel appreciates the progress made on local outreach. One of the simplest ways to do this is to keep the website updated, because it is the portal to the outside world. However, we also recommend that investigators work with the outreach program to craft presentations that could be delivered at various venues (e.g., schools, Science Pubs). There was a comment in the proposal that there has been some difficulty getting PI's to commit to outreach efforts due to logistics. The location of the PI's should have little impact on their ability to participate in outreach efforts. Involvement of PIs in outreach activities can extend the reach of the program and improve the public's appreciation of what is being accomplished. We also encourage the outreach team to call and interview PI's to get information that would be beneficial to the outreach efforts.

Investigators responses to previous comments made by the science Panel suggested that funding is insufficient to expand outreach. The Panel feels that two people are being supported to complete this work, which is ample provided that the program prioritizes updating the website and working with PIs on presentations over local outreach.

Science Coordinator Comments – FY15

Date: September 2014

I concur with the Science Panel. The website is listed as an outreach tool yet there is very little information about this Program. I struggled to find the Program specific webpage on the PWSSC site and there was almost no information for researchers or the public.

PAC, Executive Director Comments – FY15

Date: October 2014

No project specific comment. Science Coordinator's comments are noted.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

Was there any attempt to coordinate output with Gulf monitoring group? As noted above, the Science Panel notes that there may be opportunities and requirements for increased communication among PI's within the herring project. A key point is how the different projects relate to each other, especially their connections or inter-dependences. This aspect was not well developed in this (2013) set of proposals. Perhaps this outreach project can assist in this regard?

Science Coordinator, Executive Director Comments – FY14**Date: September and October 2013**

We concur with the Science Panel.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14**Date: October 2013**

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

I concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12**Date: April 2011**

There are no project specific comments.

Project Number: 16120111-K

Project Title: PWS Herring Program – Herring Disease Program (HDP)

Primary Investigator(s): Paul Hershberger

PI Affiliation: USGS

Project Manager: USGS

EVOSTC Funding Authorized To Date: \$573,776

FY12	FY13	FY14	FY15
\$0	\$0	\$281,874	\$291,902

Additional EVOSTC Funding Requested: \$298,006

FY16
\$298,006

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$871,782

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$42,100	\$42,100	\$84,2007

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/14/15.*

The Herring Disease Program (HDP) is part of a larger integrated effort, Prince William Sound Research and Monitoring (outlined in a separated proposal by Dr. Scott Pegau). Within this integrated effort, the HDP is intended to evaluate the impact of infectious and parasitic diseases on the failed recovery of the PWS herring population. The framework for the 2012 – 2016 HDP involves a combination of field surveillance efforts, field-based disease process studies, and laboratory-based controlled studies. Field surveillance efforts will provide continued and expanded infection and disease prevalence data for herring populations in Prince William Sound (PWS), Sitka Sound, and Puget Sound. During FY 2016 we will continue the health assessments of adult herring from Prince William Sound and Sitka Sound, we will continue to rear colonies of specific-pathogen-free Pacific herring for controlled studies in the laboratory, we will compare the relative sensitivities of four newly-developed diagnostic assays that are capable of identifying prior exposure to VHS virus in Pacific herring. Additionally, by employing the qPCR and chromogenic in situ hybridization tools that were developed as products of the HDP, we will begin searching for intermediate invertebrate hosts for *Ichthyophonus*.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16**Date: September 2015**

There are no project specific comments.

Science Coordinator Comments – FY16**Date: September 2015**

I would like to commend the project team on their outstanding publication record. This project is pioneering techniques for disease detection and management and it is gratifying to see that they are sharing their knowledge during each stage of the research with the scientific community both in Alaska and worldwide.

PAC Comments – FY16**Date: September 2015**

There are no project specific comments.

Executive Director Comments – FY16**Date: September 2015**

I concur with the Science Coordinator's comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15**Date: September 2014**

The Panel commends this project team for their outstanding record of scientific publication.

Science Coordinator Comments – FY15**Date: September 2014**

I also commend the team for their efforts to publish their work in peer-reviewed literature.

PAC, Executive Director Comments – FY15**Date: October 2014**

We concur with the Science Panel and Science Coordinator.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

The Science Panel feels that this is probably one of the most important high-payoff programs within EVOSTC. Funding needs to continue and the incorporation of disease ecology needs to be somehow incorporated into models.

Draft 11-4-15

Science Coordinator, Executive Director, Trustee Council Comments – FY14

Date: September and October 2013

We concur with the Science Panel.

Public Advisory Committee Comments – FY14

Date: October 2013

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Project Number: 16120111-L

Project Title: PWS Herring Program – Herring Condition Monitoring

Primary Investigator(s): Ron Heintz

PI Affiliation: PWSCC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$720,793

FY12	FY13	FY14	FY15
\$0	\$229,990	\$238,601	\$251,572

Additional EVOSTC Funding Requested: \$253,861

FY16
\$253,861

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$974,024

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$42,431	\$46,683	\$ 89,114

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/12/15.*

Outlined here is a single herring monitoring project that is a part of an integrative program that will enhance the current herring monitoring efforts and examine aspects of particular life stages to allow better modeling of Prince William Sound herring populations. The long-term goal of the program is to improve predictive models of herring stocks through observations and research.

This project will be continuing the development of an overwinter herring mortality model that began with an ongoing monitoring project initiated in 2007, and incorporates results from Prince William Sound herring research dating as far back as the 1990's. Accordingly, herring are sampled in November and the following March (Objectives 1 and 2). The model runs by applying herring condition observations made before and after winter (Objective 3). Proposed sampling will commence in November 2012 and end in March 2016. A future project is expected to continue the time series beginning in November 2016. The purpose of the time series is to relate overwinter mortality to herring recruitment.

Additionally, this project will be furthering the development of an overwinter herring mortality model with additional data types including proximate composition, RNA/DNA, and diet (Objective 6), as well energy levels per se. The goal is to use physiological indicators to realistically modify the daily energy loss rate in the overwintering model. The results of model improvement will be tested using the March data model validation approach that began in 2007.

Draft 11-4-15

We will no longer be assessing competitive effects of other juvenile fishes on condition of age-0 herring using stable isotope analysis as noted in previous proposals (Objective 4). Our experience with the sampling program is that we were unable to target the sample sizes need for other species to make this a realistic goal. This aspect of the project was not conducted in 2015 and will not be conducted in 2016.

In 2015, we examined the relationship between age-0 herring length and scale growth (Objective 5) using existing data collected as part of this program, in order to better interpret long-term scale data held by Alaska Department of Fish and Game within the context of energetics. This project will not continue in 2016 as the analysis was completed successfully.

Additionally, we will be assessing effects of competition of other juvenile fishes on condition of age-0 herring using stable isotope analysis on an opportunistic basis.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16

Date: September 2015

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15

Date: September 2014

Parts of this expensive proposal/project are vague. In particular the 'new' work looking at juvenile scales is not clear. (1) Is the plan to take scales from juvenile fish? If so, this could be difficult because, depending on the time of year and fish size, scales may be incompletely developed and very fragile. (2) Have the investigators done any 'preliminary work' to examine the feasibility of their approach? (3) The project refers to 'predictive models' but is there a hypothesis? (4) Will this project build on previous 2012 EVOSTC-supported projects on scales by Moffitt?

Science Coordinator, PAC, Executive Director Comments – FY15

Date: September and October 2014

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14

Date: September 2013

Considerable concern was expressed about the departure of Dr. Kline and the panel endorses Pegau's expressed urgency in finding a suitable replacement. These proposals tackle important issues and they both do a very good job of relating what they do to other projects, especially to the ASA model. These proposals also present well and respond to much of what the panel recommended in 2011.

Over-wintering mortality among herring juveniles has been invoked as an explanation for many things: recruitment variation, spatial variation in herring survival and susceptibility to disease within Prince William Sound, and perhaps more. It is an important topic and there is a rich legacy of work on this by productive researchers in Prince William Sound. It is important that this work receive the continued attention it deserves, including as much synthesis of past work as possible.

With respect to the 2013 proposals: no plan is evident to examine the relationship of the change in energy content to climate and oceanographic conditions during the pre-sampling and overwintering periods. If PIs are truly interested in determining whether the "constraints" are relaxed, then all constraints, including climate/ocean factors must be considered. As much as possible these projects must be integrated with oceanographic and biological data from LTM, especially because the causes for condition changes are crucial. The project must also be integrated with the herring disease program. The panel suggests that condition be used in experiments with disease challenges including transmission mechanisms.

Science Coordinator, Executive Director Comments – FY14

Date: September and October 2013

We concur with the Science Panel.

Public Advisory Committee Comments – FY14

Date: October 2013

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14

Date: October 2013

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13

Date: September 2012

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Draft 11-4-15

Science Coordinator, Executive Director Comments – FY13

Date: September 2012

We concur with the Science Panel.

Public Advisory Committee Comments – FY13

Date: September 2012

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

Project Number: 16120111-O

Project Title: PWS Herring Program – Coordination and Logistics

Primary Investigator(s): Scott Pegau

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$1,601,530

FY12	FY13	FY14	FY15
\$364,126	\$510,261	\$388,136	\$339,007

Additional EVOSTC Funding Requested: \$338,583

FY16
\$338,583

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$1,940,113

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$20,000	\$21,000	\$22,000	\$24,000	\$24,700	\$111,700

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/14/15.*

This project is for the coordination and logistics aspects of the proposed program titled, "Herring Research and Monitoring". The long-term goal of the program is to improve predictive models of herring stocks through observations and research. The objectives of the program are 1) Provide information to improve input to the age-structure-analysis (ASA) model, or test assumptions within the ASA model, 2) Inform the required synthesis effort, 3) Address assumptions in the current measurements, and 4) Develop new approaches to monitoring. The Coordination and Logistics project objectives are to 1) ensure coordination between projects to achieve the program objectives, 2) Provide a synthesis from existing results, and 3) provide logistical support to the various projects.

Coordination includes scheduling of projects to ensure the maximum sharing of vessel time and ensuring that projects dependent on results or samples from another project are in the correct order. Coordination will be primarily through email and teleconference, but each year all the investigators are required to meet in person. Coordination is also taking place with the existing Herring Survey program, the Long-Term monitoring program, and ADF&G herring sampling. Logistics is primarily in providing vessel time. A synthesis was provided to EVOSTC in early 2015.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Draft 11-4-15

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel, Science Coordinator, Executive Director, Trustee Council Comments – FY14**Date: September and October 2013**

There are no project specific comments.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior to this review. We have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13**Date: September 2012**

We concur with the Science Panel.

Public Advisory Committee Comments – FY13**Date: September 2012**

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director, Trustee Council Comments – FY12

Date: April 2011

There are no project specific comments.

Project Number: 16120111-Q

Project Title: PWS Herring Program – Modeling the population dynamics of PWS herring

Primary Investigator(s): Trevor Branch

PI Affiliation: University of WA

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$322,163

FY12	FY13	FY14	FY15
\$36,907	\$87,013	\$97,836	\$100,407

Additional EVOSTC Funding Requested: \$104,920

FY16
\$104,920

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$427,083

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/14/15.*

Shortly after the Exxon Valdez oil spill, the Prince William Sound herring populations collapsed and have not yet recovered. We propose a modeling project to (1) revise and update the ASA model used to manage this population, (2) conduct simulations to test which data sources are most important in assessing the current status of this population, and (3) collect data on herring populations worldwide to find out how often these populations collapse under ordinary conditions.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16**Date: September 2015**

The role of Trevor Branch in devoting explicit models not only ASA models for herring but also potentially other process-oriented models are very evident in reviewing the most recent proposals. His explicit models can serve well to synthesize data from several different herring projects, especially articulating which factors contribute to herring fitness and recovery.

Science Coordinator, Executive Director Comments – FY16**Date: September 2015**

I concur with the Science Panel's comments.

Public Advisory Committee Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel Comments – FY15**Date: September 2014**

The Panel acknowledges the detailed and well-rounded proposal for this project. The Panel also strongly supports the recognition in the proposal that the ASA model will have a key role in synthesis. For this reason, it is essential that all participants in the upcoming synthesis meeting have a clear description of the model as currently coded. Such a description does not exist in the published literature or previous reports to EVOSTC. The description should include (i) equations; (ii) a list of parameters assigned values before model runs; and (iii) a list of parameters estimated from data and objective functions used. It does not need to include much supporting text. We suggest a target date of December 1, 2014 for this description so that attendees have ample time to take account of the model details in preparation for the synthesis meeting. A further, more technical, comment is that there was no reason given for moving to a Bayesian framework. There are many potentially excellent reasons for this decision, but they were not presented.

Is the present ASA model used for PWS identical to the model described by Hulson et al. 2008? (See Hulson, P-J. F., Miller, S. E., Quinn, T. J. II, Marty, G. D., Moffitt, S. D., and Funk, F. 2008. Data conflicts in fishery models: incorporating hydroacoustic data into the Prince William Sound Pacific herring assessment model. – ICES Journal of Marine Science, 65: 25–43.)

Objective 3 (Gathering data on clupeids of the world) is a formidable task, especially for a graduate student. More regional comparisons however may be useful if the analyses were confined to a smaller number, especially those in the eastern pacific.

Science Coordinator, PAC, Executive Director Comments – FY15**Date: September 2014**

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Not Reviewed	Fund	Fund

Science Panel Comments – FY14**Date: September 2013**

While this effort may be in the correct direction, the estimation of herring biomass is an integral and very important part of the herring program. Candidly, the Science Panel had expected more progress and more effort than the efforts of a graduate student to be directed at this issue. This comment should not be seen as a criticism of the student, but instead as a deficiency in the effort directed at this important issue. There is no indication from the proposal that there is any dialogue between the PI and the other herring program PI's and if so, that is a problem that should be addressed. A specific concern is the extent to which acoustic data, or acoustic indices, can be used, as a component of the annual assessments. Similar questions exist about the spawn data. It seems probable that some form of fisheries-independent index would be required to tune the age-structure (ASA) model. If not, then something else might be used, such as a spawn index and if so, that might require a reallocation of resources. Therefore a better understanding of the data requirements for practical development of the ASA model is required. To this end the modelers need to examine and evaluate the strengths and weaknesses of the available data, preferably in collaboration with other PI's in the herring program.

Science Coordinator, Executive Director Comments – FY14**Date: September and October 2013**

We concur with the Science Panel.

Public Advisory Committee Comments – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14**Date: October 2013**

There are no project specific comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
September 2012	Fund	Fund	Not Reviewed	Fund

Science Panel Comments – FY13**Date: September 2012**

Due to the change in the funding cycle, the program only began their work four months prior. We

Draft 11-4-15

have reviewed the work completed to date and are comfortable with the program continuing their proposed work.

Science Coordinator, Executive Director Comments – FY13

Date: September 2012

We concur with the Science Panel.

Public Advisory Committee Comments – FY13

Date: September 2012

Not reviewed due to the lack of a quorum at their meeting. No individual comments were received..

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
April – Aug.2011	Fund	Fund	Fund	Fund

Science Panel Comments – FY12

Date: April 2011

The Herring Program team clearly gave careful thought to how modeling should be done and who should do it. Their choice and recruitment of Trevor Branch at UW is superb. This is a young rising star in fisheries dynamics modeling, who has many experienced colleagues with whom to interact. His proposal represents a good guideline for the modeling work he will begin, identifying some key processes of high value to the herring program. We expect to see evolution of the modeling as the project develops and see Branch as a leader who will make adaptive additions and modifications as new issues arise. We would like to have seen a more overt mention of how competing drivers of herring mortality will be tested against one another – physiological stress, starvation, top-down predation, and disease. These are clearly embedded in the life history modeling, but model fits to choose the factor or combinations of factors that best fit observed abundance changes would be welcome.

Agency Staff Comments – FY12

Date: August 2011

The proponent is a great choice for this work, and having this as a doctoral project is a cost-effective way to get some very good work done. The project description is light on details, and that is acceptable to a limited extent, given that the work includes an investigation of what has been done and the available data (via the management strategy evaluation), and that it is important to be flexible in model development. It would be helpful to have more details on the “holistic” model. For example, the Hulson et al. age structured analysis is referenced in relation to the management strategy evaluation, but there is no clear description of how the proposed holistic life-stage model relates to or builds off of the ASA, i.e., what the structure of the “holistic” model will be. Another concern is that is not clear if or how the “holistic” model will be used to aid in identifying the limiting factors in herring recruitment and recovery. That could be an important aspect of the overall herring program. The disclaimer in the second paragraph of the “Statement of the Problem” is disconcerting given the intellectual effort that the proposal aims to expend on model development: “While we do not anticipate that there will be a major change in our modeling ability in the next five years, we

expect that the combination of monitoring and focused process studies will provide incremental changes over the next twenty years and result in a much better understanding of herring populations by the end of the program." Perhaps the proponent could offer a more detailed, though conditional description of what the expected benefits might be.

The order of the three tasks is a bit confusing. The tasks given in Methods (p. 3-4) are: 1. Management strategy evaluation to identify most informative datasets – 2. Predict future levels of recruitment – a meta-analysis of time series for other herring and clupeid stocks. 3. Holistic model of herring dynamics – life stage model (age based), tasks conducted by UW students and faculty with access to Hilborn, Punt, and Essington.

The expected order of completion of these tasks as given under Milestones (p.7) is 1. model (by 9/14), 2. MSE (by 9/15), and 3. predict recruitment (by 9/16)

It is not clear why a model will be developed first, and then a different model (ASA) used in the management strategy evaluation. Also, the work to predict future recruitment, as described, appears correlational and doesn't appear to involve the "holistic" model or a mechanistic understanding of herring dynamics, yet the timeline has this work occurring after initial model development. How would this work be related to the "holistic" model?

The budget includes research assistant-ship and tuition for a Ph.D. student – essentially a half time position dedicated to this research. This is a cost efficient use of funds.

Science Coordinator Comments – FY12

Date: April 2011

I concur with the Science Panel's comments. The PI's identified are skilled and well-respected in their field and will bring valuable experience to this complex project.

Public Advisory Committee – FY12

Date: April 2011

The PAC concurs with the Science Panel recommendation to fund the Branch modeling project. There were no objections.

Executive Director Comments – FY12

Date: April 2011

There are no project specific comments.

Project Number: 16160111-S

Project Title: PWS Herring Program – Herring Movement Study

Primary Investigator(s): Mary Anne Bishop

PI Affiliation: PWSSC

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$0

FY12	FY13	FY14	FY15
\$0	\$0	\$0	\$0

Additional EVOSTC Funding Requested: \$272,600

FY16
\$272,600

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$272,600

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$415,000	\$415,000

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/31/15.*

One of the important knowledge gaps for the Pacific herring (*Clupea pallasii*) population in Prince William Sound (PWS) is understanding adult herring annual migration movements between spawning, summer feeding, and overwintering areas. In 2013 we documented post-spawn migration of herring from Port Gravina to the PWS entrances by acoustic tagging adult herring and collecting data from the Ocean Tracking Network acoustic arrays. The 2013 study, however, could not verify if herring were migrating out into the Gulf of Alaska and then returning to PWS because of the layout of the Ocean Tracking Network arrays.

The goal of this herring study is to clarify the annual migration cycle of PWS adult herring. The objectives of this FY16 proposed project are to 1) purchase and deploy additional acoustic receivers at the Ocean Tracking Network arrays so that the direction of herring movements (into or out of PWS) can be determined; and 2) purchase acoustic tags. Achieving these objectives in FY16 will then allow us in FY17 to begin to address objectives aimed at 1) documenting adult herring migration movements out from and into PWS; and 2) understanding factors that influence migration patterns including age, condition, spawning location, and residency in PWS.

Because it takes several months from the start of funding to get tags and equipment purchased, prepared, and deployed, completing these activities during FY16 will allow us to initiate acoustic tracking studies in 2017 when herring are aggregated on their spring spawning grounds. With the

Draft 11-4-15

batteries of the Hinchinbrook Entrance and Montague Strait acoustic arrays expiring around March 2020, a tagging program starting in 2017 provides a larger time window (three seasons, FY17, 18, 19) for collecting high quality data and increases the feasibility of monitoring herring aggregations in the three major spawning areas: Port Fidalgo, Port Gravina, and Montague Island. In addition, by using acoustic tag programmed at low power only, battery life on acoustic tags would be increased to of ~400 days. This would allow us to monitor acoustic-tagged herring from one spawning season to the next.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel Comments – FY16

Date: September 2015

The proposed project uses stationary transducers (fixed to bottom) to detect fish tagged with small, battery-energized internal tags that have been surgically inserted into previously live herring and then released. This is relatively new technology or relatively new application to herring that, when employed in PWS, will attempt to discern important information about herring movements, especially the extent of movement into, or out of, PWS.

Much of the Panel discussion of this topic was related to the efficacy of the technology or equipment, the types of questions or hypotheses that might be addressed, and the utility of such information relative to the stated goals and objectives of the herring program. Probably most of the questions and recommendations that we discussed have already been considered by the proposers who list three general objectives and four general hypotheses (two have several sub-hypotheses). Nearly all of the Panel comments and suggestions about herring biology have been covered by these hypotheses except for one: the contribution that this project would make to the key goal of providing information to support the stock assessment model.

This aspect is not clearly presented in the proposal (2016 and beyond), but its apparent omission is likely an oversight. There are several ways that acoustic array information is relevant. One important contribution is an examination of a widely held view, within the scientific and lay communities in the PWS area, that herring spend all of their lives within the sound. For instance such an assumption has implications for acoustic survey design (timing and location) and herring sampling – which relate to integral assumptions in the assessment model. Further, the potential results from the use of acoustic arrays could drastically affect input used for mass-balance ecological models (such as Ecopath) that are applied to PWS. The acoustic array proposal might be clarified if the PI elaborated on these later points.

The other issue about this proposal concerned the appropriateness of funding a proposal prior to the next general invitation, which will not be released until next year. The views of the Panel members were split on this but all recognized the trade-offs. By starting now there will be much better opportunity to access the existing array of acoustic receivers. The down-side is that this proposal will appear to be getting special attention and indeed it would be. On the other hand it also is clear that

the proposal is sound and that the proponents are well-established and very productive scientists.

It is clear based on the life span of existing acoustic arrays that this project needs to be funded in FY16 as the existing array will not be functional beyond 2017. As such, a delay in funding will make the project of low or no value. A finding that significant herring movement occurs out (and in) of PWS would be an important finding conceptually, even if the data are more qualitative. Linking possible movements with oceanographic data from year to year would be very important.

Science Coordinator, Executive Director Comments – FY16

Date: September 2015

I concur with the Science Panel's comments.

Public Advisory Committee Comments – FY16

Date: September 2015

There are no project specific comments.

Project Number: 16160111-T

Project Title: PWS Herring Program – ASL Study and Aerial Milt Survey

Primary Investigator(s): Steve Moffitt

PI Affiliation: ADFG

Project Manager: ADFG

EVOSTC Funding Authorized To Date: \$0

FY12	FY13	FY14	FY15
\$0	\$0	\$0	\$0

Additional EVOSTC Funding Requested: \$60,000

FY16
\$60,000

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$60,000

Funding From Non-EVOSTC Sources:

FY12	FY13	FY14	FY15	FY16	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$53,237	\$53,237

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/14/15.*

This project will conduct spring aerial surveys to document Pacific herring *Clupea pallasii* spawn distribution and biomass as well as the distribution and abundance data on sea lions, other marine mammals, and birds associated with herring schools or spawn. Additionally, this project will process age, sex, and size samples of Pacific herring collected by acoustics surveys, spawning surveys, PWS Herring Program disease sampling and genetics collections. Aerial survey and age, sex, and size data have collected since the early 1970s and are an essential part of the age structured model used by the Alaska Department of Fish and Game to estimate the historical and future biomass for fisheries management. This project will also provide support to other Prince William Sound herring program and Gulf Watch Alaska projects by sharing information about herring or marine mammal locations or processing samples collected by the other projects.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16

Date: September 2015

There are no project specific comments.

Draft 11-4-15

NOAA Harbor Protection Program Projects

Draft 11-4-15

Project Number: 16120112

Project Title: NOAA Harbor Protection Projects – Project Management

Primary Investigator(s): Laurel Jennings

PI Affiliation: NOAA

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$32,527

FY12	FY13	FY14	FY15
\$19,883	\$0	\$6,540	\$6,104

EVOSTC Funding Requested: \$8,448

FY16
\$8,448

Request includes 9% GA

Total EVOSTC Funding (Authorized and Requested): \$40,975

Funding From Non-EVOSTC Sources:

FY14	FY15	FY16	FY17	FY18	Total Non-EVOSTC Funding
\$0	\$38,304	\$0	\$0	\$0	\$38,304

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 9/1/15.*

In this project, NOAA Restoration Center is providing oversight, management and technical assistance for two projects; one focused on harbor protection and harbor clean-up as well as another focused on snow management/water quality improvement, both efforts take place in Cordova, AK. The goal of these projects is to improve habitat for the benefit of species impacted by the Exxon Valdez oil spill. In addition, habitat for herring populations will also benefit from the implementation of these projects. As of this reporting period (September 1, 2015), the Copper River Watershed Project Snow Management Project will be in the final reporting period for EVOS. NOAA RC will continue to offer oversight and post-project closeout and report review. NOAA RC technical support and management of the Native Village of Eyak's Harbor Protection and Harbor Clean-up Project will continue until 2017.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund Reduced	Fund Reduced	Fund Reduced	Fund Reduced	Fund Reduced

Science Panel Comments – FY15**Date: September 2014**

We recommend funding for this effort with the removal of the travel expenses for the staff member located in Washington, DC.

Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

We concur with the Science Panel.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund Conditional	Fund Conditional	Not Reviewed	Fund Conditional	Fund

Science Panel Comments – FY14**Date: September 2013**

Not reviewed.

Science Coordinator Comments – FY14**Date: September 2013**

This proposal's funding is dependent on the Council's decision on proposals from the Copper River Watershed and the Native Village of Eyak.

Public Advisory Committee – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Executive Director Comments – FY14**Date: September 2013**

This proposal's funding is dependent on the Council's decision on proposals from the Copper River Watershed and the Native Village of Eyak.

FY12 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
June/July 2011	Not reviewed	Do not fund	Do not fund	Fund
April 2011	Do not fund	Do not fund	Do not fund	Do not fund

Science Panel Comments – FY12

Date: June 2011

Not reviewed.

Science Panel Comments – FY12

Date: April 2011

In response, the Proposer has reduced their budget to \$1 million and has indicated funding from NOAA in the final proposal. The panel has several key concerns regarding the proposed program. First, a significant portion of the funding requested will be spent in administrative and travel costs for the Seattle, WA and Anchorage, AK based team. Second, the narrative does not provide enough information to determine the potential effectiveness of the program. Finally, there is no established plan for outreach and education that would be critical for this type of effort. There are only general descriptions of types of activities that might be included in community-specific plans. There are references to other Best Management Practices (BMP) but the proposal does not commit to following any particular BMP. There seems to be overlap in scoping and assessment phases with an already existing Alaska Clean Harbor project funded for \$282,615 by CIAP grant (see CIAP approved state plan, http://dnr.alaska.gov/coastal/CIAP/ciap_Fall.htm). Unless coordination is required, there may be duplication of effort with the Clean Harbor program at significantly higher expense in this project. Travel costs seem high, especially in the implementation phases that do not involve public outreach. Most of the staff is coming from Seattle which increases the cost, but there is not much justification in the proposal other than relationship building with communities. The listed project managers do not seem to have much experience with harbor operations, so technical assistance may be limited.

Science Coordinator Comments – FY12

Date: June 2011

The team has reduced their budget as requested by the Council. I continue to be concerned that the first projects will not even be selected until June 2013 leaving only three field seasons available for the actual work. Also, the current timeline would not allow the Council (who will only be meeting annually in Aug/Sep) the opportunity to review the projects prior to their selection and implementation.

Public Advisory Committee Comments – FY12

Date: July 2011

A revised proposal with funds leveraged has reduced the cost of this effort, which will be managed by NOAA staff. Studebaker raised a concern about the details of the effort, it is not clear what will be done and where. John French mentioned the need to coordinate this with the U.S. Coast Guard clean harbors program. Eilo stated that he supported the cleanup of harbors. The only changes to the project are a reduced budget. While there are merits to the cleanup of harbors, the Trustee Council should proceed with caution, as there are few details at this time explaining what this project will accomplish.

Executive Director Comments – FY12

Date: July 2011

The proposer has responded to SP and TC concerns and submitted a reduced-budget proposal that mitigates issues identified prior. However, the PAC has identified concerns with funding an largely
Draft 11-4-15

administrative process and I agree with the Science Coordinator's concerns. This is an important focus area, as also discussed by the PAC, but due to those issues, my "fund" recommendation is fairly soft.

Trustee Council Comments – FY12

Date: October 2011

A revised proposal has been submitted by the team. At this time, funding has only been approved to complete the scoping and RFP development phase of this project. The Council will review the completed RFP at a later date and will determine at that time if future funding is warranted

Trustee Council Comments – FY12

Date: September 2011

The Council did not vote to fund this entire request. However, it did request a revised proposal and budget that would be limited to the scoping and RFP phase, concluding with presentation to the Council of the proposals received in response to the RFP and with a budget not-to-exceed \$125,000 (plus 9% GA). The following items were also specifically noted as being of interest:

1. Greater staffing efficiency for travel in the spill-area communities: limit travel time and number of travelers to only those necessary.
2. Consult EVOSTC office staff members, such as Cherri Womac, who have experience locating free or low-cost meeting rooms in these communities.
3. Work with DEC staff to ensure that the scoping/RFP phase seeks proposals for work which is not already legally required by state or federal law.
4. The currently-proposed timeframe for scheduling meetings in the communities is an extremely busy time for harbor personnel. It is recommended that you determine when other meetings with harbor personnel are occurring and/or adjust your schedule to dates that are outside of the commercial fishing season.
5. The scoping/RFP phase should emphasize to proposers and interested parties that the Council's current intent is to consider funding proposals with a total not to exceed the remaining amount of the original NOAA Clean Harbor proposal. For example, if the entire \$125,000 is used during the scoping/RFP phase, fund proposals up to a total of approximately \$953,750.

Trustee Council Comments – FY12

Date: June 2011

The Council requests the proposer review the Science Panel comments and strengthen its proposal and adjust the budget to \$1 million dollars.

Project Number: 16120112 - A

Project Title: NOAA Harbor Protection Program – Cordova Clean Harbor

Primary Investigator(s): Ivy Patton

PI Affiliation: Native Village Eyak

Project Manager: NOAA

EVOSTC Funding Authorized To Date: \$266,718

FY12	FY13	FY14	FY15
\$0	\$0	\$193,722	\$72,996

Additional EVOSTC Funding Requested: \$77,355

FY16
\$77,355

Requests include 9% GA.

Total EVOSTC Funding (Authorized and Requested): \$344,073

Funding From Non-EVOSTC Sources:

FY14	FY15	FY16	FY17	FY18	Total Non-EVOSTC Funding
\$0	\$0	\$0	\$0	\$0	\$0

Abstract:

**This abstract is excerpted from the PI's Proposal, dated 8/25/15.*

The Native Village of Eyak, along with their partners, will bring a local, physical presence to the Cordova Harbor to promote clean boating practices through education and information dissemination. In addition, the work will engage the local harbor staff, marine businesses, Coast Guard, and non-profit organizations by supporting increased use of available services. Finally, this important work will evaluate existing harbor user practices, give recommendations for improvements to decision makers, and assist with improving and augmenting critical harbor services.

Specifically the tasks for this project include:

- Addressing waste and antifreeze disposal limitations - achieved by providing new waste receptacles at convenient locations. These new receptacles will reduce the chance of materials being lost back to the environment while making it easier to properly dispose of waste.
- Improved outreach activities - educating harbor users to the best practices, which will reduce waste reaching the harbor. This will be done using signage and the development of new, effective outreach materials.
- Evaluation – monitor the effectiveness of the harbor cleanup effort by tracking changes in use patterns and PAH levels in mussels.

FY16 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY16**Date: September 2015**

There are no project specific comments.

FY15 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund	Fund	Fund	Fund	Fund

Science Panel, Science Coordinator, PAC, Executive Director Comments – FY15**Date: September and October 2014**

There are no project specific comments.

FY14 Funding Recommendations:

Science Panel	Science Coordinator	PAC	Executive Director	Trustee Council
Fund Conditional	Fund Conditional	Not Reviewed	Fund Conditional	Fund

Science Panel Comments – FY14**Date: September 2013**

The science panel appreciates the interest of the local community in cleaning up Cordova Harbor. We also appreciate the improvements to the proposal in response to our comments on the previous version, but we do recommend further changes to the work plan should the proposal be funded.

It should be straightforward to estimate the costs of the three antifreeze waste disposal options without actually implementing each of them. If the real objective of this part of the proposal is to implement the three approaches on a trial basis to determine which of them is likely to be most effective, then this should have been stated together with a detailed rationale of the pros and cons of each approach. It also isn't clear to the panel why additional surveys are needed, although we do recommend that a follow-up survey be conducted to evaluate compliance with the initiatives and reasons for the success or failures of each initiative. We also recommend that knowledge gained from the project be communicated to other communities and a plan for doing so should be developed.

Science Coordinator, Executive Director Comments – FY14**Date: September and October 2013**

We concur with the Science Panel.

Public Advisory Committee – FY14**Date: October 2013**

The October 2013 PAC meeting was cancelled due to the federal government shutdown. Abstracts were submitted to the PAC; no individual comments were received.

Trustee Council Comments – FY14

Date: October 2013

The Council requests the Pls work with EVOSTC staff to refine their budget in response to Science Panel and EVOSTC staff comments.

FY13 FUNDING RECOMMENDATIONS

Date	Science Panel	Science Coordinator	PAC	Executive Director
January 2013	No consensus	Modify	Not reviewed	Modify

Individual Science Panel Comments – FY13

Date: December 2012/January 2013

Reviewer 1:

This proposal describes several projects, each of which could make important contributions to preventing water pollution in the Cordova harbor and Orca Inlet and one of which can provide proof of concept for responding to small oil spills. The proposal reflects past work in various groups in Cordova-Eyak coming together under the banner of Clean Harbors to support this project on behalf of the environment and natural resources of the area. Several components make up this proposed project. It will address antifreeze pollution by pursuing recycling possibilities. It will address the lead pollution of improper disposal of batteries with a battery storage shed. It will hold a conference and then conduct pilot studies of containment and removal of small oil spills, including purchase of boom. It will conduct a variety of outreach efforts including educational possibilities through the high school ocean science bowls. All of this seems well conceived. The question is whether this fits the profile of EVOS Trustee funding policies. First, the EVOS Trustee Council has not previously invested in pollution prevention or in research or implementation of response actions. That is clearly what this proposal is all about. Second, the cost of this project is very high – 417 K in EVOS Trustee Council funds. Third, I cannot find evidence that the responsible Pls have a track record of demonstrating experience and success in handling this level of funding in a previous similar project. Fourth, I question the value of the PAH sampling in mussels, given that the response activities for small oil spills represent merely a pilot project not a sustained set of responses that could be sufficient to allow detection of reduced pollution in the mussels. Fifth, the sampling design for collecting mussels (From where? How many? Why the proposed frequency?) is not adequately justified. Sixth, this proposal needs to do a better job of relating pollution reduction to enhancing recovery of injured species, to show the connection typically required for EVOS Trustee Council funding.

Reviewer 2:

I appreciate that groups are coalescing on behalf of the community to improve water quality of the Cordova Harbor. Several projects have been proposed, including 1) proper disposal of antifreeze, batteries and trash, 2) small oil spill response, 3) workshops, public education and outreach, and 4) monitoring of water quality. A substantial component of this proposal is exploratory (e.g., workshops, contest), but I favor a more cost-effective approach of implementing best available practices. There are a great many harbors that are addressing these same issues, and it should be straight forward to adopt existing practices. I am also not convinced that the monitoring PAHs in mussels is the best use of funds for tracking success of this multi-pronged approach to cleaning up the harbor. Furthermore, mussels will be collected from only one location in the harbor. How will this provide meaningful data

on small spills that are patchy in space and time? This is the most expensive of the proposals, and the budget could be trimmed to focus on components that would have a direct, immediate impact on improving water quality while concomitantly reducing associated administrative costs

Reviewer 3:

This proposal is presented by a group of concerned citizens including the NVE and others such as PWS keeper,

Cordova fishermen, etc. Their goals are to bring a presence to Cordova Harbor to promote clean boating practices, engage local harbor staff, businesses, etc. in supporting services and to assist with improving user clean practices. Previously NVE and CCH has addressed antifreeze disposal, dealing with small spills in the harbor and developing cleanup approaches, extending outreach activity for education of harbor users, and evaluation of changes through PAH monitoring of mussel tissues. While the other tasks are worthy, the last item on PAH levels in mussels is too ambitious and the design is probably not such that useful data can be obtained. It is suggested this last task be eliminated. This is an expensive proposal and cost savings could be realized in a number of areas, particularly in administration.

Science Coordinator Comments – FY13

Date: January 2013

Overall, the proposal is clear and maximizes the local, state, and federal resources available. The costs are clearly detailed and the objectives are reasonable in both time frame and cost. The amount of cooperation and coordination that has already been achieved is remarkable and I appreciate that much of the planning and design has already occurred prior to this funding request.

My primary concern is with the projects that address small-spill response through workshops and a demonstration project. While these projects would certainly be useful for OSRI or the oil and gas industry, they may not be able to receive funding through the EVOS Trustee Council who is usually not able to fund any activities in oil spill prevention and response. I would recommend that these projects be removed from the proposal and the budget be reduced accordingly. I also suggest that some clarification is needed about the antifreeze demonstration project to ensure that this project would result in a long term solution to the harbor's need for dealing with antifreeze. In response to several of the science panel members concern regarding the PAH monitoring in mussels, the sampling and monitoring proposed is part of the existing NOAA Mussel Watch Program. This information would add to the long-term data set that already exists through this program.

Public Advisory Committee Comments – FY13

Date: January 2013

Abstracts were submitted to individual members of the PAC for comment. No comments were received.

Executive Director Comments – FY13

Date: February 2013

I support the recommendations and observations of the Science Coordinator, though I also note the remaining concerns of the Council's legal advisers.

Draft 11-4-15

Executive Director Comments – FY13

Date: January 2013

This project was solicited by NOAA under EVOSTC project 12120112, Phase I of which was funded in the FY'12 Work Plan. Phase I was funded by the Council at a reduced sum of \$20,000 for an invitational process and work with spill area communities to encourage submission of proposals reducing contamination originating from harbors and marinas. It should be noted that there are concerns regarding the proposals that were submitted under this program. This has long been a tenuous funding area for the Council. In the past, the Council funded acquisition of waste management facilities and activities and aided their implementation, but there was concern about the very indirect links between such projects and restoration. The projects submitted under NOAA's invitation have simply renewed these concerns. Moreover, some of the proposals are for projects that are very similar to those that have been funded by the Council in the past and have, apparently, not been successful or not maintained, both of which are inimical to Council policies. Lastly, some of the proposals seek funding that is aimed at correcting illegal behaviors on the part of members of the public or of governmental entities and seek monies that would augment, probably unlawfully, the appropriations of local governments and one or more State agencies.

**Long Island Parcel
KAP3004**

Property Name:	Long Island
Owner:	Leisnoi, Inc.
Agency Sponsor:	State of Alaska or Kodiak Island Borough
Appraised Value:	To be determined
Funding Request	To be determined

Overview

The Great Land Trust seeks up to \$ **To be determined**, but in no case above fair market value as determined by an appraisal currently being completed, to fund a conservation easement on approximately 1,334 acres of Long Island. This island is owned by Leisnoi, Inc. and is located off on the northeastern end of Kodiak Island, and situated in the Gulf of Alaska.

MacSwain and Associates is in the process of completing an appraisal report on this property. The report is expected to be completed by November 1, 2015. The appraisal will be completed consistent with EVOSTC, USPAP, and UASFLA appraisal standards. The timber appraisal was completed by Forest & Land Management, Inc. The appraisal will be reviewed by Johnson Appraisal Company. The fair market value of the conservation easement will depend on the final terms of the conservation easement. If the appraisal is completed by the November 12, 2015 Council meeting, Great Land Trust will seek funding of an amount not above fair market value, to fund the purchase of a conservation easement on approximately 1,334 acres on Long Island. Long Island is in the Gulf of Alaska, located approximately 6 air miles from the northeastern coast of Kodiak Island. It is contained within the Kodiak Island Borough.

As described in the Proposed Management section, the conservation easement on Long Island would be held by either by the State of Alaska or the Kodiak Island Borough with additional enforcement rights held by the Bureau of Land Management (BLM). The conservation easement would allow public access in either scenario. As the fee owner, Leisnoi, Inc. would retain certain rights on the entire 1,334 acres, such as the ability to install appropriate signage, maintain certain rights to archaeological sites and artifacts, engage in subsistence activities, and maintain ownership of any potential carbon credit value. Additionally on approximately 141 acres on the northwestern point of Long Island, Leisnoi, Inc. will retain additional rights such as the ability to build structures and limit public access. Other uses such as subdivision and timber harvest will still be restricted.

Koniag, Inc. owns the subsurface estate below this property. Negotiations with Koniag regarding acquisition of the subsurface estate are ongoing. The protection of this large, ecologically-rich island in the Kodiak Archipelago would contribute to EVOSTC area-wide goals of species recovery and habitat protection. Injured Species in the Kodiak Archipelago are dependent on the coastal, wetland, and upland habitats provided by the Long Island parcel. Long Island provides habitat for large populations of sea birds, as well as shore birds

Revised as of Sept. 10, 2015

and terrestrial and marine mammal species, including those affected by EVOS.

Property Description and Habitat

Long Island is located in the Gulf of Alaska off the northeastern coast of Kodiak Island. The island is approximately 6 air miles from the city of Kodiak and is adjacent to Woody Island. Long Island is approximately 0.75 miles wide by 4 miles long and contains approximately 15.2 miles of coastline. The coastline is characterized by steep, rocky cliffs and outcrops. Sitka spruce and grasses, among other native plant species, sit atop the uplands. There are a number of freshwater ponds and lakes of varying size on the island. There are two known harbor seal haulout areas on Long Island: Vera Bay and a site on the southeast point of the island. Long Island serves other coastal wildlife communities such as sea otters and birds identified by the EVOSTC as Injured Species.

Long Island is within the Audubon Society-recognized Chiniak Bay Important Bird Area (IBA), which is a highly productive marine area of global importance. A few species of significance within the IBA are the Black Oystercatcher, Emperor Goose, Steller's Eider, Pigeon Guillemot, and Harlequin Duck. The Chiniak Bay IBA supports a minimum of 23 seabird colonies during the summer, and includes wintering habitat for numerous marine and land based avian species, including the Steller's Eider, Emperor Goose, and bald eagle.

Long Island provides coastal forage areas, colony and nesting habitat for several species of sea and shore birds, including: Pelagic Cormorants, Red-faced Cormorants, Glaucous-winged Gulls, Black-legged Kittiwakes, Black Oystercatcher, ducks, and bald eagles. Fish and Wildlife Service's National Wetlands Inventory map approximates 192.8 acres of wetland habitat within the parcel, described as freshwater forested/shrub wetlands, freshwater emergent wetlands, estuarine and marine wetlands, estuarine and marine deepwater, and a number of freshwater lakes and ponds.

Long Island is currently uninhabited and has no residential or commercial facilities, but it has been inhabited in the past. The U.S. War Department acquired Long Island from the BLM in 1941. Fort Tidball, a World War II coastal defense installation, was constructed between 1942 and 1943, and gun batteries were established on the island's eastern coast at Deer Point and Castle Bluff. The other operational areas were the Headquarter Complex, Burt Point, the Garage Area, Point Head and North Cape. The fort was decommissioned in 1945 and abandoned in 1947. Long Island was returned to BLM jurisdiction in 1956 and eventually reserved for Native selection under the Alaska Native Claims Settlement Act (ANCSA). In 1971, Long Island was transferred under ANCSA to Leisnoi, Inc. Remnants of the defense installation are still present and visible on the island. These historic sites are similar to those at Fort Abercrombie State Historic Park on Kodiak Island and would provide opportunities for recreation and tourism. In addition to the historic sites, abandoned roads provide access for hiking on Long Island. The U.S. Army Corps of Engineers conducted site inspections and restoration activities on Long Island between 1986 and 2003. A clean up decision document was finalized in 2005 and states that the US Army Corps of Engineers selected a remedy that includes "no further remedial action planned" and "no defense action indicated" status recommendations, as well as recorded deed notices.

Restoration Benefits

A number of species affected by EVOS would benefit from acquisition of the Long Island parcel, including sea otters, harbor seals, Red-faced and Pelagic Cormorants, Kittlitz's

Revised as of Sept. 10, 2015

Murrelets, Black Oystercatchers, Pigeon Guillemots, Harlequin Ducks, and bald eagles. Acquisition of the Long Island parcel would provide permanent habitat protection for these species and assist the EVOSTC in reaching and maintaining its recovery objectives in the Kodiak Archipelago.

The Long Island parcel also contains important wetlands, including Fish and Wildlife Service-identified nationally declining freshwater forest/shrub, freshwater emergent, estuarine and marine wetlands. Estuarine wetlands provide habitat for Intertidal Communities and other Injured Species. Marine wetlands provide habitat for Subtidal Communities. Acquisition of this parcel would assure high function of these wetlands, which would benefit Injured Species.

Kelp beds occur along the perimeter of Long Island, which provide a productive and dynamic marine ecosystem. This continuous kelp provides important juvenile fish habitat that could bolster injured commercial, sport and subsistence fisheries, particularly salmon fisheries.

Long Island is a mere 6 air miles from the city of Kodiak, which is the third largest fishing port in the United States. The natural abundance and wild setting of the Island and surrounding waters provide recreational and subsistence opportunity for visitors and residents. This parcel would add another 1,193 acres to lands open to the public in the Kodiak area and contribute to recreation and tourism, which were identified by the EVOSTC as an Injured Service. The purchase of this parcel would also continue to contribute to the perpetual health of the local native peoples and benefit subsistence harvest levels, which is also identified as an Injured Human Service.

Potential Threats

Long Island provides essential habitat and migratory grounds for numerous species of fish, birds, and mammals. Conservation of this parcel would eliminate the threat of future habitat fragmentation or loss from road timber harvest, construction, subdivision, and development of Long Island.

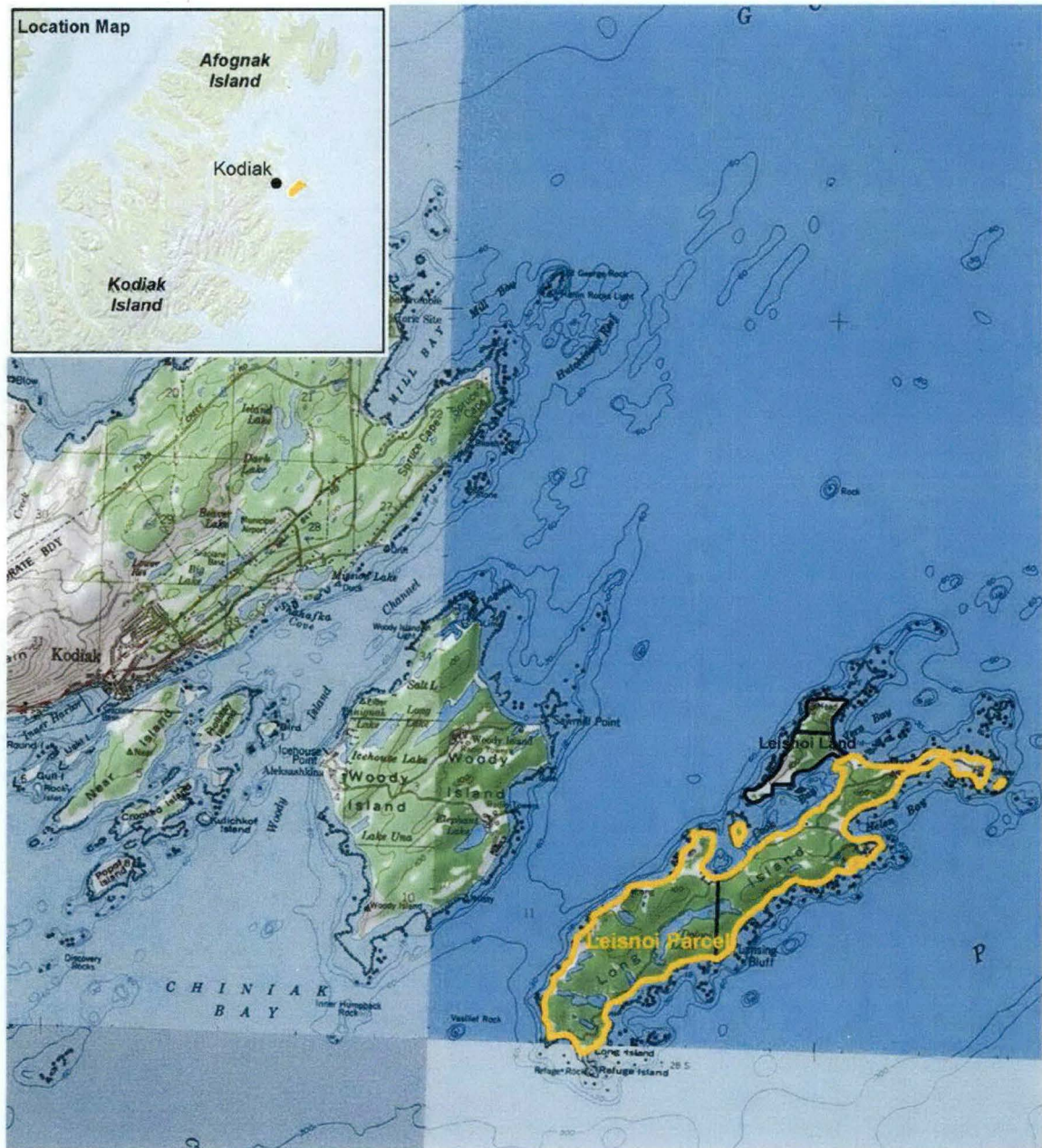
Conserving the large intact island and coastal habitat reduces the risk of habitat loss or fragmentation and thus removes barriers to species mobility and access to resources. Species ability to freely move across landscapes ensures a greater rate of reproductive success, greater access to food, and more opportunity to establish territory in higher-quality habitat. When populations experience barriers to reproduction, they are at greater risk of experiencing a decline in genetic diversity, and a decrease in genetic diversity decreases a population's ability to adapt to a changing environment and can increase the effect of deleterious alleles on the population. Ample access to resources reduces species stress and makes them less susceptible to disease and starvation.

Proposed Management

The conservation easement would be held by the State of Alaska or the Kodiak Island Borough.


Funding Request

\$ To be determined. See Above.



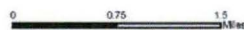
Leisnoi Inc. Land - Long Island

March 3, 2015

 Leisnoi Inc. Surface Owner, Koniag Corp. Subsurface Owner

Approximate Legal Description & Acreage:

Lots 1 & 2 of Sections 4 and 5, Lot 2 and a portion of Lot 1 of Section 6, and Lot 1 of Sections 7 and 8 of T28S, R18W, Seward Meridian, and Lot 1 of Sections 1, 12, 13, and 14, and Lot 2 of Section 11 of T28S, R19W, S.M., and located in the Kodiak Island Borough, Kodiak Recording District, Alaska, containing 1,193 acres, more or less.



Great Land Trust
EVOS Habitat Prioritization

Revised as of Sept. 10, 2015



Revised as of Sept. 10, 2015

Long Island Photos

